

Colorado

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EC97TCF-CO

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	76 537	100.0	127 429	100.0	47 456	100.0	606
Single modes	58 702	76.7	122 023	95.8	42 187	88.9	95
Truck ¹	52 082	68.0	91 178	71.6	14 191	29.9	70
For-hire truck	25 152	32.9	32 852	25.8	8 734	18.4	514
Private truck	26 806	35.0	58 086	45.6	5 387	11.4	33
Rail	2 794	3.7	30 543	24.0	27 789	58.6	1 150
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	3 767	4.9	100	—	188	.4	1 408
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	14 800	19.3	S	S	S	S	1 053
Parcel, U.S. Postal Service or courier	14 127	18.5	432	.3	418	.9	1 053
Truck and rail	584	.8	916	.7	725	1.5	862
Truck and water	S	S	S	S	S	S	3 715
Rail and water	S	S	S	S	S	S	1 438
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	3 035	4.0	1 440	1.1	345	.7	392

— 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	76 537	58 745	30.3	127 429	93 672	36.0	47 456	25 026	89.6	606	487	24.6
Single modes	58 702	48 137	21.9	122 023	88 136	38.4	42 187	20 941	101.5	95	149	-36.4
Truck ¹	52 082	43 812	18.9	91 178	67 873	34.3	14 191	9 172	54.7	70	104	-32.1
For-hire truck	25 152	23 617	6.5	32 852	28 099	16.9	8 734	6 994	24.9	514	427	20.3
Private truck	26 806	20 172	32.9	58 086	39 716	46.3	5 387	2 156	149.8	33	46	-29.5
Rail	2 794	1 582	76.7	30 543	19 566	56.1	27 789	11 670	138.1	1 150	942	22.2
Water	—	—	—	—	—	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—	—	—	—	—	—
Air (includes truck and air)	3 767	2 622	43.7	100	36	179.6	188	51	268.1	1 408	1 407	.1
Pipeline ²	S	S	S	S	S	S	S	S	S	S	S	S
Multiple modes	14 800	8 274	78.9	S	4 574	S	S	3 687	S	1 053	918	14.6
Parcel, U.S. Postal Service or courier	14 127	7 654	84.6	432	205	111.2	418	164	154.6	1 053	918	14.6
Truck and rail	584	596	-2.0	916	4 160	-78.0	725	2 986	-75.7	862	704	22.5
Truck and water	S	S	S	S	S	S	S	S	S	3 715	2 874	29.3
Rail and water	S	S	S	S	S	S	S	S	S	1 438	2 009	-28.4
Other multiple modes	—	—	—	—	—	—	—	—	—	—	—	—
Other and unknown modes	3 035	2 335	30.0	1 440	962	49.7	345	397	-13.1	392	334	17.4

— 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. 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	76.7	81.9	95.8	94.1	88.9	83.7
Truck ¹	68.0	74.6	71.6	72.5	29.9	36.6
For-hire truck	32.9	40.2	25.8	30.0	18.4	27.9
Private truck	35.0	34.3	45.6	42.4	11.4	8.6
Rail	3.7	2.7	24.0	20.9	58.6	46.6
Water	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—
Air (includes truck and air)	4.9	4.5	—	—	.4	.2
Pipeline ²	S	S	S	S	S	S
Multiple modes	19.3	14.1	S	4.9	S	14.7
Parcel, U.S. Postal Service or courier	18.5	13.0	.3	.2	.9	.7
Truck and rail .....	.8	1.0	.7	4.4	1.5	11.9
Truck and water	S	S	S	S	S	S
Rail and water	S	S	S	S	S	S
Other multiple modes	—	—	—	—	—	—
Other and unknown modes	4.0	4.0	1.1	1.0	.7	1.6

— 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 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	47 456	100.0	602
Truck	14 260	30.0	70
Rail	31 894	67.2	1 069
Shallow draft	S	S	122
Great Lakes	—	—	—
Deep draft	S	S	2 650
Air	183	.4	1 338
Parcel, U.S. Postal Service or courier	418	.9	1 053
Pipeline	S	S	S
Other and unknown modes	345	.7	392

— 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	76 537	100.0	127 429	100.0	47 456	100.0
Less than 50 miles	23 219	30.3	66 093	51.9	1 315	2.8
50 to 99 miles	6 022	7.9	11 870	9.3	1 126	2.4
100 to 249 miles	5 445	7.1	15 493	12.2	3 393	7.2
250 to 499 miles	5 482	7.2	6 123	4.8	3 466	7.3
500 to 749 miles	6 891	9.0	4 030	3.2	3 697	7.8
750 to 999 miles	14 037	18.3	9 642	7.6	11 788	24.8
1,000 to 1,499 miles	10 455	13.7	12 500	9.8	19 260	40.6
1,500 to 1,999 miles	4 618	6.0	1 658	1.3	3 333	7.0
2,000 miles or more	369	.5	S	S	S	S
Single modes	58 702	100.0	122 023	100.0	42 187	100.0
Less than 50 miles	20 508	34.9	65 169	53.4	1 294	3.1
50 to 99 miles	4 995	8.5	11 606	9.5	1 102	2.6
100 to 249 miles	4 412	7.5	15 129	12.4	3 295	7.8
250 to 499 miles	4 115	7.0	5 719	4.7	3 191	7.6
500 to 749 miles	4 933	8.4	3 915	3.2	3 591	8.5
750 to 999 miles	9 245	15.7	7 951	6.5	9 599	22.8
1,000 to 1,499 miles	7 545	12.9	10 930	9.0	16 858	40.0
1,500 to 1,999 miles	2 745	4.7	1 592	1.3	3 210	7.6
2,000 miles or more	S	S	S	S	S	S
Truck¹	52 082	100.0	91 178	100.0	14 191	100.0
Less than 50 miles	20 392	39.2	62 996	69.1	1 245	8.8
50 to 99 miles	4 886	9.4	10 822	11.9	1 042	7.3
100 to 249 miles	3 917	7.5	6 267	6.9	1 207	8.5
250 to 499 miles	3 709	7.1	3 357	3.7	1 637	11.5
500 to 749 miles	3 945	7.6	1 957	2.1	1 534	10.8
750 to 999 miles	7 140	13.7	1 834	2.0	2 006	14.1
1,000 to 1,499 miles	6 203	11.9	3 444	3.8	4 587	32.3
1,500 to 1,999 miles	1 884	3.6	500	.5	932	6.6
2,000 miles or more	S	S	S	S	S	S
For-hire truck	25 152	100.0	32 852	100.0	8 734	100.0
Less than 50 miles	3 630	14.4	17 601	53.6	401	4.6
50 to 99 miles	1 202	4.8	5 235	15.9	543	6.2
100 to 249 miles	1 068	4.2	2 908	8.9	611	7.0
250 to 499 miles	1 945	7.7	1 686	5.1	839	9.6
500 to 749 miles	3 203	12.7	1 560	4.7	1 241	14.2
750 to 999 miles	6 754	26.9	1 613	4.9	1 770	20.3
1,000 to 1,499 miles	5 603	22.3	1 790	5.4	2 472	28.3
1,500 to 1,999 miles	1 740	6.9	460	1.4	857	9.8
2,000 miles or more	S	S	S	S	S	S
Private truck	26 806	100.0	58 086	100.0	5 387	100.0
Less than 50 miles	16 746	62.5	45 366	78.1	843	15.7
50 to 99 miles	3 669	13.7	5 449	9.4	474	8.8
100 to 249 miles	2 817	10.5	3 350	5.8	594	11.0
250 to 499 miles	1 725	6.4	1 626	2.8	772	14.3
500 to 749 miles	732	2.7	385	.7	282	5.2
750 to 999 miles	374	1.4	217	.4	231	4.3
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	143	.5	39	—	74	1.4
2,000 miles or more	—	—	—	—	—	—
Rail	2 794	100.0	30 543	100.0	27 789	100.0
Less than 50 miles	116	4.1	2 173	7.1	48	.2
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	489	17.5	8 862	29.0	2 088	7.5
250 to 499 miles	243	8.7	2 354	7.7	1 550	5.6
500 to 749 miles	476	17.0	1 950	6.4	2 047	7.4
750 to 999 miles	682	24.4	6 092	19.9	7 560	27.2
1,000 to 1,499 miles	531	19.0	7 476	24.5	12 254	44.1
1,500 to 1,999 miles	242	8.6	1 050	3.4	2 199	7.9
2,000 miles or more	—	—	—	—	—	—
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	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—
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	—	—	—	—	—	—

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	—	—	—	—	—	—
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	—	—	—	—	—	—
Air (includes truck and air)	3 767	100.0	100	100.0	188	100.0
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	S	S	—	.2	—	—
100 to 249 miles	6	.2	—	.1	—	—
250 to 499 miles	141	3.7	3	3.4	2	1.3
500 to 749 miles	513	13.6	9	8.7	10	5.1
750 to 999 miles	1 423	37.8	24	24.0	33	17.6
1,000 to 1,499 miles	811	21.5	10	9.9	16	8.5
1,500 to 1,999 miles	620	16.5	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Pipeline²	S	S	S	S	S	S
Less than 50 miles	—	—	—	—	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	—	—	—	—	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	—	—	—	—	S	S
750 to 999 miles	—	—	—	—	S	S
1,000 to 1,499 miles	—	—	—	—	S	S
1,500 to 1,999 miles	—	—	—	—	S	S
2,000 miles or more	—	—	—	—	S	S
Multiple modes	14 800	100.0	S	S	S	S
Less than 50 miles	1 174	7.9	171	4.3	8	.2
50 to 99 miles	839	5.7	137	3.5	14	.3
100 to 249 miles	900	6.1	121	3.1	31	.6
250 to 499 miles	1 235	8.3	S	S	S	S
500 to 749 miles	1 765	11.9	103	2.6	96	1.9
750 to 999 miles	4 171	28.2	S	S	S	S
1,000 to 1,499 miles	2 727	18.4	S	S	S	S
1,500 to 1,999 miles	1 831	12.4	55	1.4	103	2.1
2,000 miles or more	158	1.1	S	S	S	S
Parcel, U.S. Postal Service or courier	14 127	100.0	432	100.0	418	100.0
Less than 50 miles	1 163	8.2	44	10.2	1	.2
50 to 99 miles	826	5.8	19	4.4	2	.4
100 to 249 miles	889	6.3	30	7.0	7	1.6
250 to 499 miles	1 207	8.5	36	8.4	19	4.6
500 to 749 miles	1 756	12.4	61	14.2	50	11.9
750 to 999 miles	3 782	26.8	85	19.7	94	22.5
1,000 to 1,499 miles	2 620	18.5	103	23.9	147	35.1
1,500 to 1,999 miles	1 781	12.6	50	11.6	93	22.4
2,000 miles or more	104	.7	3	.6	6	1.4
Truck and rail	584	100.0	916	100.0	725	100.0
Less than 50 miles	12	2.0	S	S	S	S
50 to 99 miles	14	2.4	S	S	S	S
100 to 249 miles	11	1.8	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	10	1.7	S	S	S	S
750 to 999 miles	373	63.8	234	25.5	302	41.6
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	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S
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	S	S	S	S	S	S

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	S	S	S	S	S	S
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	S	S	S	S	S	S
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—
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 and unknown modes	3 035	100.0	1 440	100.0	345	100.0
Less than 50 miles	1 537	50.6	753	52.3	14	4.0
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	133	4.4	S	S	S	S
250 to 499 miles	132	4.3	S	S	S	S
500 to 749 miles	S	S	12	.8	10	3.0
750 to 999 miles	621	20.5	83	5.8	92	26.5
1,000 to 1,499 miles	183	6.0	21	1.5	30	8.6
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	S	S	S	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 "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	76 537	100.0	127 429	100.0	47 456	100.0	606
Less than 50 lb	14 326	18.7	S	S	230	.5	662
50 to 99 lb	3 704	4.8	213	.2	107	.2	505
100 to 499 lb	9 534	12.5	1 064	.8	286	.6	290
500 to 749 lb	2 549	3.3	519	.4	106	.2	203
750 to 999 lb	1 935	2.5	446	.4	72	.2	159
1,000 to 9,999 lb	15 147	19.8	7 727	6.1	1 217	2.6	156
10,000 to 49,999 lb	21 255	27.8	39 792	31.2	8 324	17.5	192
50,000 to 99,999 lb	4 607	6.0	26 922	21.1	4 658	9.8	168
100,000 lb or more	3 481	4.5	50 078	39.3	32 457	68.4	725
Single modes	58 702	100.0	122 023	100.0	42 187	100.0	95
Less than 50 lb	4 611	7.9	S	S	24	—	S
50 to 99 lb	1 453	2.5	111	—	15	—	133
100 to 499 lb	6 794	11.6	899	.7	167	.4	170
500 to 749 lb	2 347	4.0	499	.4	99	.2	197
750 to 999 lb	1 712	2.9	430	.4	66	.2	152
1,000 to 9,999 lb	14 237	24.3	7 458	6.1	1 126	2.7	151
10,000 to 49,999 lb	19 595	33.4	38 638	31.7	7 674	18.2	183
50,000 to 99,999 lb	4 554	7.8	26 367	21.6	4 571	10.8	169
100,000 lb or more	3 399	5.8	47 185	38.7	28 446	67.4	723
Truck¹	52 082	100.0	91 178	100.0	14 191	100.0	70
Less than 50 lb	3 156	6.1	S	S	15	.1	S
50 to 99 lb	979	1.9	108	.1	11	—	101
100 to 499 lb	6 001	11.5	889	1.0	152	1.1	153
500 to 749 lb	2 094	4.0	495	.5	95	.7	190
750 to 999 lb	1 602	3.1	421	.5	53	.4	125
1,000 to 9,999 lb	13 579	26.1	7 440	8.2	1 097	7.7	145
10,000 to 49,999 lb	19 338	37.1	38 486	42.2	7 507	52.9	179
50,000 to 99,999 lb	4 359	8.4	26 005	28.5	4 050	28.5	153
100,000 lb or more	974	1.9	16 903	18.5	1 212	8.5	S
For-hire truck	25 152	100.0	32 852	100.0	8 734	100.0	514
Less than 50 lb	1 109	4.4	14	—	6	—	473
50 to 99 lb	242	1.0	14	—	7	—	472
100 to 499 lb	2 472	9.8	146	.4	100	1.1	641
500 to 749 lb	916	3.6	83	.3	62	.7	752
750 to 999 lb	761	3.0	49	.1	31	.4	628
1,000 to 9,999 lb	5 418	21.5	1 058	3.2	586	6.7	573
10,000 to 49,999 lb	12 207	48.5	10 512	32.0	5 489	62.9	549
50,000 to 99,999 lb	1 310	5.2	12 327	37.5	1 437	16.5	108
100,000 lb or more	717	2.8	8 649	26.3	1 014	11.6	S
Private truck	26 806	100.0	58 086	100.0	5 387	100.0	33
Less than 50 lb	2 040	7.6	S	S	S	S	S
50 to 99 lb	734	2.7	95	.2	5	—	49
100 to 499 lb	3 514	13.1	740	1.3	51	.9	62
500 to 749 lb	1 170	4.4	412	.7	32	.6	77
750 to 999 lb	837	3.1	372	.6	22	.4	58
1,000 to 9,999 lb	8 119	30.3	6 357	10.9	498	9.2	82
10,000 to 49,999 lb	7 105	26.5	27 942	48.1	2 008	37.3	67
50,000 to 99,999 lb	S	S	13 676	23.5	S	S	194
100,000 lb or more	S	S	S	S	151	2.8	S
Rail	2 794	100.0	30 543	100.0	27 789	100.0	1 150
Less than 50 lb	S	S	S	S	S	S	559
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	S	S	S	S	S	S	491
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	1 933
10,000 to 49,999 lb	179	6.4	S	S	S	S	816
50,000 to 99,999 lb	187	6.7	353	1.2	508	1.8	1 475
100,000 lb or more	2 363	84.6	30 054	98.4	27 163	97.7	1 145
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	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—

