

Kansas

1997

Issued December 1999

EC97TCF-KS

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



ACKNOWLEDGMENTS

This report was prepared in the Service Sector Statistics Division under the direction of **Thomas E. Zabelsky**, Assistant Chief for Current Service and Transportation Programs. Planning, implementation, and compiling of this report were under the supervision of **John L. Fowler**, Chief, Commodity Flow Survey Branch, assisted by **Wanda Dougherty, Debra Corbett, Bruce Dembroski, Shirley Gray, Michael Jones, Stephanie Kelley, Mabel Ocasio, Bonnie Opalko, Joyce Price, Barbara Selinske, Eli Serrano,** and **Michael Sprung**. Sample design and statistical methodology were developed under the general direction of **Howard Hogan** and **Carl A. Konschnik**, former Assistant Chiefs, and **Ruth E. Detlefsen**, current Assistant Chief, Research and Methodology. Sample design and estimation were under the supervision of **Patrick Cantwell**, former Chief, and **Jock Black**, current Chief, Program Research and Development Branch, assisted by **William C. Davie Jr., David L. Kinyon, Jacklyn R. Jonas,** and **M. Cristina Cruz**. Frame construction, sample control, imputation, and quality control procedures were developed under the supervision of **Carol King**, Chief, Statistical Methods Branch, assisted by **James Hunt**.

The processing system and computer programs were developed and implemented by the OAO programming group, led by **Jacques Wilmore** and assisted by **Harold N. Bobbitt** and **Robert J. Jeffrey**. **Steve G. McCraith**, Chief, Quinquennial Surveys Branch, Economic Statistical Methods and Programming Division and **Joseph F. Keehan** provided general support.

Coordination of data collection efforts was under the direction of **Judith N. Petty**, Chief, National Processing Center, assisted by **Matthew Aulbach, Linda Broadus, Grant Goodwin, Carlene Bottorff, Teresa Branstetter,** and **Jack Miller**.

The staff of the Administrative and Customer Services Division, **Walter C. Odom**, Chief, performed planning, design, composition, editorial review, and printing planning and procurement for the publications, Internet products, and report forms. **Margaret A. Smith** provided publication coordination and editing.

We also acknowledge the contributions of the following Department of Transportation (DOT) representatives in the overall planning and design of the survey: **Rolf Schmitt**, Associate Director for Transportation Studies, Bureau of Transportation Statistics, assisted by **Susan Lapham, Russ Capelle, Ronald J. Duych,** and **Felix Ammah-Tagoe**.

The Oak Ridge National Laboratory's Center for Transportation Analysis, under the former and current direction of **Mike Bronzini** and **David Greene**, respectively, provided all mileage data for this report, using its transportation network modeling system, under the supervision of **Frank Southworth** and assisted by **Shih-Miao Chin, Bruce Peterson, Jane Rollow,** and **Angela Gibson**.

Special acknowledgment is also due to the many businesses whose cooperation was essential to the publication of these data.

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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	76 502	100.0	141 428	100.0	47 055	100.0	343
Single modes	68 057	89.0	138 630	98.0	44 999	95.6	177
Truck ¹	56 609	74.0	96 241	68.0	18 229	38.7	142
For-hire truck	35 426	46.3	53 041	37.5	15 261	32.4	481
Private truck	20 611	26.9	41 629	29.4	2 625	5.6	46
Rail	5 762	7.5	35 431	25.1	25 292	53.7	730
Water	S	S	S	S	S	S	1
Shallow draft	S	S	S	S	S	S	1
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	3 881	5.1	25	—	33	—	1 335
Pipeline ²	1 742	2.3	6 411	4.5	S	S	S
Multiple modes	6 562	8.6	1 354	1.0	1 637	3.5	722
Parcel, U.S. Postal Service or courier	5 957	7.8	234	.2	142	.3	720
Truck and rail	582	.8	945	.7	1 082	2.3	1 329
Truck and water	S	S	S	S	S	S	5 351
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	1 883	2.5	1 443	1.0	419	.9	49