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	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—
Air (includes truck and air)	3 767	100.0	100	100.0	188	100.0	1 408
Less than 50 lb	1 454	38.6	6	6.0	9	4.7	1 384
50 to 99 lb	473	12.6	2	2.2	3	1.8	1 574
100 to 499 lb	792	21.0	10	10.0	15	7.8	1 522
500 to 749 lb	S	S	3	3.2	S	S	1 321
750 to 999 lb	S	S	S	S	S	S	1 446
1,000 to 9,999 lb	593	15.7	15	15.5	24	12.7	1 574
10,000 to 49,999 lb	S	S	S	S	S	S	2 367
50,000 to 99,999 lb	S	S	S	S	S	S	1 473
100,000 lb or more	S	S	S	S	S	S	1 945
Pipeline²	S	S	S	S	S	S	S
Less than 50 lb	—	—	—	—	S	S	S
50 to 99 lb	—	—	—	—	S	S	S
100 to 499 lb	S	S	S	S	S	S	S
500 to 749 lb	S	S	S	S	S	S	S
750 to 999 lb	—	—	—	—	S	S	S
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	S
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	S	S	S	S	S	S	S
Multiple modes	14 800	100.0	S	S	S	S	1 053
Less than 50 lb	9 156	61.9	207	5.2	201	4.1	1 056
50 to 99 lb	2 156	14.6	92	2.3	90	1.8	964
100 to 499 lb	2 508	16.9	121	3.1	116	2.4	1 003
500 to 749 lb	140	.9	7	.2	6	.1	823
750 to 999 lb	S	S	5	.1	5	.1	926
1,000 to 9,999 lb	S	S	S	S	S	S	1 284
10,000 to 49,999 lb	538	3.6	367	9.2	440	8.9	1 211
50,000 to 99,999 lb	28	.2	S	S	34	.7	126
100,000 lb or more	74	.5	S	S	S	S	1 101
Parcel, U.S. Postal Service or courier	14 127	100.0	432	100.0	418	100.0	1 053
Less than 50 lb	9 156	64.8	207	47.8	201	48.2	1 056
50 to 99 lb	2 156	15.3	92	21.3	90	21.5	964
100 to 499 lb	2 507	17.7	121	28.0	116	27.7	1 002
500 to 749 lb	140	1.0	7	1.7	6	1.4	826
750 to 999 lb	S	S	5	1.2	5	1.2	926
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	584	100.0	916	100.0	725	100.0	862
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	S	S	S	S	S	S	85
100 to 499 lb	S	S	S	S	S	S	1 391
500 to 749 lb	S	S	S	S	S	S	442
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	1 191
10,000 to 49,999 lb	485	82.9	360	39.3	417	57.5	1 163
50,000 to 99,999 lb	28	4.8	S	S	34	4.7	126
100,000 lb or more	S	S	S	S	S	S	1 022
Truck and water	S	S	S	S	S	S	3 715
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	S	S	S	S	S	S	3 725
10,000 to 49,999 lb	S	S	S	S	S	S	3 709
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—

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	S	S	S	S	S	S	1 438
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	S	S	S	S	S	S	1 438
Other multiple modes	—	—	—	—	—	—	—
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 and unknown modes	3 035	100.0	1 440	100.0	345	100.0	392
Less than 50 lb	559	18.4	24	1.7	5	1.4	416
50 to 99 lb	95	3.1	11	.7	S	S	S
100 to 499 lb	232	7.6	44	3.0	3	.7	52
500 to 749 lb	62	2.0	13	.9	1	.2	S
750 to 999 lb	55	1.8	11	.7	1	.3	93
1,000 to 9,999 lb	878	28.9	251	17.4	68	19.8	286
10,000 to 49,999 lb	1 123	37.0	787	54.7	211	61.0	286
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	8	.3	17	1.2	S	S	76

— 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	76 537	100.0	127 429	100.0	47 456	100.0	606
01	Live animals and live fish	—	—	—	—	—	—	—
02	Cereal grains	831	1.1	7 731	6.1	2 094	4.4	160
03	Other agricultural products	250	.3	S	S	S	S	S
04	Animal feed and products of animal origin, n.e.c.	1 760	2.3	3 287	2.6	911	1.9	S
05	Meat, fish, seafood, and their preparations	3 910	5.1	1 415	1.1	1 126	2.4	306
06	Milled grain products and preparations, and bakery products	1 032	1.3	948	.7	344	.7	140
07	Other prepared foodstuffs and fats and oils	2 858	3.7	5 439	4.3	692	1.5	S
08	Alcoholic beverages	3 000	3.9	6 531	5.1	8 223	17.3	124
09	Tobacco products	S	S	S	S	S	S	1 172
10	Monumental or building stone	S	S	90	—	S	S	S
11	Natural sands	35	—	4 757	3.7	227	.5	41
12	Gravel and crushed stone	106	.1	13 659	10.7	456	1.0	33
13	Nonmetallic minerals n.e.c.	25	—	915	.7	189	.4	S
14	Metallic ores and concentrates	224	.3	68	—	90	.2	1 181
15	Coal	684	.9	37 648	29.5	21 986	46.3	S
17	Gasoline and aviation turbine fuel	1 305	1.7	5 332	4.2	S	S	234
18	Fuel oils	626	.8	2 697	2.1	S	S	S
19	Coal and petroleum products, n.e.c.	699	.9	S	S	459	1.0	S
20	Basic chemicals	S	S	886	.7	188	.4	1 062
21	Pharmaceutical products	2 354	3.1	45	—	S	S	558
22	Fertilizers	S	S	S	S	S	S	142
23	Chemical products and preparations, n.e.c.	3 497	4.6	331	.3	239	.5	497
24	Plastics and rubber	1 911	2.5	423	.3	218	.5	506
25	Logs and other wood in the rough	14	—	31	—	13	—	79
26	Wood products	2 131	2.8	2 172	1.7	338	.7	299
27	Pulp, newsprint, paper, and paperboard	464	.6	208	.2	34	—	150
28	Paper or paperboard articles	907	1.2	571	.4	126	.3	814
29	Printed products	3 796	5.0	1 140	.9	238	.5	886
30	Textiles, leather, and articles of textiles or leather	1 750	2.3	154	.1	58	.1	1 050
31	Nonmetallic mineral products	2 048	2.7	16 566	13.0	1 468	3.1	307
32	Base metal in primary or semifinished forms and in finished basic shapes	2 106	2.8	1 514	1.2	850	1.8	362
33	Articles of base metal	2 802	3.7	1 383	1.1	613	1.3	323
34	Machinery	4 054	5.3	424	.3	308	.6	240
35	Electronic and other electrical equipment and components and office equipment	12 303	16.1	399	.3	225	.5	989
36	Motorized and other vehicles (including parts)	2 653	3.5	229	.2	105	.2	479
37	Transportation equipment, n.e.c.	S	S	S	S	10	—	1 169
38	Precision instruments and apparatus	1 959	2.6	26	—	20	—	914
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	1 945	2.5	225	.2	54	.1	584
40	Miscellaneous manufactured products	7 901	10.3	S	S	717	1.5	969
41	Waste and scrap	S	S	S	S	537	1.1	382
43	Mixed freight	2 180	2.8	1 159	.9	161	.3	560
--	Commodity unknown	426	.6	76	—	S	S	543

— 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	76 537	100.0	127 429	100.0	47 456	100.0	606
Single modes	58 702	76.7	122 023	95.8	42 187	88.9	95
Truck ¹	52 082	68.0	91 178	71.6	14 191	29.9	70
For-hire truck	25 152	32.9	32 852	25.8	8 734	18.4	514
Private truck	26 806	35.0	58 086	45.6	5 387	11.4	33
Rail	2 794	3.7	30 543	24.0	27 789	58.6	1 150
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	3 767	4.9	100	—	188	4	1 408
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	14 800	19.3	S	S	S	S	1 053
Parcel, U.S. Postal Service or courier	14 127	18.5	432	.3	418	.9	1 053
Truck and rail	584	.8	916	.7	725	1.5	862
Truck and water	S	S	S	S	S	S	3 715
Rail and water	S	S	S	S	S	S	1 438
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	3 035	4.0	1 440	1.1	345	.7	392
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	—	—	—	—	—	—	—
Single modes	—	—	—	—	—	—	—
Truck ¹	—	—	—	—	—	—	—
For-hire truck	—	—	—	—	—	—	—
Private truck	—	—	—	—	—	—	—
Rail	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—
SCTG 02, CEREAL GRAINS							
Total	831	100.0	7 731	100.0	2 094	100.0	160
Single modes	803	96.6	7 528	97.4	1 911	91.3	159
Truck ¹	637	76.6	6 174	79.9	999	47.7	134
For-hire truck	189	22.8	1 833	23.7	366	17.5	181
Private truck	430	51.8	4 168	53.9	S	S	115
Rail	166	20.0	1 354	17.5	913	43.6	639
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	938
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	938
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	7

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	250	100.0	S	S	S	S	S
Single modes	243	97.0	S	S	S	S	S
Truck ¹	243	97.0	S	S	S	S	S
For-hire truck	157	62.9	S	S	S	S	941
Private truck	84	33.8	86	9.8	14	1.9	S
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	521
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	478
Truck and rail	S	S	S	S	S	S	978
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	29
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	1 760	100.0	3 287	100.0	911	100.0	S
Single modes	1 313	74.6	2 983	90.8	779	85.5	S
Truck ¹	1 245	70.8	2 871	87.4	641	70.4	S
For-hire truck	397	22.6	927	28.2	489	53.7	495
Private truck	848	48.2	1 945	59.2	152	16.7	69
Rail	S	S	S	S	S	S	1 264
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	112	6.4	76	2.3	112	12.3	1 256
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	1 053
Truck and rail	112	6.3	76	2.3	112	12.3	1 479
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	3 910	100.0	1 415	100.0	1 126	100.0	306
Single modes	3 883	99.3	1 396	98.7	1 125	100.0	316
Truck ¹	3 844	98.3	1 359	96.0	1 047	93.0	309
For-hire truck	2 793	71.4	963	68.0	894	79.4	898
Private truck	1 044	26.7	S	S	S	S	111
Rail	S	S	S	S	S	S	1 308
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	3 241
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	647
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	647
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	43

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	1 032	100.0	948	100.0	344	100.0	140
Single modes	909	88.0	895	94.5	340	98.8	135
Truck ¹	905	87.7	882	93.1	329	95.7	135
For-hire truck	358	34.7	345	36.4	260	75.7	552
Private truck	546	52.9	536	56.6	69	19.9	105
Rail	S	S	S	S	S	S	867
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	S
SCTG 07, OTHER PREPARED FOODSTUFFS AND FATS AND OILS							
Total	2 858	100.0	5 439	100.0	692	100.0	S
Single modes	2 788	97.5	5 321	97.8	679	98.1	S
Truck ¹	2 762	96.6	5 254	96.6	604	87.3	S
For-hire truck	569	19.9	842	15.5	287	41.5	417
Private truck	2 192	76.7	4 407	81.0	316	45.7	S
Rail	26	.9	67	1.2	75	10.8	1 129
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 892
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	674
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	668
Truck and rail	S	S	S	S	S	S	978
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	22
SCTG 08, ALCOHOLIC BEVERAGES							
Total	3 000	100.0	6 531	100.0	8 223	100.0	124
Single modes	2 951	98.4	6 414	98.2	8 078	98.2	120
Truck ¹	1 769	59.0	2 165	33.2	S	S	77
For-hire truck	737	24.6	1 236	18.9	1 134	13.8	850
Private truck	1 023	34.1	925	14.2	S	S	51
Rail	1 182	39.4	4 249	65.1	6 743	82.0	1 526
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	1 171
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	1 171
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	123