— 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	76 502	70 515	8.5	141 428	134 539	5.1	47 055	38 706	21.6	343	329	4.1
Single modes	68 057	61 790	10.1	138 630	129 216	7.3	44 999	35 098	28.2	177	229	-22.7
Truck ¹	56 609	53 100	6.6	96 241	96 215	—	18 229	15 419	18.2	142	155	-8.4
For-hire truck	35 426	34 827	1.7	53 041	55 616	-4.6	15 261	11 735	30.0	481	409	17.6
Private truck	20 611	18 083	14.0	41 629	40 474	2.9	2 625	3 581	-26.7	46	61	-23.4
Rail	5 762	6 532	-11.8	35 431	27 747	27.7	25 292	19 129	32.2	730	801	-8.8
Water	S	S	S	S	S	S	S	S	S	1	7 679	-100.0
Shallow draft	S	—	S	S	—	S	S	—	S	1	—	S
Great Lakes	—	—	—	—	—	—	—	—	—	—	—	—
Deep draft	—	S	S	—	S	S	—	S	S	—	7 679	-100.0
Air (includes truck and air)	3 881	1 299	198.9	25	16	59.2	33	21	57.9	1 335	1 384	-3.5
Pipeline ²	1 742	859	102.9	6 411	5 237	22.4	S	S	S	S	S	S
Multiple modes	6 562	6 492	1.1	1 354	2 916	-53.6	1 637	2 506	-34.7	722	525	37.4
Parcel, U.S. Postal Service or courier	5 957	5 954	—	234	202	15.7	142	118	20.2	720	521	38.3
Truck and rail	582	277	110.2	945	388	143.7	1 082	288	275.2	1 329	1 303	2.0
Truck and water	S	S	S	S	17	S	S	134	S	5 351	8 434	-36.6
Rail and water	—	94	-100.0	—	2 310	-100.0	—	1 965	-100.0	—	851	-100.0
Other multiple modes	—	—	—	—	—	—	—	—	—	—	—	—
Other and unknown modes	1 883	2 233	-15.7	1 443	2 406	-40.0	419	S	S	49	282	-82.7

— 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. 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	89.0	87.6	98.0	96.0	95.6	90.7
Truck ¹	74.0	75.3	68.0	71.5	38.7	39.8
For-hire truck	46.3	49.4	37.5	41.3	32.4	30.3
Private truck	26.9	25.6	29.4	30.1	5.6	9.3
Rail	7.5	9.3	25.1	20.6	53.7	49.4
Water	S	S	S	S	S	S
Shallow draft	S	-	S	-	S	-
Great Lakes	-	S	-	S	-	S
Deep draft	-	-	-	-	-	-
Air (includes truck and air)	5.1	1.8	-	-	-	-
Pipeline ²	2.3	1.2	4.5	3.9	S	S
Multiple modes	8.6	9.2	1.0	2.2	3.5	6.5
Parcel, U.S. Postal Service or courier	7.8	8.4	.2	.2	.3	.3
Truck and rail8	.4	.7	.3	2.3	.7
Truck and water	S	S	S	-	S	.3
Rail and water	-	.1	-	1.7	-	5.1
Other multiple modes	-	-	-	-	-	-
Other and unknown modes	2.5	3.2	1.0	1.8	.9	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 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	47 055	100.0	338
Truck	18 450	39.2	142
Rail	26 295	55.9	779
Shallow draft	S	S	S
Great Lakes	-	-	-
Deep draft	S	S	3 765
Air	30	-	1 204
Parcel, U.S. Postal Service or courier	142	.3	720
Pipeline	S	S	S
Other and unknown modes	419	.9	49

- 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	76 502	100.0	141 428	100.0	47 055	100.0
Less than 50 miles	18 264	23.9	60 523	42.8	1 353	2.9
50 to 99 miles	5 182	6.8	12 538	8.9	1 119	2.4
100 to 249 miles	9 451	12.4	24 431	17.3	5 619	11.9
250 to 499 miles	11 503	15.0	18 489	13.1	8 877	18.9
500 to 749 miles	10 526	13.8	11 854	8.4	10 267	21.8
750 to 999 miles	6 462	8.4	5 953	4.2	7 161	15.2
1,000 to 1,499 miles	14 895	19.5	7 482	5.3	12 114	25.7
1,500 to 1,999 miles	143	.2	S	S	S	S
2,000 miles or more	76	.1	S	S	S	S
Single modes	68 057	100.0	138 630	100.0	44 999	100.0
Less than 50 miles	17 087	25.1	59 750	43.1	1 338	3.0
50 to 99 miles	4 823	7.1	12 331	8.9	1 101	2.4
100 to 249 miles	8 629	12.7	24 081	17.4	5 528	12.3
250 to 499 miles	9 969	14.6	18 058	13.0	8 644	19.2
500 to 749 miles	9 127	13.4	11 571	8.3	10 060	22.4
750 to 999 miles	5 588	8.2	5 844	4.2	7 033	15.6
1,000 to 1,499 miles	12 681	18.6	6 911	5.0	11 129	24.7
1,500 to 1,999 miles	103	.2	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Truck¹	56 609	100.0	96 241	100.0	18 229	100.0
Less than 50 miles	15 974	28.2	54 492	56.6	1 232	6.8
50 to 99 miles	4 353	7.7	10 151	10.5	902	4.9
100 to 249 miles	7 933	14.0	15 556	16.2	3 167	17.4
250 to 499 miles	7 870	13.9	6 975	7.2	3 000	16.5
500 to 749 miles	6 801	12.0	3 999	4.2	2 929	16.1
750 to 999 miles	4 325	7.6	1 510	1.6	1 584	8.7
1,000 to 1,499 miles	9 257	16.4	3 490	3.6	5 286	29.0
1,500 to 1,999 miles	96	.2	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
For-hire truck	35 426	100.0	53 041	100.0	15 261	100.0
Less than 50 miles	4 646	13.1	21 940	41.4	688	4.5
50 to 99 miles	1 814	5.1	6 271	11.8	559	3.7
100 to 249 miles	3 983	11.2	10 790	20.3	2 301	15.1
250 to 499 miles	6 343	17.9	5 678	10.7	2 434	16.0
500 to 749 miles	5 851	16.5	3 560	6.7	2 617	17.1
750 to 999 miles	4 010	11.3	1 410	2.7	1 481	9.7
1,000 to 1,499 miles	8 698	24.6	3 328	6.3	5 057	33.1
1,500 to 1,999 miles	80	.2	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Private truck	20 611	100.0	41 629	100.0	2 625	100.0
Less than 50 miles	11 277	54.7	31 595	75.9	526	20.0
50 to 99 miles	2 533	12.3	3 822	9.2	337	12.8
100 to 249 miles	3 839	18.6	4 614	11.1	836	31.8
250 to 499 miles	1 331	6.5	1 079	2.6	459	17.5
500 to 749 miles	831	4.0	332	.8	234	8.9
750 to 999 miles	294	1.4	79	.2	81	3.1
1,000 to 1,499 miles	493	2.4	105	.3	149	5.7
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	-	-	-	-	-	-
Rail	5 762	100.0	35 431	100.0	25 292	100.0
Less than 50 miles	243	4.2	2 496	7.0	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	652	11.3	8 461	23.9	2 352	9.3
250 to 499 miles	1 011	17.5	8 134	23.0	4 301	17.0
500 to 749 miles	1 058	18.4	7 561	21.3	7 119	28.1
750 to 999 miles	633	11.0	4 331	12.2	5 445	21.5
1,000 to 1,499 miles	S	S	3 415	9.6	5 834	23.1
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	-	-	-	-	-	-
Water	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
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	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
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)	3 881	100.0	25	100.0	33	100.0
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	4	.1	—	.5	S	S
100 to 249 miles	27	.7	1	2.3	6	.6
250 to 499 miles	497	12.8	6	23.3	7	20.2
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	S	S	2	9.3	3	9.4
1,000 to 1,499 miles	1 398	36.0	5	20.1	9	27.8
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Pipeline²	1 742	100.0	6 411	100.0	S	S
Less than 50 miles	807	46.3	2 240	34.9	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	—	—	—	—	S	S
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	6 562	100.0	1 354	100.0	1 637	100.0
Less than 50 miles	363	5.5	19	1.4	1	—
50 to 99 miles	229	3.5	18	1.4	2	.1
100 to 249 miles	727	11.1	S	S	S	S
250 to 499 miles	1 393	21.2	409	30.2	223	13.6
500 to 749 miles	1 190	18.1	96	7.1	79	4.8
750 to 999 miles	778	11.9	96	7.1	114	6.9
1,000 to 1,499 miles	1 822	27.8	441	32.5	779	47.6
1,500 to 1,999 miles	40	.6	1	—	2	.1
2,000 miles or more	20	.3	S	S	S	S
Parcel, U.S. Postal Service or courier	5 957	100.0	234	100.0	142	100.0
Less than 50 miles	363	6.1	19	8.0	1	.5
50 to 99 miles	229	3.8	18	7.9	2	1.2