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	\$	\$	\$	\$	\$	\$	1 172
Single modes	\$	\$	\$	\$	\$	\$	1 051
Truck ¹	\$	\$	\$	\$	\$	\$	911
For-hire truck	\$	\$	\$	\$	\$	\$	1 109
Private truck	\$	\$	\$	\$	\$	\$	69
Rail	-	-	-	-	-	-	-
Water	-	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	\$	\$	\$	\$	\$	\$	4 246
Pipeline ²	-	-	-	-	\$	\$	\$
Multiple modes	\$	\$	\$	\$	\$	\$	1 226
Parcel, U.S. Postal Service or courier	\$	\$	\$	\$	\$	\$	1 226
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	\$	\$	\$	\$	\$	\$	8
SCTG 10, MONUMENTAL OR BUILDING STONE							
Total	\$	\$	90	100.0	\$	\$	\$
Single modes	\$	\$	90	100.0	\$	\$	\$
Truck ¹	\$	\$	\$	\$	\$	\$	\$
For-hire truck	\$	9.2	\$	\$	\$	\$	\$
Private truck	\$	\$	\$	\$	\$	\$	29
Rail	\$	\$	\$	\$	\$	\$	1 887
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	\$	\$	\$	\$	\$	\$	32
SCTG 11, NATURAL SANDS							
Total	35	100.0	4 757	100.0	227	100.0	41
Single modes	33	94.0	4 548	95.6	187	82.0	37
Truck ¹	32	91.2	4 524	95.1	162	71.1	36
For-hire truck	9	26.9	\$	\$	54	23.8	\$
Private truck	22	64.3	3 410	71.7	108	47.3	31
Rail	\$	\$	\$	\$	\$	\$	1 017
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	\$	\$	\$	\$	\$	\$	193

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	106	100.0	13 659	100.0	456	100.0	33
Single modes	106	99.8	13 633	99.8	456	99.9	33
Truck ¹	106	99.8	13 633	99.8	456	99.9	33
For-hire truck	37	35.2	6 090	44.6	218	47.8	35
Private truck	68	64.6	7 543	55.2	238	52.1	32
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	1 230
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 230
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	13
SCTG 13, NONMETALLIC MINERALS N.E.C.							
Total	25	100.0	915	100.0	189	100.0	S
Single modes	25	98.3	911	99.6	186	98.1	S
Truck ¹	22	86.4	S	S	58	30.6	S
For-hire truck	S	S	115	12.6	28	15.0	338
Private truck	16	62.9	S	S	S	S	43
Rail	S	S	S	S	S	S	1 422
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	32
Truck and rail	S	S	S	S	S	S	1 100
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	224	100.0	68	100.0	90	100.0	1 181
Single modes	S	S	S	S	S	S	884
Truck ¹	S	S	S	S	S	S	884
For-hire truck	S	S	S	S	S	S	947
Private truck	S	S	S	S	S	S	8
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	50	74.3	74	81.9	1 417
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 830
Truck and rail	S	S	50	74.3	74	81.9	1 340
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—

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	684	100.0	37 648	100.0	21 986	100.0	S
Single modes	649	94.9	35 038	93.1	18 230	82.9	S
Truck ¹	S	S	S	S	S	S	S
For-hire truck	S	S	S	S	274	1.2	S
Private truck	S	S	S	S	S	S	50
Rail	397	58.0	21 839	58.0	17 863	81.2	916
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	1 438
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	S	S	S	S	S	S	1 438
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 17, GASOLINE AND AVIATION TURBINE FUEL							
Total	1 305	100.0	5 332	100.0	S	S	234
Single modes	1 302	99.8	5 316	99.7	S	S	245
Truck ¹	1 068	81.9	4 589	86.1	S	S	245
For-hire truck	S	S	S	S	S	S	481
Private truck	S	S	S	S	S	S	S
Rail	S	S	S	S	S	S	268
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	4
SCTG 18, FUEL OILS							
Total	626	100.0	2 697	100.0	S	S	S
Single modes	626	99.9	2 695	99.9	S	S	S
Truck ¹	582	92.9	2 447	90.7	S	S	S
For-hire truck	S	S	S	S	S	S	342
Private truck	492	78.5	1 989	73.7	S	S	27
Rail	S	S	S	S	S	S	1 045
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	S	S	S	S	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	8

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	699	100.0	S	S	459	100.0	S
Single modes	682	97.5	S	S	S	S	S
Truck ¹	661	94.5	S	S	S	S	S
For-hire truck	S	S	S	S	S	S	201
Private truck	378	54.1	699	14.4	S	S	17
Rail	S	S	S	S	S	S	810
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	286
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	286
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	161
SCTG 20, BASIC CHEMICALS							
Total	S	S	886	100.0	188	100.0	1 062
Single modes	684	70.0	863	97.5	170	90.5	412
Truck ¹	S	S	803	90.6	114	60.7	68
For-hire truck	S	S	S	S	S	S	563
Private truck	125	12.8	S	S	S	S	24
Rail	8	.9	52	5.9	S	S	1 028
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 499
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	S	S	S	S	S	S	1 214
Parcel, U.S. Postal Service or courier	148	15.1	S	S	S	S	1 214
Truck and rail	S	S	S	S	S	S	1 024
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	1	.1	S	S	S	S	S
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	2 354	100.0	45	100.0	S	S	558
Single modes	1 372	58.3	17	37.6	10	35.3	S
Truck ¹	S	S	17	36.5	9	32.9	S
For-hire truck	S	S	7	14.9	6	21.2	S
Private truck	S	S	S	S	S	S	S
Rail	S	S	S	S	S	S	1 098
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 522
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	958	40.7	24	51.8	S	S	783
Parcel, U.S. Postal Service or courier	958	40.7	24	51.8	S	S	783
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	310

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	S	S	S	S	S	S	142
Single modes	6	32.5	S	S	S	S	36
Truck ¹	6	32.5	S	S	S	S	36
For-hire truck	S	S	S	S	S	S	S
Private truck	4	23.1	S	S	S	S	33
Rail	—	—	—	—	—	—	—
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	186
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	3 497	100.0	331	100.0	239	100.0	497
Single modes	3 186	91.1	285	86.0	207	86.7	S
Truck ¹	3 177	90.9	275	83.1	202	84.6	S
For-hire truck	2 872	82.1	189	56.9	193	80.8	S
Private truck	299	8.5	82	24.8	7	3.0	S
Rail	S	S	S	S	S	S	454
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 495
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	247	7.1	30	9.0	S	S	905
Parcel, U.S. Postal Service or courier	239	6.8	S	S	S	S	906
Truck and rail	S	S	S	S	S	S	209
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	63	1.8	16	5.0	11	4.4	S
SCTG 24, PLASTICS AND RUBBER							
Total	1 911	100.0	423	100.0	218	100.0	506
Single modes	1 285	67.2	383	90.6	201	91.9	107
Truck ¹	1 258	65.8	376	88.8	191	87.3	89
For-hire truck	619	32.4	230	54.4	184	84.4	581
Private truck	636	33.3	145	34.3	6	2.8	30
Rail	S	S	S	S	S	S	1 341
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	20	1.1	S	S	S	S	1 497
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	530	27.7	24	5.6	16	7.4	777
Parcel, U.S. Postal Service or courier	530	27.7	24	5.6	16	7.3	777
Truck and rail	S	S	S	S	S	S	1 979
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	96	5.0	16	3.8	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 25, LOGS AND OTHER WOOD IN THE ROUGH							
Total	14	100.0	31	100.0	13	100.0	79
Single modes	14	100.0	31	100.0	13	100.0	79
Truck ¹	10	75.7	25	80.0	6	47.3	63
For-hire truck	8	57.1	18	57.2	6	44.2	177
Private truck	3	18.6	7	22.8	S	S	17
Rail	S	S	S	S	S	S	1 104
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	—	—	—	—	—	—	—
SCTG 26, WOOD PRODUCTS							
Total	2 131	100.0	2 172	100.0	338	100.0	299
Single modes	2 033	95.4	2 119	97.6	330	97.7	196
Truck ¹	2 022	94.9	2 114	97.3	320	94.8	S
For-hire truck	423	19.9	575	26.5	189	55.9	960
Private truck	1 596	74.9	1 539	70.9	131	38.9	70
Rail	S	S	S	S	S	S	1 747
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	861
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	55	2.6	5	.2	S	S	706
Parcel, U.S. Postal Service or courier	55	2.6	5	.2	S	S	706
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	54
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	464	100.0	208	100.0	34	100.0	150
Single modes	435	93.6	197	94.6	33	95.8	132
Truck ¹	435	93.6	197	94.6	33	95.8	132
For-hire truck	147	31.6	78	37.6	27	80.0	564
Private truck	288	62.0	119	57.0	5	15.8	45
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	11	2.4	S	S	1	1.9	336
Parcel, U.S. Postal Service or courier	11	2.4	S	S	1	1.9	336
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	40

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	907	100.0	571	100.0	126	100.0	814
Single modes	780	86.1	551	96.5	109	86.5	91
Truck ¹	780	86.1	551	96.5	109	86.5	91
For-hire truck	332	36.6	218	38.2	69	55.0	222
Private truck	431	47.5	317	55.5	29	22.7	39
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 156
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	1 159
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 159
Truck and rail	S	S	S	S	S	S	1 574
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	9	1.0	S	S	S	S	S
SCTG 29, PRINTED PRODUCTS							
Total	3 796	100.0	1 140	100.0	238	100.0	886
Single modes	1 767	46.5	959	84.1	126	52.9	S
Truck ¹	1 546	40.7	940	82.5	S	S	S
For-hire truck	356	9.4	S	S	S	S	771
Private truck	1 145	30.2	838	73.5	28	11.7	20
Rail	S	S	S	S	S	S	1 475
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 313
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 762	46.4	96	8.5	92	38.7	1 058
Parcel, U.S. Postal Service or courier	1 762	46.4	96	8.5	92	38.7	1 058
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	268	7.0	S	S	S	S	442
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	1 750	100.0	154	100.0	58	100.0	1 050
Single modes	838	47.9	129	83.9	39	66.7	710
Truck ¹	828	47.3	129	83.8	38	65.4	649
For-hire truck	428	24.5	26	16.6	23	39.0	1 106
Private truck	399	22.8	103	67.1	15	26.4	222
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	2 319
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	821	46.9	20	13.1	19	33.1	1 131
Parcel, U.S. Postal Service or courier	821	46.9	20	13.1	19	33.1	1 131
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	91	5.2	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 31, NONMETALLIC MINERAL PRODUCTS							
Total	2 048	100.0	16 566	100.0	1 468	100.0	307
Single modes	1 899	92.7	16 058	96.9	1 317	89.7	73
Truck ¹	1 745	85.2	15 497	93.5	718	48.9	51
For-hire truck	529	25.9	1 712	10.3	326	22.2	S
Private truck	1 209	59.1	13 765	83.1	391	26.6	37
Rail	81	4.0	514	3.1	520	35.4	1 338
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 618
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	104	5.1	374	2.3	101	6.9	939
Parcel, U.S. Postal Service or courier	57	2.8	2	—	2	.1	951
Truck and rail	47	2.3	372	2.2	99	6.8	S
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	45	2.2	134	.8	51	3.4	116
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	2 106	100.0	1 514	100.0	850	100.0	362
Single modes	2 005	95.2	1 478	97.6	831	97.7	150
Truck ¹	1 826	86.7	1 012	66.8	400	47.0	144
For-hire truck	758	36.0	423	27.9	339	39.9	715
Private truck	1 069	50.7	589	38.9	60	7.1	S
Rail	164	7.8	464	30.7	428	50.4	912
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 384
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	54	2.6	5	.3	4	.4	941
Parcel, U.S. Postal Service or courier	54	2.6	5	.3	4	.4	941
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	47	2.2	31	2.1	S	S	S
SCTG 33, ARTICLES OF BASE METAL							
Total	2 802	100.0	1 383	100.0	613	100.0	323
Single modes	2 245	80.1	1 232	89.1	541	88.3	107
Truck ¹	2 058	73.4	846	61.1	295	48.2	98
For-hire truck	1 038	37.1	405	29.2	255	41.5	576
Private truck	1 019	36.4	441	31.9	41	6.6	40
Rail	161	5.8	386	27.9	S	S	519
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 303
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	423	15.1	26	1.9	32	5.2	779
Parcel, U.S. Postal Service or courier	396	14.1	12	.9	11	1.7	777
Truck and rail	S	S	S	S	S	S	1 609
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	134	4.8	125	9.0	S	S	58

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	4 054	100.0	424	100.0	308	100.0	240
Single modes	3 376	83.3	349	82.3	254	82.6	139
Truck ¹	3 237	79.8	347	81.8	252	81.8	100
For-hire truck	2 098	51.7	232	54.7	230	74.9	707
Private truck	1 137	28.0	115	27.1	21	6.9	27
Rail	S	S	S	S	S	S	1 402
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	95	2.3	2	.4	2	.7	1 361
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	367	9.1	16	3.8	S	S	544
Parcel, U.S. Postal Service or courier	304	7.5	8	2.0	4	1.4	542
Truck and rail	S	S	S	S	S	S	1 967
Truck and water	S	S	S	S	S	S	3 715
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	311	7.7	59	13.9	S	S	43
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	12 303	100.0	399	100.0	225	100.0	989
Single modes	7 317	59.5	337	84.4	171	75.9	283
Truck ¹	4 982	40.5	S	S	137	61.1	S
For-hire truck	3 781	30.7	72	18.1	74	32.7	825
Private truck	1 202	9.8	S	S	S	S	S
Rail	S	S	S	S	S	S	1 424
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	2 318	18.8	17	4.1	26	11.4	1 388
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	4 328	35.2	45	11.3	47	20.9	1 165
Parcel, U.S. Postal Service or courier	4 321	35.1	43	10.7	44	19.6	1 165
Truck and rail	S	S	S	S	S	S	1 243
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	659	5.4	17	4.3	7	3.2	707
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	2 653	100.0	229	100.0	105	100.0	479
Single modes	2 011	75.8	171	74.7	86	82.3	236
Truck ¹	1 959	73.8	169	73.7	84	80.0	143
For-hire truck	1 319	49.7	92	40.0	69	66.4	495
Private truck	639	24.1	77	33.7	14	13.6	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 260
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	9	8.3	774
Parcel, U.S. Postal Service or courier	S	S	S	S	9	8.3	774
Truck and rail	—	—	—	—	—	—	—
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 37, TRANSPORTATION EQUIPMENT, N.E.C.							
Total	S	S	S	S	10	100.0	1 169
Single modes	279	79.1	S	S	9	93.1	1 213
Truck ¹	99	28.0	S	S	7	74.4	956
For-hire truck	93	26.3	S	S	7	74.3	991
Private truck	S	S	S	S	S	S	355
Rail	S	S	S	S	S	S	245
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 420
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	—	.4	—	1.3	1 207
Parcel, U.S. Postal Service or courier	S	S	—	.4	—	1.3	1 207
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	152
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	1 959	100.0	26	100.0	20	100.0	914
Single modes	898	45.8	14	53.1	8	38.2	386
Truck ¹	642	32.8	13	49.9	6	32.1	182
For-hire truck	374	19.1	9	33.2	6	31.3	548
Private truck	S	S	S	S	S	S	21
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	256	13.1	1	3.2	1	6.1	1 357
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	972	49.6	12	44.8	12	59.1	984
Parcel, U.S. Postal Service or courier	972	49.6	12	44.8	12	59.1	984
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	375
SCTG 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	1 945	100.0	225	100.0	54	100.0	584
Single modes	S	S	217	96.2	46	83.8	97
Truck ¹	S	S	212	94.1	40	72.9	S
For-hire truck	261	13.4	38	16.8	34	62.3	653
Private truck	S	S	174	77.4	6	10.6	37
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 258
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	1 199
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 199
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	2	.8	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 40, MISCELLANEOUS MANUFACTURED PRODUCTS							
Total	7 901	100.0	S	S	717	100.0	969
Single modes	5 171	65.4	S	S	569	79.4	349
Truck ¹	5 028	63.6	S	S	552	77.0	317
For-hire truck	2 047	25.9	316	17.8	268	37.4	750
Private truck	S	S	S	S	S	S	116
Rail	S	S	S	S	S	S	268
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	87	1.1	1	—	2	.2	1 465
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	2 594	32.8	S	S	S	S	1 146
Parcel, U.S. Postal Service or courier	2 594	32.8	S	S	S	S	1 146
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	136	1.7	14	.8	S	S	262
SCTG 41, WASTE AND SCRAP							
Total	S	S	S	S	537	100.0	382
Single modes	S	S	S	S	S	S	S
Truck ¹	S	S	S	S	S	S	S
For-hire truck	S	S	S	S	S	S	S
Private truck	27	7.8	82	6.6	S	S	60
Rail	S	S	S	S	S	S	561
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	1 197
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	—
Truck and rail	S	S	S	S	S	S	1 197
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	675
SCTG 43, MIXED FREIGHT							
Total	2 180	100.0	1 159	100.0	161	100.0	560
Single modes	2 144	98.4	1 154	99.6	159	99.1	104
Truck ¹	2 144	98.4	1 154	99.6	159	99.1	104
For-hire truck	S	S	S	S	S	S	703
Private truck	2 133	97.8	1 153	99.5	158	98.5	103
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	1 232
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 232
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	25

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	426	100.0	76	100.0	S	S	543
Single modes	361	84.6	74	97.1	S	S	369
Truck ¹	357	83.8	74	97.1	S	S	364
For-hire truck	S	S	S	S	S	S	1 120
Private truck	S	S	S	S	S	S	135
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 556
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	841
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	841
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	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	76 537	100.0	127 429	100.0	47 456	100.0
NEW ENGLAND STATES						
Connecticut	200	.3	22	—	43	—
Maine	33	—	S	S	S	S
Massachusetts	680	.9	465	.4	961	2.0
New Hampshire	104	.1	15	—	30	—
Rhode Island	S	S	S	S	S	S
Vermont	17	—	S	S	S	S
MIDDLE ATLANTIC STATES						
New Jersey	695	.9	527	.4	1 023	2.2
New York	2 841	3.7	197	.2	344	.7
Pennsylvania	727	1.0	S	S	S	S
EAST NORTH CENTRAL STATES						
Illinois	2 408	3.1	5 014	3.9	6 436	13.6
Indiana	637	.8	199	.2	233	.5
Michigan	1 360	1.8	S	S	S	S
Ohio	1 189	1.6	190	.1	248	.5
Wisconsin	437	.6	S	S	S	S
WEST NORTH CENTRAL STATES						
Iowa	587	.8	725	.6	S	S
Kansas	1 064	1.4	1 264	1.0	829	1.7
Minnesota	535	.7	210	.2	207	.4
Missouri	874	1.1	1 476	1.2	950	2.0
Nebraska	898	1.2	1 054	.8	369	.8
North Dakota	S	S	S	S	S	S
South Dakota	294	.4	133	.1	65	.1
SOUTH ATLANTIC STATES						
Delaware	20	—	2	—	4	—
District of Columbia	34	—	1	—	2	—
Florida	1 569	2.0	384	.3	S	S
Georgia	1 140	1.5	149	.1	221	.5
Maryland	365	.5	43	—	72	.2
North Carolina	574	.8	111	—	185	.4
South Carolina	190	.2	S	S	S	S
Virginia	909	1.2	1 153	.9	2 191	4.6
West Virginia	34	—	2	—	3	—
EAST SOUTH CENTRAL STATES						
Alabama	393	.5	2 845	2.2	4 510	9.5
Kentucky	440	.6	S	S	S	S
Mississippi	160	.2	166	.1	227	.5
Tennessee	693	.9	S	S	S	S
WEST SOUTH CENTRAL STATES						
Arkansas	170	.2	118	—	110	.2
Louisiana	363	.5	33	—	42	—
Oklahoma	511	.7	187	.1	136	.3
Texas	4 137	5.4	3 895	3.1	3 582	7.5
MOUNTAIN STATES						
Arizona	1 291	1.7	626	.5	552	1.2
Colorado	33 329	43.5	88 685	69.6	5 121	10.8
Idaho	526	.7	381	.3	310	.7
Montana	641	.8	436	.3	335	.7
Nevada	534	.7	87	—	76	.2
New Mexico	909	1.2	937	.7	332	.7
Utah	1 747	2.3	1 556	1.2	695	1.5
Wyoming	1 353	1.8	S	S	536	1.1
PACIFIC STATES						
Alaska	S	S	2	—	3	—
California	6 656	8.7	2 017	1.6	2 545	5.4
Hawaii	139	.2	S	S	S	S
Oregon	561	.7	544	.4	751	1.6
Washington	1 048	1.4	383	.3	569	1.2

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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.

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	88 178	100.0	123 979	100.0	30 242	100.0
NEW ENGLAND STATES						
Connecticut	S	S	S	S	S	S
Maine	68	—	4	—	8	—
Massachusetts	857	1.0	60	—	120	.4
New Hampshire	S	S	11	—	22	—
Rhode Island	S	S	S	S	S	S
Vermont	85	.1	5	—	11	—
MIDDLE ATLANTIC STATES						
New Jersey	S	S	145	.1	258	.9
New York	1 531	1.7	149	.1	260	.9
Pennsylvania	1 113	1.3	206	.2	352	1.2
EAST NORTH CENTRAL STATES						
Illinois	2 386	2.7	705	.6	715	2.4
Indiana	1 078	1.2	315	.3	362	1.2
Michigan	1 418	1.6	387	.3	485	1.6
Ohio	1 893	2.1	424	.3	558	1.8
Wisconsin	2 468	2.8	596	.5	659	2.2
WEST NORTH CENTRAL STATES						
Iowa	995	1.1	693	.6	565	1.9
Kansas	1 821	2.1	S	S	1 821	6.0
Minnesota	1 299	1.5	S	S	S	S
Missouri	2 113	2.4	503	.4	385	1.3
Nebraska	1 725	2.0	5 301	4.3	1 537	5.1
North Dakota	67	—	46	—	46	.2
South Dakota	359	.4	133	.1	67	.2
SOUTH ATLANTIC STATES						
Delaware	S	S	2	—	3	—
District of Columbia	S	S	S	S	S	S
Florida	751	.9	307	.3	S	S
Georgia	743	.8	316	.3	474	1.6
Maryland	181	.2	S	S	S	S
North Carolina	1 004	1.1	148	.1	245	.8
South Carolina	323	.4	64	—	114	.4
Virginia	849	1.0	57	—	97	.3
West Virginia	S	S	S	S	S	S
EAST SOUTH CENTRAL STATES						
Alabama	S	S	249	.2	343	1.1
Kentucky	712	.8	325	.3	400	1.3
Mississippi	220	.2	88	—	110	.4
Tennessee	892	1.0	400	.3	516	1.7
WEST SOUTH CENTRAL STATES						
Arkansas	458	.5	322	.3	335	1.1
Louisiana	213	.2	416	.3	553	1.8
Oklahoma	871	1.0	773	.6	605	2.0
Texas	4 689	5.3	4 931	4.0	3 038	10.0
MOUNTAIN STATES						
Arizona	738	.8	191	.2	150	.5
Colorado	33 329	37.8	88 685	71.5	5 121	16.9
Idaho	665	.8	762	.6	731	2.4
Montana	163	.2	253	.2	229	.8
Nevada	290	.3	133	.1	118	.4
New Mexico	603	.7	692	.6	202	.7
Utah	1 229	1.4	569	.5	291	1.0
Wyoming	760	.9	6 407	5.2	2 329	7.7
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	8 803	10.0	1 579	1.3	1 790	5.9
Hawaii	2	—	1	—	S	S
Oregon	1 187	1.3	748	.6	1 072	3.5
Washington	885	1.0	559	.5	815	2.7

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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	4.0	—	9.3	—	18.4	—	13.2
Single modes	4.7	1.0	9.7	1.3	14.7	2.7	36.4
Truck	4.8	1.3	13.9	5.1	12.5	8.0	33.9
For-hire truck	5.7	1.5	15.3	3.0	11.4	5.1	12.5
Private truck	5.5	.8	18.5	6.5	33.9	5.5	32.8
Rail	11.7	.4	15.6	4.2	23.7	6.6	11.4
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	11.3	.6	29.8	—	36.7	.2	2.0
Pipeline	S	S	S	S	S	S	S
Multiple modes	5.6	1.1	S	S	S	S	4.2
Parcel, U.S. Postal Service or courier	6.6	1.3	16.9	—	22.6	.3	4.2
Truck and rail	35.2	.2	25.6	.3	29.5	.5	19.3
Truck and water	S	S	S	S	S	S	29.8
Rail and water	S	S	S	S	S	S	29.8
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	15.5	.5	33.7	.4	25.3	.3	25.6

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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	4.0	7.4	11.0	9.3	9.2	17.8	18.4	7.1	37.5	13.2	7.5	18.9
Single modes	4.7	6.6	9.8	9.7	9.1	18.4	14.7	7.2	33.0	36.4	7.0	23.6
Truck	4.8	5.9	9.1	13.9	10.3	23.3	12.5	7.2	22.4	33.9	7.5	23.6
For-hire truck	5.7	9.6	11.9	15.3	14.6	24.7	11.4	9.9	18.8	12.5	6.1	16.8
Private truck	5.5	4.8	9.7	18.5	10.9	31.4	33.9	4.4	85.3	32.8	9.6	24.1
Rail	11.7	15.9	34.8	15.6	18.1	37.3	23.7	14.8	66.5	11.4	8.9	17.7
Water	—	—	—	—	—	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—	—	—	—	—	—
Air (includes truck and air)	11.3	22.3	35.9	29.8	26.5	111.5	36.7	23.4	160.3	2.0	1.3	2.4
Pipeline	S	S	S	S	S	S	S	S	S	S	S	S
Multiple modes	5.6	8.4	18.0	S	23.8	S	S	27.7	S	4.2	3.4	6.1
Parcel, U.S. Postal Service or courier	6.6	8.0	19.0	16.9	5.2	37.4	22.6	7.1	60.2	4.2	3.4	6.2
Truck and rail	35.2	36.4	49.6	25.6	24.4	7.8	29.5	35.3	11.2	19.3	21.8	35.6
Truck and water	S	S	S	S	S	S	S	S	S	29.8	21.9	47.8
Rail and water	S	S	S	S	S	S	S	S	S	29.8	30.2	30.4
Other multiple modes	—	—	—	—	—	—	—	—	—	—	—	—
Other and unknown modes	15.5	40.1	55.8	33.7	26.1	63.8	25.3	29.8	34.0	25.6	19.7	38.0

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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	1.0	1.1	1.3	.9	2.7	3.3
Truck	1.3	1.3	5.1	3.3	8.0	3.3
For-hire truck	1.5	1.2	3.0	3.3	5.1	3.0
Private truck .....	.8	2.1	6.5	3.2	5.5	.8
Rail .....	.4	.4	4.2	3.2	6.6	5.4
Water	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-
Air (includes truck and air) .....	.6	.6	-	-	.2	-
Pipeline	S	S	S	S	S	S
Multiple modes	1.1	1.0	S	.9	S	3.4
Parcel, U.S. Postal Service or courier	1.3	.9	-	-	.3	-
Truck and rail .....	.2	.3	.3	.9	.5	3.5
Truck and water	S	S	S	S	S	S
Rail and water	S	S	S	S	S	S
Other multiple modes	-	-	-	-	-	-
Other and unknown modes .....	.5	.9	.4	.2	.3	.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-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	18.4	-	13.1
Truck	12.4	7.9	32.3
Rail	27.8	8.1	12.3
Shallow draft	S	S	31.6
Great Lakes	-	-	-
Deep draft	S	S	29.8
Air	37.0	.2	2.0
Parcel, U.S. Postal Service or courier	22.6	.3	4.2
Pipeline	S	S	S
Other and unknown modes	25.3	.3	25.7