100 to 249 miles	710	11.9	51	22.0	10	6.9
250 to 499 miles	1 344	22.6	44	18.8	20	13.8
500 to 749 miles	1 124	18.9	42	18.1	31	21.8
750 to 999 miles	668	11.2	21	8.9	22	15.1
1,000 to 1,499 miles	1 469	24.7	36	15.6	54	37.9
1,500 to 1,999 miles	40	.7	1	.4	2	1.1
2,000 miles or more	11	.2	1	.3	S	S
Truck and rail	582	100.0	945	100.0	1 082	100.0
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	49	8.4	365	38.6	203	18.8
500 to 749 miles	66	11.4	54	5.7	48	4.4
750 to 999 miles	109	18.8	75	8.0	92	8.5
1,000 to 1,499 miles	353	60.7	404	42.8	726	67.1
1,500 to 1,999 miles	—	—	—	—	—	—
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	S	S	S	S	S	S
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	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—
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	1 883	100.0	1 443	100.0	419	100.0
Less than 50 miles	814	43.2	754	52.3	14	3.4
50 to 99 miles	130	6.9	189	13.1	16	3.9
100 to 249 miles	96	5.1	146	10.1	29	6.9
250 to 499 miles	141	7.5	23	1.6	10	2.5
500 to 749 miles	208	11.1	S	S	S	S
750 to 999 miles	96	5.1	14	1.0	14	3.4
1,000 to 1,499 miles	392	20.8	131	9.1	206	49.2
1,500 to 1,999 miles	—	—	—	—	—	—
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	76 502	100.0	141 428	100.0	47 055	100.0	343
Less than 50 lb	7 063	9.2	210	.1	85	.2	437
50 to 99 lb	2 016	2.6	159	.1	38	—	228
100 to 499 lb	6 790	8.9	1 102	.8	197	.4	182
500 to 749 lb	2 280	3.0	490	.3	80	.2	160
750 to 999 lb	1 371	1.8	446	.3	73	.2	162
1,000 to 9,999 lb	15 516	20.3	7 592	5.4	1 751	3.7	216
10,000 to 49,999 lb	30 789	40.2	41 354	29.2	11 208	23.8	271
50,000 to 99,999 lb	4 486	5.9	45 300	32.0	6 751	14.3	153
100,000 lb or more	6 190	8.1	44 776	31.7	26 873	57.1	583
Single modes	68 057	100.0	138 630	100.0	44 999	100.0	177
Less than 50 lb	2 674	3.9	91	—	14	—	179
50 to 99 lb	1 162	1.7	116	—	16	—	127
100 to 499 lb	5 529	8.1	975	.7	150	.3	149
500 to 749 lb	2 170	3.2	474	.3	74	.2	153
750 to 999 lb	1 303	1.9	432	.3	69	.2	157
1,000 to 9,999 lb	14 823	21.8	7 344	5.3	1 674	3.7	214
10,000 to 49,999 lb	29 922	44.0	40 322	29.1	10 248	22.8	259
50,000 to 99,999 lb	4 400	6.5	44 909	32.4	6 313	14.0	144
100,000 lb or more	6 074	8.9	43 969	31.7	26 442	58.8	585
Truck¹	56 609	100.0	96 241	100.0	18 229	100.0	142
Less than 50 lb	1 654	2.9	86	—	9	—	104
50 to 99 lb	975	1.7	114	.1	14	—	110
100 to 499 lb	5 023	8.9	970	1.0	144	.8	143
500 to 749 lb	2 080	3.7	472	.5	72	.4	150
750 to 999 lb	1 280	2.3	431	.4	68	.4	156
1,000 to 9,999 lb	14 100	24.9	7 307	7.6	1 604	8.8	209
10,000 to 49,999 lb	26 877	47.5	39 883	41.4	9 657	53.0	246
50,000 to 99,999 lb	4 138	7.3	44 627	46.4	6 167	33.8	142
100,000 lb or more	481	.9	2 350	2.4	495	2.7	S
For-hire truck	35 426	100.0	53 041	100.0	15 261	100.0	481
Less than 50 lb	308	.9	9	—	6	—	741
50 to 99 lb	269	.8	28	—	10	—	305
100 to 499 lb	2 207	6.2	192	.4	104	.7	523
500 to 749 lb	1 230	3.5	86	.2	48	.3	556
750 to 999 lb	639	1.8	81	.2	45	.3	551
1,000 to 9,999 lb	8 526	24.1	2 346	4.4	1 224	8.0	536
10,000 to 49,999 lb	18 572	52.4	18 080	34.1	7 845	51.4	466
50,000 to 99,999 lb	3 306	9.3	31 256	58.9	5 525	36.2	180
100,000 lb or more	369	1.0	962	1.8	S	S	392
Private truck	20 611	100.0	41 629	100.0	2 625	100.0	46
Less than 50 lb	1 340	6.5	77	.2	3	.1	32
50 to 99 lb	705	3.4	85	.2	4	.1	41
100 to 499 lb	2 813	13.7	777	1.9	40	1.5	48
500 to 749 lb	849	4.1	385	.9	24	.9	61
750 to 999 lb	641	3.1	350	.8	23	.9	64
1,000 to 9,999 lb	5 567	27.0	4 957	11.9	379	14.4	77
10,000 to 49,999 lb	7 780	37.7	20 795	50.0	1 510	57.5	69
50,000 to 99,999 lb	802	3.9	12 814	30.8	603	23.0	48
100,000 lb or more	113	.5	1 388	3.3	41	1.6	S
Rail	5 762	100.0	35 431	100.0	25 292	100.0	730
Less than 50 lb	S	S	S	S	S	S	383
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	S	S	S	S	S	S	163
500 to 749 lb	S	S	S	S	S	S	252
750 to 999 lb	S	S	S	S	S	S	475
1,000 to 9,999 lb	S	S	S	S	S	S	2 021
10,000 to 49,999 lb	S	S	435	1.2	585	2.3	1 409
50,000 to 99,999 lb	S	S	235	.7	S	S	589
100,000 lb or more	4 025	69.9	34 733	98.0	24 511	96.9	625
Water	S	S	S	S	S	S	1
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
Shallow draft	S	S	S	S	S	S	1
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

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)	3 881	100.0	25	100.0	33	100.0	1 335
Less than 50 lb	1 020	26.3	4	16.9	6	17.9	1 335
50 to 99 lb	187	4.8	2	6.7	2	6.9	1 325
100 to 499 lb	506	13.0	4	16.6	6	18.7	1 391
500 to 749 lb	S	S	S	S	1	4.4	1 195
750 to 999 lb	S	S	—	1.0	—	1.2	1 558
1,000 to 9,999 lb	178	4.6	S	S	S	S	1 154
10,000 to 49,999 lb	S	S	4	16.6	6	18.0	1 326
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Pipeline²	1 742	100.0	6 411	100.0	S	S	S
Less than 50 lb	—	—	—	—	S	S	S
50 to 99 lb	—	—	—	—	S	S	S
100 to 499 lb	—	—	—	—	S	S	S
500 to 749 lb	—	—	—	—	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
50,000 to 99,999 lb	235	13.5	S	S	S	S	S
100,000 lb or more	1 505	86.4	6 364	99.3	S	S	S
Multiple modes	6 562	100.0	1 354	100.0	1 637	100.0	722
Less than 50 lb	4 044	61.6	98	7.3	69	4.2	740
50 to 99 lb	775	11.8	34	2.5	22	1.3	629
100 to 499 lb	1 018	15.5	84	6.2	44	2.7	478
500 to 749 lb	72	1.1	8	.6	4	.3	561
750 to 999 lb	49	.7	9	.6	3	.2	365
1,000 to 9,999 lb	S	S	S	S	S	S	S
10,000 to 49,999 lb	538	8.2	552	40.8	819	50.0	1 485
50,000 to 99,999 lb	S	S	S	S	S	S	2 679
100,000 lb or more	S	S	406	30.0	258	15.7	761
Parcel, U.S. Postal Service or courier	5 957	100.0	234	100.0	142	100.0	720
Less than 50 lb	4 044	67.9	98	42.2	69	48.8	740
50 to 99 lb	775	13.0	34	14.5	22	15.3	629
100 to 499 lb	1 017	17.1	84	36.1	44	30.6	477
500 to 749 lb	72	1.2	8	3.4	4	3.1	561
750 to 999 lb	49	.8	9	3.7	3	2.2	365
1,000 to 9,999 lb	S	S	S	S	S	S	54
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	582	100.0	945	100.0	1 082	100.0	1 329
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	S	S	S	S	S	S	2 013
100 to 499 lb	S	S	S	S	S	S	1 559
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	1 222
10,000 to 49,999 lb	534	91.8	551	58.4	810	74.9	1 467
50,000 to 99,999 lb	S	S	S	S	S	S	562
100,000 lb or more	27	4.6	300	31.8	218	20.2	773
Truck and water	S	S	S	S	S	S	5 351
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	S	S	S	S	S	S	7 861
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	S	S	S	S	S	S	7 965
50,000 to 99,999 lb	S	S	S	S	S	S	5 314
100,000 lb or more	S	S	S	S	S	S	370