- 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	4.0	—	9.3	—	18.4	—
Less than 50 miles	3.4	1.1	15.5	4.3	10.9	.8
50 to 99 miles	10.8	.6	19.6	1.3	21.1	1.4
100 to 249 miles	13.2	.6	15.4	2.0	15.6	1.6
250 to 499 miles	13.6	.7	15.3	1.2	17.8	3.5
500 to 749 miles	5.2	.3	16.2	.6	20.4	1.2
750 to 999 miles	5.3	.7	17.8	1.5	20.1	3.2
1,000 to 1,499 miles	6.4	1.0	27.0	2.5	28.0	6.0
1,500 to 1,999 miles	7.7	.5	32.0	.5	33.6	1.2
2,000 miles or more	39.1	.2	S	S	S	S
Single modes	4.7	—	9.7	—	14.7	—
Less than 50 miles	3.6	1.5	15.8	4.1	11.2	.8
50 to 99 miles	12.1	.6	20.3	1.3	21.8	1.4
100 to 249 miles	13.4	.6	14.9	2.0	15.3	1.6
250 to 499 miles	16.5	.8	16.7	1.1	19.7	3.7
500 to 749 miles	8.1	.6	16.6	.6	20.9	1.2
750 to 999 miles	8.1	1.0	15.5	1.2	16.9	3.4
1,000 to 1,499 miles	9.0	1.3	22.2	2.3	23.0	6.1
1,500 to 1,999 miles	9.1	.3	33.4	.5	35.0	1.5
2,000 miles or more	S	S	S	S	S	S
Truck	4.8	—	13.9	—	12.5	—
Less than 50 miles	3.6	1.7	16.2	2.2	11.9	.9
50 to 99 miles	12.5	.8	22.3	1.4	23.5	1.7
100 to 249 miles	14.4	.7	13.4	1.4	14.2	1.7
250 to 499 miles	18.8	1.0	16.6	.8	15.4	2.6
500 to 749 miles	8.8	.7	12.9	.4	13.2	1.6
750 to 999 miles	9.9	1.0	9.2	.3	10.5	1.7
1,000 to 1,499 miles	13.4	1.6	45.2	1.4	43.4	7.7
1,500 to 1,999 miles	10.9	.5	20.6	.2	20.4	1.7
2,000 miles or more	S	S	S	S	S	S
For-hire truck	5.7	—	15.3	—	11.4	—
Less than 50 miles	13.7	1.7	22.1	5.9	20.7	.7
50 to 99 miles	11.0	.6	40.3	5.1	41.3	2.4
100 to 249 miles	13.5	.5	22.3	2.2	24.8	1.8
250 to 499 miles	16.6	.8	9.9	1.2	10.0	1.1
500 to 749 miles	8.2	1.2	16.4	1.1	16.6	1.9
750 to 999 miles	10.6	1.8	11.7	1.3	13.1	2.8
1,000 to 1,499 miles	12.8	2.4	37.6	1.3	35.8	5.3
1,500 to 1,999 miles	12.1	1.1	21.4	.3	21.1	1.8
2,000 miles or more	S	S	S	S	S	S
Private truck	5.5	—	18.5	—	33.9	—
Less than 50 miles	3.2	3.3	21.5	3.4	16.5	3.7
50 to 99 miles	14.8	1.1	14.8	1.6	13.9	2.2
100 to 249 miles	17.9	1.1	15.7	2.0	15.5	2.9
250 to 499 miles	28.7	1.5	35.3	.9	34.2	4.6
500 to 749 miles	20.5	.5	18.4	.3	15.9	2.4
750 to 999 miles	22.4	.3	25.8	.3	27.7	2.4
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	37.1	.2	41.6	—	42.7	1.1
2,000 miles or more	—	—	—	—	—	—
Rail	11.7	—	15.6	—	23.7	—
Less than 50 miles	36.0	1.7	36.8	4.0	36.7	.2
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	44.3	5.8	26.4	6.3	23.8	4.5
250 to 499 miles	29.6	2.9	25.3	6.0	29.9	6.2
500 to 749 miles	20.6	3.4	26.6	1.3	31.8	1.8
750 to 999 miles	16.7	4.0	19.3	3.1	20.2	6.5
1,000 to 1,499 miles	29.0	4.2	35.3	7.1	35.0	9.6
1,500 to 1,999 miles	39.3	2.6	47.8	1.2	48.7	2.1
2,000 miles or more	—	—	—	—	—	—
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	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—
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	—	—	—	—	—	—

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	—	—	—	—	—	—
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	—	—	—	—	—	—
Air (includes truck and air)	11.3	—	29.8	—	36.7	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	S	S	39.7	.2	37.5	—
100 to 249 miles	44.0	—	39.0	.1	41.7	—
250 to 499 miles	37.2	1.1	47.7	2.0	48.9	1.2
500 to 749 miles	18.8	1.9	44.3	4.4	43.2	3.9
750 to 999 miles	14.5	5.6	34.2	9.8	35.2	11.0
1,000 to 1,499 miles	34.4	6.1	41.4	2.3	43.2	2.4
1,500 to 1,999 miles	41.6	5.0	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Pipeline	S	S	S	S	S	S
Less than 50 miles	—	—	—	—	—	—
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	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Multiple modes	5.6	—	S	S	S	S
Less than 50 miles	19.0	1.4	40.0	4.5	44.7	.5
50 to 99 miles	25.6	1.2	49.6	3.4	48.6	.7
100 to 249 miles	28.3	1.6	44.8	2.7	44.8	1.2
250 to 499 miles	20.8	1.7	S	S	S	S
500 to 749 miles	14.8	2.0	30.9	2.0	36.8	2.2
750 to 999 miles	9.9	2.2	S	S	S	S
1,000 to 1,499 miles	12.6	1.8	S	S	S	S
1,500 to 1,999 miles	12.8	1.3	19.0	1.2	18.8	2.9
2,000 miles or more	37.6	.5	S	S	S	S
Parcel, U.S. Postal Service or courier	6.6	—	16.9	—	22.6	—
Less than 50 miles	19.2	1.4	36.5	3.3	38.9	.2
50 to 99 miles	26.3	1.3	17.5	.8	18.1	.1
100 to 249 miles	28.5	1.6	17.7	1.0	16.3	.3
250 to 499 miles	20.4	1.8	19.5	1.6	18.3	1.0
500 to 749 miles	14.8	2.1	20.5	1.4	20.6	1.3
750 to 999 miles	11.4	2.0	18.9	1.3	19.5	1.1
1,000 to 1,499 miles	13.3	1.9	31.7	2.9	31.7	2.9
1,500 to 1,999 miles	12.2	1.2	21.2	.9	21.2	1.0
2,000 miles or more	31.1	.2	30.5	.2	27.9	.6
Truck and rail	35.2	—	25.6	—	29.5	—
Less than 50 miles	48.0	3.0	S	S	S	S
50 to 99 miles	43.1	2.0	S	S	S	S
100 to 249 miles	44.0	2.4	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	47.7	1.4	S	S	S	S
750 to 999 miles	41.7	7.5	23.9	12.5	21.7	9.9
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	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S
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	S	S	S	S	S	S

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	S	S	S	S	S	S
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	S	S	S	S	S	S
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—
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 and unknown modes	15.5	—	33.7	—	25.3	—
Less than 50 miles	18.0	6.4	30.3	6.0	44.2	2.0
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	44.7	1.2	S	S	S	S
250 to 499 miles	45.9	2.1	S	S	S	S
500 to 749 miles	S	S	38.1	.3	39.6	1.2
750 to 999 miles	29.4	6.0	28.1	3.6	27.6	8.2
1,000 to 1,499 miles	48.3	3.9	33.8	1.8	33.6	7.6
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	S	S	S	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-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	4.0	—	9.3	—	18.4	—	13.2
Less than 50 lb	6.9	1.2	S	S	9.8	.1	15.6
50 to 99 lb	11.5	.6	15.6	—	32.0	—	12.3
100 to 499 lb	10.3	1.2	7.7	.1	21.4	.2	16.5
500 to 749 lb	9.5	.3	9.6	—	16.7	—	18.5
750 to 999 lb	13.8	.4	20.0	—	16.6	—	19.5
1,000 to 9,999 lb	4.6	1.2	14.9	1.1	8.5	.6	13.1
10,000 to 49,999 lb	8.1	1.9	12.7	3.6	8.4	3.7	17.6
50,000 to 99,999 lb	38.1	1.7	11.5	1.6	31.4	4.3	29.7
100,000 lb or more	11.0	.5	17.2	4.6	27.7	7.4	19.2
Single modes	4.7	—	9.7	—	14.7	—	36.4
Less than 50 lb	17.1	1.2	S	S	31.2	—	S
50 to 99 lb	18.5	.5	14.5	—	15.0	—	25.1
100 to 499 lb	10.2	1.2	7.4	.1	13.7	—	8.1
500 to 749 lb	9.9	.4	10.2	—	17.7	—	19.9
750 to 999 lb	11.4	.4	20.9	—	16.9	—	19.8
1,000 to 9,999 lb	5.0	1.6	15.8	1.2	8.9	.5	14.2
10,000 to 49,999 lb	6.9	2.0	13.5	3.6	8.8	3.5	17.2
50,000 to 99,999 lb	38.6	2.1	11.7	1.6	31.8	4.4	30.2
100,000 lb or more	11.0	.6	17.5	4.5	22.7	7.1	19.5
Truck	4.8	—	13.9	—	12.5	—	33.9
Less than 50 lb	22.6	1.2	S	S	39.3	—	S
50 to 99 lb	11.3	.2	15.0	—	12.3	—	18.7
100 to 499 lb	11.1	1.2	7.5	.2	13.9	.2	7.3
500 to 749 lb	7.3	.3	10.2	.1	18.4	.1	20.7
750 to 999 lb	11.7	.4	21.4	.1	10.1	—	16.7
1,000 to 9,999 lb	5.1	1.9	15.8	1.6	9.6	1.2	14.3
10,000 to 49,999 lb	7.0	2.0	13.6	3.4	8.8	4.1	17.3
50,000 to 99,999 lb	40.8	2.5	12.0	3.4	37.7	5.6	34.9
100,000 lb or more	27.7	.6	43.5	5.2	26.9	2.5	S
For-hire truck	5.7	—	15.3	—	11.4	—	12.5
Less than 50 lb	34.8	1.5	25.3	—	20.2	—	24.2
50 to 99 lb	15.5	.1	26.8	—	13.3	—	18.2
100 to 499 lb	14.7	1.6	14.5	.2	20.1	.2	10.4
500 to 749 lb	12.3	.5	15.5	—	27.8	.1	10.7
750 to 999 lb	22.0	.7	9.9	—	11.6	—	13.2
1,000 to 9,999 lb	9.2	1.8	16.4	1.3	7.8	.6	11.5
10,000 to 49,999 lb	10.4	3.3	11.7	4.3	11.3	3.6	8.4
50,000 to 99,999 lb	23.2	1.0	22.8	6.1	32.1	2.8	35.0
100,000 lb or more	38.6	1.3	45.4	8.8	32.0	3.5	S
Private truck	5.5	—	18.5	—	33.9	—	32.8
Less than 50 lb	24.2	1.7	S	S	S	S	S
50 to 99 lb	13.5	.4	14.2	—	16.8	—	30.6
100 to 499 lb	17.1	2.2	7.0	.5	13.2	.4	9.5
500 to 749 lb	13.4	.6	13.1	.3	17.3	.3	15.9
750 to 999 lb	9.1	.3	24.6	.2	15.7	.2	23.2
1,000 to 9,999 lb	7.9	2.9	18.1	2.3	16.7	3.9	19.9
10,000 to 49,999 lb	7.9	2.1	19.7	4.0	16.1	6.5	28.8
50,000 to 99,999 lb	S	S	22.9	4.3	S	S	30.5
100,000 lb or more	S	S	S	S	49.9	1.9	S
Rail	11.7	—	15.6	—	23.7	—	11.4
Less than 50 lb	S	S	S	S	S	S	31.5
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	S	S	S	S	S	S	49.4
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	23.9
10,000 to 49,999 lb	46.5	3.7	S	S	S	S	19.1
50,000 to 99,999 lb	43.4	3.6	44.9	.5	49.9	.6	17.6
100,000 lb or more	15.7	5.9	15.8	1.0	23.8	1.0	11.1
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	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—