See footnotes at end of table.

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

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

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
Multiple modes—Con.							
Rail and water	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
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	1 883	100.0	1 443	100.0	419	100.0	49
Less than 50 lb	346	18.3	21	1.4	1	2	S
50 to 99 lb	79	4.2	10	.7	1	2	66
100 to 499 lb	244	12.9	43	3.0	3	8	S
500 to 749 lb	38	2.0	8	.5	2	4	196
750 to 999 lb	20	1.0	5	.4	S	S	S
1,000 to 9,999 lb	686	36.4	246	17.0	75	17.9	276
10,000 to 49,999 lb	329	17.5	479	33.2	141	33.7	260
50,000 to 99,999 lb	S	S	231	16.0	21	5.1	99
100,000 lb or more	S	S	S	S	S	S	374

— 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	76 502	100.0	141 428	100.0	47 055	100.0	343
01	Live animals and live fish	159	.2	135	.1	43	—	551
02	Cereal grains	4 399	5.8	41 190	29.1	15 953	33.9	142
03	Other agricultural products	835	1.1	1 990	1.4	679	1.4	118
04	Animal feed and products of animal origin, n.e.c.	1 516	2.0	6 575	4.6	2 213	4.7	S
05	Meat, fish, seafood, and their preparations	7 433	9.7	3 119	2.2	2 574	5.5	S
06	Milled grain products and preparations, and bakery products	2 390	3.1	4 448	3.1	3 126	6.6	178
07	Other prepared foodstuffs and fats and oils	3 634	4.8	4 277	3.0	963	2.0	149
08	Alcoholic beverages	684	.9	546	.4	S	S	40
09	Tobacco products	254	.3	8	—	1	—	87
10	Monumental or building stone	S	S	S	S	S	S	18
11	Natural sands	47	—	13 960	9.9	697	1.5	45
12	Gravel and crushed stone	78	.1	12 230	8.6	240	.5	21
13	Nonmetallic minerals n.e.c.	194	.3	3 766	2.7	1 743	3.7	235
14	Metallic ores and concentrates	S	S	S	S	S	S	213
15	Coal	S	S	S	S	S	S	118
17	Gasoline and aviation turbine fuel	1 619	2.1	7 012	5.0	S	S	46
18	Fuel oils	554	.7	1 665	1.2	S	S	47
19	Coal and petroleum products, n.e.c.	1 295	1.7	8 549	6.0	2 224	4.7	94
20	Basic chemicals	1 200	1.6	7 344	5.2	6 753	14.4	S
21	Pharmaceutical products	1 369	1.8	S	S	S	S	549
22	Fertilizers	493	.6	2 745	1.9	442	.9	S
23	Chemical products and preparations, n.e.c.	2 064	2.7	1 018	.7	849	1.8	235
24	Plastics and rubber	3 140	4.1	1 257	.9	712	1.5	309
25	Logs and other wood in the rough	S	S	S	S	S	S	201
26	Wood products	939	1.2	1 184	.8	152	.3	203
27	Pulp, newsprint, paper, and paperboard	592	.8	570	.4	115	.2	85
28	Paper or paperboard articles	1 364	1.8	979	.7	461	1.0	335
29	Printed products	3 614	4.7	1 442	1.0	590	1.3	585
30	Textiles, leather, and articles of textiles or leather	S	S	S	S	S	S	871
31	Nonmetallic mineral products	1 333	1.7	6 885	4.9	1 028	2.2	195
32	Base metal in primary or semifinished forms and in finished basic shapes	1 201	1.6	1 189	.8	308	.7	139
33	Articles of base metal	2 065	2.7	915	.6	330	.7	238
34	Machinery	6 171	8.1	800	.6	492	1.0	264
35	Electronic and other electrical equipment and components and office equipment	4 469	5.8	677	.5	574	1.2	450
36	Motorized and other vehicles (including parts)	3 209	4.2	496	.4	231	.5	209
37	Transportation equipment, n.e.c.	6 641	8.7	S	S	S	S	1 011
38	Precision instruments and apparatus	1 239	1.6	15	—	10	—	812
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	580	.8	116	—	59	.1	271
40	Miscellaneous manufactured products	2 338	3.1	605	.4	236	.5	720
41	Waste and scrap	145	.2	740	.5	334	.7	400
43	Mixed freight	4 066	5.3	2 019	1.4	224	.5	211
--	Commodity unknown	478	.6	S	S	S	S	322

— 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	76 502	100.0	141 428	100.0	47 055	100.0	343
Single modes	68 057	89.0	138 630	98.0	44 999	95.6	177
Truck ¹	56 609	74.0	96 241	68.0	18 229	38.7	142
For-hire truck	35 426	46.3	53 041	37.5	15 261	32.4	481
Private truck	20 611	26.9	41 629	29.4	2 625	5.6	46
Rail	5 762	7.5	35 431	25.1	25 292	53.7	730
Water	S	S	S	S	S	S	1
Shallow draft	S	S	S	S	S	S	1
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	3 881	5.1	25	-	33	-	1 335
Pipeline ²	1 742	2.3	6 411	4.5	S	S	S
Multiple modes	6 562	8.6	1 354	1.0	1 637	3.5	722
Parcel, U.S. Postal Service or courier	5 957	7.8	234	.2	142	.3	720
Truck and rail	582	.8	945	.7	1 082	2.3	1 329
Truck and water	S	S	S	S	S	S	5 351
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	1 883	2.5	1 443	1.0	419	.9	49
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	159	100.0	135	100.0	43	100.0	551
Single modes	159	100.0	135	100.0	43	100.0	551
Truck ¹	159	100.0	135	100.0	43	100.0	551
For-hire truck	156	98.2	132	98.3	42	99.0	556
Private truck	S	S	S	S	S	S	168
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	4 399	100.0	41 190	100.0	15 953	100.0	142
Single modes	4 393	99.9	41 121	99.8	15 587	97.7	129
Truck ¹	2 268	51.6	22 525	54.7	2 599	16.3	97
For-hire truck	1 970	44.8	19 475	47.3	2 526	15.8	121
Private truck	299	6.8	3 050	7.4	73	.5	38
Rail	2 059	46.8	18 035	43.8	12 978	81.4	519
Water	S	S	S	S	S	S	1
Shallow draft	S	S	S	S	S	S	1
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	S	S	S	S	S	S	5 314
Parcel, U.S. Postal Service or courier	-	-	-	-	-	-	-
Truck and rail	-	-	-	-	-	-	-
Truck and water	S	S	S	S	S	S	5 314
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	93

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	835	100.0	1 990	100.0	679	100.0	118
Single modes	820	98.2	1 975	99.2	677	99.8	107
Truck ¹	670	80.2	1 339	67.3	160	23.5	106
For-hire truck	329	39.3	930	46.7	113	16.7	206
Private truck	S	S	409	20.6	S	S	88
Rail	S	S	S	S	S	S	S
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 766
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	298
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	298
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	1 516	100.0	6 575	100.0	2 213	100.0	S
Single modes	1 313	86.7	6 190	94.1	1 660	75.0	S
Truck ¹	1 132	74.7	5 422	82.5	1 165	52.6	S
For-hire truck	648	42.7	3 111	47.3	1 008	45.5	319
Private truck	477	31.5	2 289	34.8	146	6.6	S
Rail	182	12.0	762	11.6	495	22.4	816
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	196	12.9	337	5.1	547	24.7	1 609
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	196	12.9	337	5.1	547	24.7	1 609
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	51
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	7 433	100.0	3 119	100.0	2 574	100.0	S
Single modes	7 411	99.7	3 111	99.7	2 572	99.9	S
Truck ¹	7 411	99.7	3 111	99.7	2 572	99.9	S
For-hire truck	6 346	85.4	2 653	85.0	2 451	95.2	914
Private truck	1 042	14.0	445	14.3	103	4.0	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	139
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	139
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	13	.2	4	.1	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 06, MILLED GRAIN PRODUCTS AND PREPARATIONS, AND BAKERY PRODUCTS							
Total	2 390	100.0	4 448	100.0	3 126	100.0	178
Single modes	2 269	94.9	4 095	92.1	2 810	89.9	180
Truck ¹	1 871	78.3	2 225	50.0	792	25.3	150
For-hire truck	991	41.5	1 576	35.4	614	19.7	454
Private truck	879	36.8	643	14.5	171	5.5	101
Rail	398	16.6	1 871	42.1	2 019	64.6	1 073
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	S	S	1 184
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	77	3.2	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	S
Truck and rail	68	2.8	S	S	S	S	979
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	3 634	100.0	4 277	100.0	963	100.0	149
Single modes	3 546	97.6	4 254	99.5	953	98.9	S
Truck ¹	3 291	90.5	3 691	86.3	485	48.3	S
For-hire truck	581	16.0	579	13.5	201	20.9	S
Private truck	2 702	74.4	3 091	72.3	263	27.3	52
Rail	251	6.9	561	13.1	485	50.4	855
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 453
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	854
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	854
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 08, ALCOHOLIC BEVERAGES							
Total	684	100.0	546	100.0	S	S	40
Single modes	658	96.2	496	91.0	S	S	38
Truck ¹	651	95.2	481	88.1	S	S	38
For-hire truck	S	S	S	S	S	S	77
Private truck	615	90.0	383	70.3	S	S	36
Rail	S	S	S	S	S	S	1 506
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

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	254	100.0	8	100.0	1	100.0	87
Single modes	254	99.9	8	99.9	1	100.0	88
Truck ¹	254	99.9	8	99.9	1	100.0	88
For-hire truck	—	—	—	—	—	—	—
Private truck	254	99.9	8	99.9	1	100.0	88
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	79
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	79
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	11
SCTG 10, MONUMENTAL OR BUILDING STONE							
Total	S	S	S	S	S	S	18
Single modes	S	S	S	S	S	S	18
Truck ¹	S	S	S	S	S	S	18
For-hire truck	—	—	—	—	—	—	—
Private truck	S	S	S	S	S	S	18
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	17
SCTG 11, NATURAL SANDS							
Total	47	100.0	13 960	100.0	697	100.0	45
Single modes	47	99.6	13 888	99.5	686	98.5	45
Truck ¹	47	99.6	13 888	99.5	686	98.5	45
For-hire truck	S	S	S	S	S	S	77
Private truck	25	53.6	S	S	S	S	19
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	82

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	78	100.0	12 230	100.0	240	100.0	21
Single modes	75	97.2	12 210	99.8	239	100.0	20
Truck ¹	75	96.3	12 051	98.5	239	99.7	20
For-hire truck	S	S	S	S	S	S	S
Private truck	51	65.2	8 545	69.9	S	S	18
Rail	S	S	S	S	S	S	5
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	50
SCTG 13, NONMETALLIC MINERALS N.E.C.							
Total	194	100.0	3 766	100.0	1 743	100.0	235
Single modes	166	85.8	3 264	86.7	1 584	90.9	248
Truck ¹	132	67.8	1 871	49.7	603	34.6	218
For-hire truck	80	41.3	1 129	30.0	370	21.2	238
Private truck	S	S	742	19.7	233	13.4	194
Rail	S	S	1 394	37.0	981	56.3	664
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	4	2.0	271	7.2	149	8.5	452
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	202
Truck and rail	4	1.9	271	7.2	149	8.5	706
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	S	S	S	S	S	S	213
Single modes	S	S	S	S	S	S	530
Truck ¹	S	S	S	S	S	S	530
For-hire truck	S	S	S	S	S	S	615
Private truck	S	S	S	S	S	S	80
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	678
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	678
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	18