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							
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	—	—	—	—	—	—	—
Air (includes truck and air)	11.3	—	29.8	—	36.7	—	2.0
Less than 50 lb	16.8	6.0	43.0	4.5	45.5	5.0	1.9
50 to 99 lb	47.8	5.0	29.0	1.7	34.1	1.7	13.5
100 to 499 lb	20.0	3.8	21.0	8.2	24.0	9.4	4.9
500 to 749 lb	S	S	48.8	1.6	S	S	15.4
750 to 999 lb	S	S	S	S	S	S	12.2
1,000 to 9,999 lb	43.3	4.7	40.8	9.0	44.6	9.6	12.4
10,000 to 49,999 lb	S	S	S	S	S	S	29.8
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
Pipeline	S	S	S	S	S	S	S
Less than 50 lb	—	—	—	—	S	S	S
50 to 99 lb	—	—	—	—	S	S	S
100 to 499 lb	S	S	S	S	S	S	S
500 to 749 lb	S	S	S	S	S	S	S
750 to 999 lb	—	—	—	—	S	S	S
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	S
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	S	S	S	S	S	S	S
Multiple modes	5.6	—	S	S	S	S	4.2
Less than 50 lb	7.1	3.6	11.9	5.3	10.8	6.5	4.4
50 to 99 lb	16.8	1.8	28.9	2.4	38.8	3.1	8.2
100 to 499 lb	18.9	2.8	30.7	3.6	41.0	4.4	11.0
500 to 749 lb	38.0	.3	25.4	.3	38.5	.3	18.6
750 to 999 lb	S	S	25.8	.2	26.1	.2	17.8
1,000 to 9,999 lb	S	S	S	S	S	S	25.9
10,000 to 49,999 lb	47.7	2.0	34.6	8.9	39.3	9.9	9.3
50,000 to 99,999 lb	44.4	—	S	S	48.7	1.9	36.7
100,000 lb or more	46.6	.2	S	S	S	S	20.1
Parcel, U.S. Postal Service or courier	6.6	—	16.9	—	22.6	—	4.2
Less than 50 lb	7.1	4.4	11.9	5.1	10.8	6.4	4.4
50 to 99 lb	16.8	1.7	28.9	2.1	38.8	2.5	8.2
100 to 499 lb	18.8	2.8	30.8	3.5	41.1	4.4	11.0
500 to 749 lb	38.0	.3	25.3	.6	38.8	.5	18.6
750 to 999 lb	S	S	25.8	.3	26.1	.4	17.8
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	35.2	—	25.6	—	29.5	—	19.3
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	S	S	S	S	S	S	31.6
100 to 499 lb	S	S	S	S	S	S	31.4
500 to 749 lb	S	S	S	S	S	S	31.6
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	25.7
10,000 to 49,999 lb	43.3	11.7	33.8	12.5	36.9	10.6	9.3
50,000 to 99,999 lb	44.4	7.3	S	S	48.7	5.2	36.7
100,000 lb or more	S	S	S	S	S	S	25.1
Truck and water	S	S	S	S	S	S	29.8
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	S	S	S	S	S	S	31.6
10,000 to 49,999 lb	S	S	S	S	S	S	31.6
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—

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	S	S	S	S	S	S	29.8
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	S	S	S	S	S	S	29.8
Other multiple modes	—	—	—	—	—	—	—
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 and unknown modes	15.5	—	33.7	—	25.3	—	25.6
Less than 50 lb	18.9	4.3	27.9	.8	43.6	1.1	27.0
50 to 99 lb	27.5	1.1	28.4	.4	S	S	S
100 to 499 lb	15.9	1.9	19.3	1.1	27.4	.6	31.1
500 to 749 lb	34.1	.8	28.2	.9	39.7	.3	S
750 to 999 lb	31.7	.4	26.2	.2	31.7	.2	45.1
1,000 to 9,999 lb	20.9	5.9	32.9	4.7	27.9	6.2	22.2
10,000 to 49,999 lb	32.1	6.4	31.8	5.9	30.7	6.2	27.6
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	47.2	.2	44.7	.9	S	S	40.8

— 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	4.0	—	9.3	—	18.4	—	13.2
01	Live animals and live fish	—	—	—	—	—	—	—
02	Cereal grains	25.0	.3	26.0	1.9	37.6	4.1	33.9
03	Other agricultural products	31.9	.1	S	S	S	S	S
04	Animal feed and products of animal origin, n.e.c.	33.6	.6	26.2	1.0	16.5	.9	S
05	Meat, fish, seafood, and their preparations	15.2	.8	14.8	.2	16.8	.7	26.4
06	Milled grain products and preparations, and bakery products	33.6	.4	36.2	.4	36.8	.3	38.1
07	Other prepared foodstuffs and fats and oils	17.2	.7	30.7	1.3	28.3	1.2	S
08	Alcoholic beverages	19.6	.7	31.2	2.0	40.1	4.9	29.5
09	Tobacco products	S	S	S	S	S	S	30.2
10	Monumental or building stone	S	S	48.2	—	S	S	S
11	Natural sands	39.0	—	40.4	1.5	43.7	.2	41.6
12	Gravel and crushed stone	22.3	—	25.9	2.1	20.9	.2	13.1
13	Nonmetallic minerals n.e.c.	28.3	—	46.8	.6	36.8	—	S
14	Metallic ores and concentrates	40.5	.1	23.4	—	27.0	—	17.0
15	Coal	29.8	.3	29.7	6.4	31.6	8.0	S
17	Gasoline and aviation turbine fuel	41.1	.6	44.2	1.7	S	S	45.4
18	Fuel oils	33.7	.3	36.5	.7	S	S	S
19	Coal and petroleum products, n.e.c.	41.5	.4	S	S	49.2	1.2	S
20	Basic chemicals	S	S	42.8	.2	27.6	.3	26.5
21	Pharmaceutical products	34.8	1.0	40.0	—	S	S	25.5
22	Fertilizers	S	S	S	S	S	S	24.1
23	Chemical products and preparations, n.e.c.	36.2	1.8	28.3	—	24.5	.1	23.2
24	Plastics and rubber	12.0	.3	18.2	—	22.6	.2	22.7
25	Logs and other wood in the rough	42.2	—	44.0	—	46.7	—	30.3
26	Wood products	18.5	.6	12.3	.2	18.6	.2	31.9
27	Pulp, newsprint, paper, and paperboard	20.6	.1	17.3	—	35.6	—	28.9
28	Paper or paperboard articles	9.8	.1	22.7	.1	24.5	.1	22.7
29	Printed products	12.8	.7	28.0	.3	22.9	.3	10.8
30	Textiles, leather, and articles of textiles or leather	18.9	.5	26.7	—	18.1	—	10.3
31	Nonmetallic mineral products	15.2	.4	20.6	2.4	11.7	.5	22.6
32	Base metal in primary or semifinished forms and in finished basic shapes	21.6	.6	15.0	.2	28.2	1.0	19.8
33	Articles of base metal	9.2	.4	14.3	.2	26.5	.7	19.1
34	Machinery	19.3	.9	16.3	—	27.5	.4	21.6
35	Electronic and other electrical equipment and components and office equipment	14.0	2.4	41.0	.1	30.5	.1	10.9
36	Motorized and other vehicles (including parts)	25.7	.8	22.3	—	32.4	.1	22.2
37	Transportation equipment, n.e.c.	S	S	S	S	33.7	—	18.5
38	Precision instruments and apparatus	22.0	.6	20.4	—	23.5	—	10.2
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	49.3	1.2	27.1	—	20.2	—	24.4
40	Miscellaneous manufactured products	23.7	1.8	S	S	35.0	.4	8.7
41	Waste and scrap	S	S	S	S	47.9	.7	46.0
43	Mixed freight	22.2	.7	21.2	.2	30.6	.1	26.5
--	Commodity unknown	40.9	.2	42.3	—	S	S	25.2

— 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	4.0	—	9.3	—	18.4	—	13.2
Single modes	4.7	1.0	9.7	1.3	14.7	2.7	36.4
Truck	4.8	1.3	13.9	5.1	12.5	8.0	33.9
For-hire truck	5.7	1.5	15.3	3.0	11.4	5.1	12.5
Private truck	5.5	.8	18.5	6.5	33.9	5.5	32.8
Rail	11.7	.4	15.6	4.2	23.7	6.6	11.4
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	11.3	.6	29.8	—	36.7	.2	2.0
Pipeline	S	S	S	S	S	S	S
Multiple modes	5.6	1.1	S	S	S	S	4.2
Parcel, U.S. Postal Service or courier	6.6	1.3	16.9	—	22.6	.3	4.2
Truck and rail	35.2	.2	25.6	.3	29.5	.5	19.3
Truck and water	S	S	S	S	S	S	29.8
Rail and water	S	S	S	S	S	S	29.8
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	15.5	.5	33.7	.4	25.3	.3	25.6
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—
SCTG 02, CEREAL GRAINS							
Total	25.0	—	26.0	—	37.6	—	33.9
Single modes	25.8	2.9	26.9	2.6	37.6	3.8	33.3
Truck	27.8	7.3	29.0	7.1	37.4	9.8	24.5
For-hire truck	24.9	9.6	27.9	9.6	26.2	7.4	23.3
Private truck	39.5	10.4	40.4	10.8	S	S	19.8
Rail	38.5	6.6	39.8	6.6	42.6	8.7	21.0
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	—	—	—	—	—	—	—
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	31.6

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	31.9	—	S	S	S	S	S
Single modes	33.4	5.6	S	S	S	S	S
Truck	33.4	5.6	S	S	S	S	S
For-hire truck	49.0	12.5	S	S	S	S	16.9
Private truck	23.0	12.9	25.9	15.7	41.9	15.1	S
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	30.2
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	30.7
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	28.6
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	33.6	—	26.2	—	16.5	—	S
Single modes	23.1	7.3	28.9	5.6	21.4	7.0	S
Truck	24.6	6.3	29.7	5.7	18.2	6.7	S
For-hire truck	22.8	9.7	43.6	9.1	23.9	7.9	18.8
Private truck	38.1	12.1	39.2	10.3	39.6	10.8	32.7
Rail	S	S	S	S	S	S	26.1
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	36.9	5.5	43.1	3.0	43.2	6.1	18.2
Parcel, U.S. Postal Service or courier	43.2	—	40.8	—	38.8	—	22.8
Truck and rail	37.0	5.5	43.1	3.0	43.3	6.1	21.4
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	15.2	—	14.8	—	16.8	—	26.4
Single modes	15.0	.3	14.5	.8	16.8	—	26.3
Truck	14.7	.6	13.9	2.0	15.5	3.1	26.8
For-hire truck	21.3	10.2	20.0	10.9	21.4	11.0	4.2
Private truck	43.8	9.9	S	S	S	S	25.1
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	28.0
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	28.9
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	28.9
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	32.1

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 06, MILLED GRAIN PRODUCTS AND PREPARATIONS, AND BAKERY PRODUCTS							
Total	33.6	—	36.2	—	36.8	—	38.1
Single modes	38.7	7.5	39.2	7.0	37.3	1.0	40.4
Truck	38.9	7.5	39.9	7.1	38.7	3.7	40.4
For-hire truck	39.8	9.8	38.0	9.3	39.3	9.8	19.3
Private truck	41.0	8.9	42.4	9.6	45.9	9.1	33.4
Rail	S	S	S	S	S	S	29.7
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	S
SCTG 07, OTHER PREPARED FOODSTUFFS AND FATS AND OILS							
Total	17.2	—	30.7	—	28.3	—	S
Single modes	17.1	1.0	30.9	1.0	28.6	1.2	S
Truck	17.1	1.0	31.1	1.5	29.1	6.2	S
For-hire truck	23.5	6.0	45.6	8.8	45.5	8.6	18.8
Private truck	20.3	5.5	32.7	8.5	28.1	8.2	S
Rail	39.2	.5	43.9	1.4	43.6	6.2	24.1
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	S	S	S	S	S	S	30.5
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	32.1
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	45.8
SCTG 08, ALCOHOLIC BEVERAGES							
Total	19.6	—	31.2	—	40.1	—	29.5
Single modes	19.2	.5	31.2	.7	40.3	.6	29.4
Truck	11.2	10.3	16.8	16.1	S	S	19.0
For-hire truck	28.9	6.5	27.3	7.8	30.5	10.6	20.5
Private truck	14.4	13.3	24.6	16.5	S	S	15.3
Rail	37.5	9.9	41.1	15.7	43.0	19.7	22.7
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	28.0
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	28.0
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.6

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	S	S	S	S	S	S	30.2
Single modes	S	S	S	S	S	S	30.6
Truck	S	S	S	S	S	S	30.4
For-hire truck	S	S	S	S	S	S	31.6
Private truck	S	S	S	S	S	S	26.5
Rail	-	-	-	-	-	-	-
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	S	S	S	S	S	S	30.0
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	30.0
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 10, MONUMENTAL OR BUILDING STONE							
Total	S	S	48.2	-	S	S	S
Single modes	S	S	48.2	-	S	S	S
Truck	S	S	S	S	S	S	S
For-hire truck	32.6	14.8	S	S	S	S	S
Private truck	S	S	S	S	S	S	36.3
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	-	-	-	-	-	-	-
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 11, NATURAL SANDS							
Total	39.0	-	40.4	-	43.7	-	41.6
Single modes	37.6	1.8	39.4	1.5	39.1	5.8	47.2
Truck	37.7	2.7	39.4	1.6	36.0	7.9	47.4
For-hire truck	44.5	13.6	S	S	48.7	13.4	S
Private truck	42.0	13.5	40.2	12.5	36.6	13.1	26.7
Rail	S	S	S	S	S	S	28.4
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	37.9

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	22.3	—	25.9	—	20.9	—	13.1
Single modes	22.3	.1	25.9	.1	20.9	—	13.1
Truck	22.3	.1	25.9	.1	20.9	—	13.1
For-hire truck	21.5	8.6	26.1	9.6	21.5	8.5	28.7
Private truck	29.1	8.5	37.8	9.6	28.9	8.4	17.8
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	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 13, NONMETALLIC MINERALS N.E.C.							
Total	28.3	—	46.8	—	36.8	—	S
Single modes	29.1	4.7	47.0	2.6	37.9	5.6	S
Truck	35.1	12.1	S	S	35.1	18.5	S
For-hire truck	S	S	36.8	14.5	40.6	16.6	29.9
Private truck	47.5	15.3	S	S	S	S	21.3
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	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	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	40.5	—	23.4	—	27.0	—	17.0
Single modes	S	S	S	S	S	S	28.0
Truck	S	S	S	S	S	S	28.0
For-hire truck	S	S	S	S	S	S	28.0
Private truck	S	S	S	S	S	S	31.6
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	34.4	11.4	36.4	11.4	18.7
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	S	S	34.4	11.4	36.4	11.4	18.7
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—

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	29.8	—	29.7	—	31.6	—	S
Single modes	31.2	3.2	31.4	3.9	25.4	5.5	S
Truck	S	S	S	S	S	S	S
For-hire truck	S	S	S	S	45.7	.8	S
Private truck	S	S	S	S	S	S	26.0
Rail	21.4	10.2	21.2	9.7	25.5	5.4	20.3
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	29.8
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	S	S	S	S	S	S	29.8
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 17, GASOLINE AND AVIATION TURBINE FUEL							
Total	41.1	—	44.2	—	S	S	45.4
Single modes	41.2	.5	44.3	.5	S	S	46.1
Truck	36.2	5.6	39.8	3.9	S	S	46.7
For-hire truck	S	S	S	S	S	S	33.0
Private truck	S	S	S	S	S	S	S
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	—	—	—	—	—	—	—
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	32.7
SCTG 18, FUEL OILS							
Total	33.7	—	36.5	—	S	S	S
Single modes	33.8	.6	36.5	.4	S	S	S
Truck	34.5	3.0	38.0	3.8	S	S	S
For-hire truck	S	S	S	S	S	S	31.7
Private truck	41.7	15.3	48.3	15.2	S	S	30.2
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	S	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

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	41.5	—	S	S	49.2	—	S
Single modes	42.9	3.6	S	S	S	S	S
Truck	44.8	7.4	S	S	S	S	S
For-hire truck	S	S	S	S	S	S	32.3
Private truck	38.3	10.0	46.2	12.9	S	S	23.3
Rail	S	S	S	S	S	S	30.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	46.1
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	46.1
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	30.2
SCTG 20, BASIC CHEMICALS							
Total	S	S	42.8	—	27.6	—	26.5
Single modes	46.1	9.5	44.4	8.8	31.0	9.8	35.5
Truck	S	S	47.4	13.2	41.0	10.6	31.0
For-hire truck	S	S	S	S	S	S	32.0
Private truck	36.5	11.4	S	S	S	S	45.9
Rail	47.6	1.4	47.8	7.6	S	S	26.5
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	31.6
Pipeline	S	S	S	S	S	S	S
Multiple modes	S	S	S	S	S	S	22.2
Parcel, U.S. Postal Service or courier	48.4	9.1	S	S	S	S	24.7
Truck and rail	S	S	S	S	S	S	28.2
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	44.1	1.4	S	S	S	S	S
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	34.8	—	40.0	—	S	S	25.5
Single modes	44.0	12.9	40.6	9.3	32.5	11.4	S
Truck	S	S	42.1	7.4	33.8	9.7	S
For-hire truck	S	S	40.6	8.3	35.8	11.2	S
Private truck	S	S	S	S	S	S	S
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	20.0
Pipeline	—	—	—	—	S	S	S
Multiple modes	38.2	12.6	45.4	8.9	S	S	17.4
Parcel, U.S. Postal Service or courier	38.2	12.6	45.4	8.9	S	S	17.4
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	30.2

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 22, FERTILIZERS							
Total	S	S	S	S	S	S	24.1
Single modes	42.2	16.9	S	S	S	S	36.8
Truck	42.2	16.9	S	S	S	S	36.8
For-hire truck	S	S	S	S	S	S	S
Private truck	48.6	16.1	S	S	S	S	40.9
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	30.6
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	36.2	—	28.3	—	24.5	—	23.2
Single modes	38.5	10.3	33.1	7.7	30.1	9.5	S
Truck	38.5	10.3	34.5	8.5	30.3	9.2	S
For-hire truck	39.4	11.6	33.4	7.0	31.2	9.3	S
Private truck	37.8	6.0	40.2	3.8	34.8	2.5	S
Rail	S	S	S	S	S	S	38.2
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	28.7
Pipeline	—	—	—	—	S	S	S
Multiple modes	45.9	9.6	39.4	6.7	S	S	15.2
Parcel, U.S. Postal Service or courier	47.8	9.7	S	S	S	S	15.0
Truck and rail	S	S	S	S	S	S	30.1
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	40.7	3.2	43.7	3.5	49.7	4.5	S
SCTG 24, PLASTICS AND RUBBER							
Total	12.0	—	18.2	—	22.6	—	22.7
Single modes	11.7	5.9	20.7	4.1	25.3	6.0	40.9
Truck	11.9	6.0	19.9	4.0	24.8	6.2	31.2
For-hire truck	20.0	7.0	26.0	8.4	26.1	7.6	15.4
Private truck	21.4	5.9	24.0	7.2	35.1	4.4	25.7
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	42.5	.4	S	S	S	S	15.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	34.2	6.7	49.2	4.2	47.8	6.1	17.8
Parcel, U.S. Postal Service or courier	34.2	6.7	49.5	4.2	48.5	6.1	17.8
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	37.6	1.8	45.9	1.6	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 25, LOGS AND OTHER WOOD IN THE ROUGH							
Total	42.2	—	44.0	—	46.7	—	30.3
Single modes	42.2	—	44.0	—	46.7	—	30.3
Truck	44.0	6.3	45.5	5.2	48.0	12.0	34.2
For-hire truck	48.1	10.1	47.8	10.0	49.2	11.5	27.8
Private truck	45.2	12.3	44.5	11.8	S	S	42.7
Rail	S	S	S	S	S	S	29.8
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	—	—	—	—	—	—	—
SCTG 26, WOOD PRODUCTS							
Total	18.5	—	12.3	—	18.6	—	31.9
Single modes	19.6	2.4	12.2	1.0	19.1	1.4	49.4
Truck	19.8	2.4	12.2	1.1	19.9	3.2	S
For-hire truck	39.3	7.0	24.9	8.5	26.6	8.8	19.2
Private truck	26.3	7.5	18.9	8.2	22.5	7.7	15.8
Rail	S	S	S	S	S	S	30.1
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	31.5
Pipeline	—	—	—	—	S	S	S
Multiple modes	44.5	1.7	38.8	.2	S	S	13.1
Parcel, U.S. Postal Service or courier	44.5	1.7	38.8	.2	S	S	13.1
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	30.1
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	20.6	—	17.3	—	35.6	—	28.9
Single modes	20.8	2.3	16.9	2.3	37.4	3.7	39.0
Truck	20.8	2.3	16.9	2.3	37.4	3.7	39.0
For-hire truck	25.8	7.2	22.4	7.1	45.3	9.6	17.9
Private truck	28.5	7.8	22.3	6.9	38.3	7.7	18.7
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	48.7	.9	S	S	49.8	1.4	35.4
Parcel, U.S. Postal Service or courier	48.7	.9	S	S	49.8	1.4	35.4
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	27.7

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 28, PAPER OR PAPERBOARD ARTICLES							
Total	9.8	—	22.7	—	24.5	—	22.7
Single modes	13.7	6.5	24.3	6.3	30.4	9.3	31.9
Truck	13.7	6.5	24.3	6.3	30.4	9.3	32.1
For-hire truck	23.7	7.3	44.6	8.3	38.2	8.7	38.7
Private truck	17.6	7.9	21.7	8.1	33.7	4.9	37.9
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	31.6
Pipeline	—	—	—	—	—	—	S
Multiple modes	S	S	S	S	S	S	14.9
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	14.9
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	48.4	.5	S	S	S	S	S
SCTG 29, PRINTED PRODUCTS							
Total	12.8	—	28.0	—	22.9	—	10.8
Single modes	17.0	9.1	34.1	9.6	49.6	12.2	S
Truck	16.5	7.3	34.4	9.8	S	S	S
For-hire truck	31.3	4.0	S	S	S	S	15.8
Private truck	18.5	5.0	34.5	9.6	37.3	4.7	42.0
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	12.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	27.0	8.4	24.5	8.9	28.0	11.5	4.8
Parcel, U.S. Postal Service or courier	27.0	8.4	24.5	8.9	28.0	11.5	4.8
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	36.5	1.9	S	S	S	S	23.5
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	18.9	—	26.7	—	18.1	—	10.3
Single modes	19.5	5.1	32.3	7.0	23.9	7.1	17.6
Truck	19.7	5.3	32.5	7.1	24.5	7.5	18.3
For-hire truck	21.8	3.3	23.8	4.8	24.9	5.9	11.7
Private truck	30.7	5.8	40.2	10.7	37.1	6.7	26.7
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	21.1
Pipeline	—	—	—	—	S	S	S
Multiple modes	21.8	4.8	21.8	6.4	11.6	7.0	9.2
Parcel, U.S. Postal Service or courier	21.8	4.8	21.8	6.4	11.6	7.0	9.2
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	48.7	1.5	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 31, NONMETALLIC MINERAL PRODUCTS							
Total	15.2	—	20.6	—	11.7	—	22.6
Single modes	15.6	1.9	21.2	1.6	14.3	3.9	17.2
Truck	16.5	2.9	22.6	3.2	12.5	5.4	14.1
For-hire truck	36.4	4.5	20.0	6.0	24.0	4.6	S
Private truck	11.8	5.2	27.2	8.7	18.0	5.9	14.8
Rail	38.5	1.9	30.7	2.9	27.2	6.7	14.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	16.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	28.1	1.4	45.0	1.4	28.2	2.3	16.8
Parcel, U.S. Postal Service or courier	41.2	1.0	32.1	—	36.1	—	17.3
Truck and rail	31.0	.7	45.1	1.4	28.5	2.3	S
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	45.4	.8	41.3	.8	39.3	3.3	31.6
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	21.6	—	15.0	—	28.2	—	19.8
Single modes	22.9	2.6	15.8	1.6	29.3	6.9	34.3
Truck	24.7	7.1	15.7	9.5	22.5	13.0	36.2
For-hire truck	26.1	4.4	16.0	4.5	24.7	11.8	14.5
Private truck	26.4	4.4	19.7	7.1	24.4	2.7	S
Rail	45.1	6.6	44.9	10.3	47.5	13.9	26.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	26.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	31.8	2.3	23.2	.1	30.0	.2	13.1
Parcel, U.S. Postal Service or courier	31.8	2.3	23.2	.1	30.0	.2	13.1
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	34.0	1.3	42.9	1.6	S	S	S
SCTG 33, ARTICLES OF BASE METAL							
Total	9.2	—	14.3	—	26.5	—	19.1
Single modes	8.1	3.1	15.7	3.3	29.9	7.6	46.6
Truck	8.0	2.7	16.6	7.1	23.6	8.8	35.5
For-hire truck	14.5	5.4	25.7	5.4	28.2	8.1	17.4
Private truck	21.0	4.8	25.3	7.3	19.7	4.3	28.5
Rail	48.2	2.5	43.4	8.9	S	S	26.0
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	27.5
Pipeline	—	—	—	—	S	S	S
Multiple modes	28.5	3.4	34.9	1.6	43.6	4.4	11.2
Parcel, U.S. Postal Service or courier	30.5	3.5	34.0	.4	41.4	2.0	11.1
Truck and rail	S	S	S	S	S	S	28.1
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	31.5	1.5	39.3	3.2	S	S	32.2

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 34, MACHINERY							
Total	19.3	—	16.3	—	27.5	—	21.6
Single modes	22.5	4.3	17.6	4.6	29.9	4.4	31.6
Truck	22.8	4.2	17.6	4.5	30.3	4.5	31.9
For-hire truck	34.9	7.6	28.1	9.0	34.3	9.0	7.3
Private truck	24.3	7.0	26.5	8.7	39.0	8.0	47.9
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	47.6	1.1	43.4	.2	38.1	.7	14.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	13.8	2.6	33.6	1.3	S	S	9.3
Parcel, U.S. Postal Service or courier	16.8	2.9	16.8	.8	18.2	1.5	9.3
Truck and rail	S	S	S	S	S	S	29.8
Truck and water	S	S	S	S	S	S	29.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	32.1	3.6	37.9	4.5	S	S	22.6
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	14.0	—	41.0	—	30.5	—	10.9
Single modes	13.6	3.9	48.3	4.2	38.2	3.9	45.7
Truck	15.4	3.8	S	S	43.7	7.2	S
For-hire truck	21.2	4.3	14.2	7.4	17.1	8.4	10.9
Private truck	23.2	3.3	S	S	S	S	S
Rail	S	S	S	S	S	S	29.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	16.1	2.5	26.7	2.4	31.0	5.9	4.7
Pipeline	—	—	—	—	S	S	S
Multiple modes	20.7	4.4	17.7	3.6	20.4	3.5	5.0
Parcel, U.S. Postal Service or courier	20.8	4.4	18.9	3.5	22.0	3.2	5.0
Truck and rail	S	S	S	S	S	S	29.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	42.4	1.5	28.5	1.9	38.7	2.0	24.1
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	25.7	—	22.3	—	32.4	—	22.2
Single modes	24.1	3.5	17.8	4.9	31.7	5.1	36.6
Truck	23.6	3.8	17.7	5.0	32.3	5.4	46.2
For-hire truck	23.3	5.1	17.9	6.5	32.2	5.9	11.4
Private truck	33.8	4.1	24.4	5.0	40.8	2.5	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	18.9
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	42.1	5.1	15.4
Parcel, U.S. Postal Service or courier	S	S	S	S	42.1	5.1	15.4
Truck and rail	—	—	—	—	—	—	—
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 37, TRANSPORTATION EQUIPMENT, N.E.C.							
Total	S	S	S	S	33.7	—	18.5
Single modes	47.7	5.2	S	S	35.5	4.3	18.6
Truck	34.9	15.9	S	S	37.8	15.0	24.8
For-hire truck	35.4	13.4	S	S	37.8	16.7	24.3
Private truck	S	S	S	S	S	S	39.7
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	23.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	40.2	5.2	40.6	3.8	19.6
Parcel, U.S. Postal Service or courier	S	S	40.2	5.2	40.6	3.8	19.6
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	44.6
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	22.0	—	20.4	—	23.5	—	10.2
Single modes	21.6	8.8	21.5	8.3	32.9	9.3	38.3
Truck	24.3	6.7	23.1	7.4	35.8	7.0	49.2
For-hire truck	29.2	5.1	34.0	7.8	37.1	6.8	24.8
Private truck	S	S	S	S	S	S	21.6
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	32.7	4.8	45.2	4.2	48.5	5.8	4.9
Pipeline	—	—	—	—	S	S	S
Multiple modes	29.1	7.7	31.1	8.2	28.9	9.5	8.3
Parcel, U.S. Postal Service or courier	29.1	7.7	31.1	8.2	28.9	9.5	8.3
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	33.4
SCTG 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	49.3	—	27.1	—	20.2	—	24.4
Single modes	S	S	28.5	4.2	24.3	9.1	47.9
Truck	S	S	29.3	4.8	28.3	11.3	S
For-hire truck	29.7	9.8	29.4	5.3	35.7	12.6	13.7
Private truck	S	S	36.1	5.4	39.6	10.1	25.0
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	28.4
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	20.7
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	20.7
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	43.0	.3	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 40, MISCELLANEOUS MANUFACTURED PRODUCTS							
Total	23.7	—	S	S	35.0	—	8.7
Single modes	36.9	7.1	S	S	43.4	8.5	12.5
Truck	38.4	7.7	S	S	45.1	9.1	12.1
For-hire truck	20.1	6.0	15.4	12.9	13.8	12.0	12.9
Private truck	S	S	S	S	S	S	25.8
Rail	S	S	S	S	S	S	48.7
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	49.2	1.6	37.6	—	33.4	.2	4.9
Pipeline	—	—	—	—	S	S	S
Multiple modes	33.0	7.2	S	S	S	S	5.1
Parcel, U.S. Postal Service or courier	33.0	7.2	S	S	S	S	5.1
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	30.8	1.3	43.3	.4	S	S	45.6
SCTG 41, WASTE AND SCRAP							
Total	S	S	S	S	47.9	—	46.0
Single modes	S	S	S	S	S	S	S
Truck	S	S	S	S	S	S	S
For-hire truck	S	S	S	S	S	S	S
Private truck	44.8	1.7	43.5	1.9	S	S	33.6
Rail	S	S	S	S	S	S	26.4
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	21.3
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	21.3
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.6
SCTG 43, MIXED FREIGHT							
Total	22.2	—	21.2	—	30.6	—	26.5
Single modes	22.8	1.7	21.3	.4	31.0	.9	27.8
Truck	22.8	1.7	21.3	.4	31.0	.9	27.8
For-hire truck	S	S	S	S	S	S	29.6
Private truck	23.0	1.9	21.4	.5	31.3	1.0	26.2
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	27.3
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	27.3
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.6

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	40.9	—	42.3	—	S	S	25.2
Single modes	48.7	12.7	43.9	14.6	S	S	35.2
Truck	49.3	12.9	43.9	14.6	S	S	36.1
For-hire truck	S	S	S	S	S	S	25.5
Private truck	S	S	S	S	S	S	29.6
Rail	—	—	—	—	—	—	—
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	S	S	S	S	S	S	27.1
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	27.1
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	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	4.0	—	9.3	—	18.4	—
NEW ENGLAND STATES						
Connecticut	31.7	—	34.8	—	34.8	—
Maine	35.0	—	S	S	S	S
Massachusetts	16.0	.1	43.6	.2	43.8	.5
New Hampshire	28.0	—	47.4	—	47.1	—
Rhode Island	S	S	S	S	S	S
Vermont	44.1	—	S	S	S	S
MIDDLE ATLANTIC STATES						
New Jersey	15.2	.1	44.9	.2	45.0	.7
New York	24.4	1.0	23.1	—	24.3	.1
Pennsylvania	18.0	.2	S	S	S	S
EAST NORTH CENTRAL STATES						
Illinois	15.3	.4	30.8	1.3	31.4	3.8
Indiana	26.4	.2	41.7	—	43.6	.2
Michigan	31.4	.5	S	S	S	S
Ohio	19.2	.3	20.2	—	21.2	.1
Wisconsin	13.0	—	S	S	S	S
WEST NORTH CENTRAL STATES						
Iowa	14.9	.1	44.6	.3	S	S
Kansas	16.2	.2	36.5	.5	44.9	2.1
Minnesota	13.3	.1	34.3	—	35.5	.2
Missouri	17.6	.2	38.3	.7	32.2	1.5
Nebraska	16.0	.2	16.6	.2	14.0	.2
North Dakota	S	S	S	S	S	S
South Dakota	15.3	—	27.4	—	28.3	—
SOUTH ATLANTIC STATES						
Delaware	21.4	—	36.2	—	35.1	—
District of Columbia	45.1	—	43.3	—	43.1	—
Florida	17.3	.3	49.9	.1	S	S
Georgia	13.3	.2	37.2	—	37.8	.2
Maryland	19.6	.1	27.2	—	26.8	—
North Carolina	13.1	—	40.3	—	41.2	.1
South Carolina	25.3	—	S	S	S	S
Virginia	22.7	.3	39.0	.4	39.3	1.3
West Virginia	28.0	—	41.0	—	42.2	—
EAST SOUTH CENTRAL STATES						
Alabama	19.5	.1	39.3	1.1	39.6	3.1
Kentucky	41.2	.2	S	S	S	S
Mississippi	34.8	—	39.0	—	40.1	.1
Tennessee	22.4	.2	S	S	S	S
WEST SOUTH CENTRAL STATES						
Arkansas	20.8	—	37.0	—	34.6	—
Louisiana	40.5	.2	47.0	—	48.1	.1
Oklahoma	36.0	.3	27.1	—	29.7	.1
Texas	5.3	.3	9.8	.5	10.6	1.6
MOUNTAIN STATES						
Arizona	12.1	.2	22.8	—	27.8	.3
Colorado	5.1	1.0	12.6	3.9	10.0	2.2
Idaho	24.5	.1	31.4	.1	29.8	.1
Montana	35.7	.2	20.5	—	20.3	.3
Nevada	21.7	.2	22.7	—	24.0	.1
New Mexico	17.1	.2	30.0	.2	23.0	.1
Utah	22.3	.4	37.7	.6	31.9	.7
Wyoming	17.4	.3	S	S	38.9	1.1
PACIFIC STATES						
Alaska	S	S	32.8	—	28.6	—
California	6.8	.5	26.4	.4	27.7	1.1
Hawaii	42.0	—	S	S	S	S
Oregon	16.3	.1	30.3	.1	29.6	.2
Washington	14.9	.2	27.6	.1	30.4	.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-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	3.9	-	7.7	-	4.8	-
NEW ENGLAND STATES						
Connecticut	S	S	S	S	S	S
Maine	34.8	-	36.1	-	36.4	-
Massachusetts	18.2	.2	27.2	-	27.4	.1
New Hampshire	S	S	19.9	-	19.6	-
Rhode Island	S	S	S	S	S	S
Vermont	27.8	-	48.0	-	46.7	-
MIDDLE ATLANTIC STATES						
New Jersey	S	S	42.6	-	41.9	.3
New York	24.5	.4	11.2	-	11.7	.1
Pennsylvania	14.4	.2	15.3	-	16.3	.2
EAST NORTH CENTRAL STATES						
Illinois	14.0	.4	13.3	-	13.7	.3
Indiana	19.5	.2	19.6	-	19.4	.2
Michigan	22.5	.4	23.3	-	23.7	.5
Ohio	21.1	.5	9.4	-	9.0	.2
Wisconsin	43.3	1.0	25.8	-	24.8	.6
WEST NORTH CENTRAL STATES						
Iowa	11.1	.1	27.2	.1	28.4	.5
Kansas	25.8	.5	S	S	48.9	2.6
Minnesota	13.0	.2	S	S	S	S
Missouri	24.4	.5	20.9	-	20.9	.3
Nebraska	16.2	.3	33.4	1.8	30.2	1.3
North Dakota	27.2	-	35.9	-	37.3	-
South Dakota	43.9	.2	26.4	-	23.8	-
SOUTH ATLANTIC STATES						
Delaware	S	S	35.8	-	35.7	-
District of Columbia	S	S	S	S	S	S
Florida	11.4	.1	48.3	.1	S	S
Georgia	23.8	.2	23.2	-	22.2	.3
Maryland	12.6	-	S	S	S	S
North Carolina	17.4	.2	12.8	-	12.9	.1
South Carolina	28.8	-	26.2	-	28.2	-
Virginia	40.3	.4	16.5	-	16.9	-
West Virginia	S	S	S	S	S	S
EAST SOUTH CENTRAL STATES						
Alabama	S	S	21.4	-	21.1	.2
Kentucky	21.8	.2	39.6	.1	40.0	.4
Mississippi	17.0	-	21.0	-	21.7	-
Tennessee	12.9	.1	21.2	-	21.2	.4
WEST SOUTH CENTRAL STATES						
Arkansas	15.8	-	19.8	-	21.3	.2
Louisiana	24.5	-	35.4	-	40.6	.7
Oklahoma	22.1	.2	22.3	.2	24.3	.5
Texas	11.5	.7	27.5	1.2	15.0	1.3
MOUNTAIN STATES						
Arizona	36.1	.3	22.6	-	22.7	.1
Colorado	5.1	1.5	12.6	4.6	10.0	2.4
Idaho	18.4	.2	19.8	.1	17.4	.5
Montana	33.9	-	42.3	.1	37.1	.3
Nevada	28.4	.1	34.4	-	34.6	.1
New Mexico	24.8	.1	17.5	.1	17.8	.1
Utah	24.3	.4	16.0	-	17.1	.2
Wyoming	27.8	.3	23.2	1.4	25.3	1.8
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	16.8	1.3	6.3	.1	6.0	.4
Hawaii	34.3	-	49.7	-	S	S
Oregon	19.6	.3	12.1	.1	12.5	.4
Washington	7.4	-	17.1	.1	18.2	.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.

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.

<div style="border: 1px solid black; width: 90%; height: 90%; margin: 5px;"></div>	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.

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

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

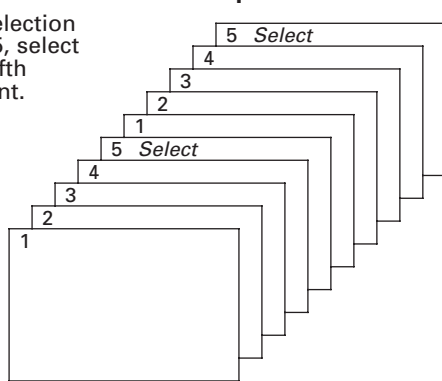
4 — Railroad
Continued →

SELECTING YOUR SAMPLE OF SHIPMENTS

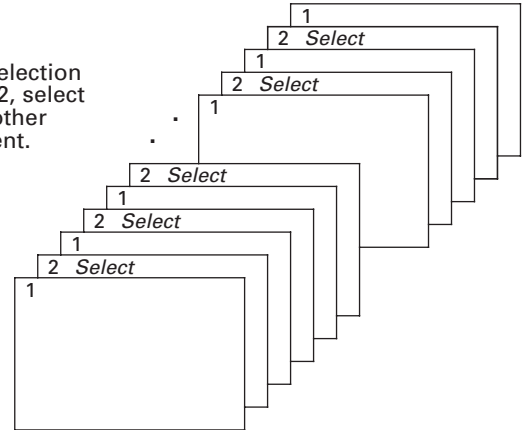
1. Use the file or combination of files that best reflects your full range of outbound shipping activities.
2. Begin with the first shipment. Count the shipments until you reach your selection rate. Select this shipment to report on in item F.
3. Continue counting with the next shipment. Count this shipment 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
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									19
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									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 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						| | | |		| | | |

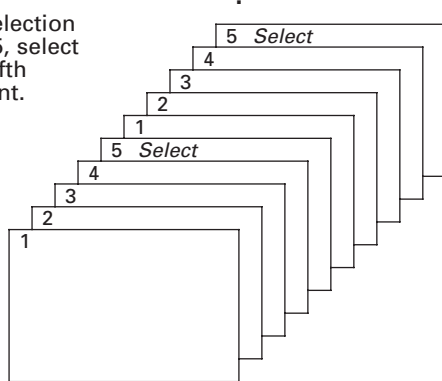
Mode of transport codes for columns (k) and (n) **1** — Parcel delivery, courier, or U.S. Postal Service **2** — Private truck **3** — For-hire truck **4** — Railroad
 Continued →

SELECTING YOUR SAMPLE OF SHIPMENTS

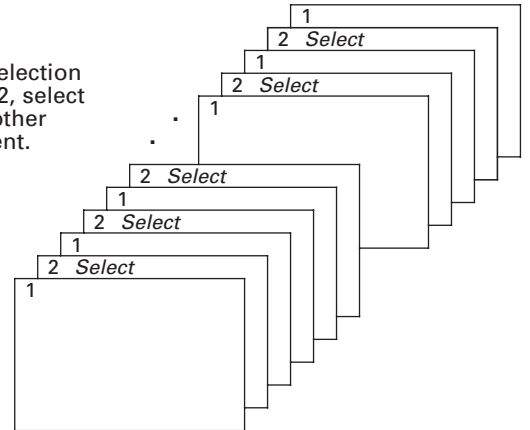
1. Use the file or combination of files that best reflects your full range of outbound shipping activities.
2. Begin with the first shipment. Count the shipments until you reach your selection rate. Select this shipment to report on in item F.
3. Continue counting with the next shipment. Count this shipment 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.
	(j)					(m)			
(i)	City	State	ZIP Code	(k)	(l)	City	Country	(n)	(o)
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> Note: In column (j) enter the U.S. port, airport, or border crossing of exit.		Export mode (n)	Line No. (o)
	(j)					(m)			
(i)	City	State	ZIP Code	(k)	(l)	City	Country	(n)	(o)
									10
									11
									12
									13
									14
									15
									16
									17
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									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
 4 — Railroad *Continued* →
- 3 — For-hire truck

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)	(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 3 — For-hire truck	4 — Railroad Continued →
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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.