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	S	S	S	S	S	S	118
Single modes	S	S	S	S	S	S	118
Truck ¹	S	S	S	S	S	S	118
For-hire truck	S	S	S	S	S	S	118
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 17, GASOLINE AND AVIATION TURBINE FUEL							
Total	1 619	100.0	7 012	100.0	S	S	46
Single modes	1 595	98.5	6 928	98.8	S	S	47
Truck ¹	463	28.6	1 936	27.6	132	8.2	28
For-hire truck	164	10.1	764	10.9	65	4.0	75
Private truck	299	18.5	1 172	16.7	S	S	20
Rail	S	S	S	S	S	S	1 521
Water	-	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	S	S	S	S	S	S	1 762
Pipeline ²	1 116	68.9	4 919	70.1	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	33
SCTG 18, FUEL OILS							
Total	554	100.0	1 665	100.0	S	S	47
Single modes	547	98.7	1 633	98.1	S	S	46
Truck ¹	314	56.8	1 631	98.0	S	S	46
For-hire truck	129	23.3	682	40.9	S	S	172
Private truck	185	33.5	950	57.0	39	25.3	22
Rail	-	-	-	-	-	-	-
Water	-	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline ²	232	41.9	1	-	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	69

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	1 295	100.0	8 549	100.0	2 224	100.0	94
Single modes	1 284	99.2	8 494	99.4	2 217	99.7	94
Truck ¹	687	53.0	1 902	22.2	378	17.0	75
For-hire truck	250	19.3	998	11.7	205	9.2	347
Private truck	437	33.7	904	10.6	173	7.8	55
Rail	265	20.4	S	S	1 766	79.4	328
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	2	.2	S	S	S	S	913
Parcel, U.S. Postal Service or courier	—	—	S	S	S	S	920
Truck and rail	S	S	S	S	S	S	504
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	19
SCTG 20, BASIC CHEMICALS							
Total	1 200	100.0	7 344	100.0	6 753	100.0	S
Single modes	1 167	97.2	7 331	99.8	6 747	99.9	S
Truck ¹	606	50.5	2 237	30.5	2 057	30.5	S
For-hire truck	419	34.9	1 590	21.6	1 951	28.9	1 056
Private truck	187	15.6	647	8.8	106	1.6	S
Rail	525	43.7	5 029	68.5	4 690	69.4	906
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 660
Pipeline ²	36	3.0	65	.9	S	S	S
Multiple modes	S	S	S	S	S	S	295
Parcel, U.S. Postal Service or courier	4	.3	S	S	S	S	291
Truck and rail	S	S	S	S	S	S	769
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	18	1.5	7	.1	S	S	S
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	1 369	100.0	S	S	S	S	549
Single modes	1 174	85.8	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	S	S	S	S	S	S	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	98	7.2	S	S	S	S	3 178
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	791
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	791
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	—	—	17

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	493	100.0	2 745	100.0	442	100.0	S
Single modes	440	89.3	2 473	90.1	400	90.4	S
Truck ¹	378	76.5	1 926	70.2	140	31.7	S
For-hire truck	102	20.7	502	18.3	67	15.1	S
Private truck	276	55.9	1 424	51.9	74	16.7	23
Rail	43	8.7	356	13.0	255	57.8	707
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	S	S	S	S	S	S	370
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	370
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	2 064	100.0	1 018	100.0	849	100.0	235
Single modes	1 836	89.0	920	90.4	740	87.2	174
Truck ¹	1 684	81.6	828	81.3	580	68.3	152
For-hire truck	1 084	52.5	571	56.1	428	50.4	398
Private truck	503	24.4	154	15.1	49	5.7	67
Rail	S	S	S	S	S	S	1 741
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 466
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	209	10.1	93	9.2	108	12.8	568
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	560
Truck and rail	82	4.0	84	8.3	103	12.2	1 223
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	18	.9	5	.4	S	S	19
SCTG 24, PLASTICS AND RUBBER							
Total	3 140	100.0	1 257	100.0	712	100.0	309
Single modes	2 828	90.1	1 200	95.5	670	94.1	265
Truck ¹	2 654	84.5	1 086	86.4	572	80.4	221
For-hire truck	2 131	67.9	860	68.4	526	73.9	558
Private truck	519	16.5	224	17.8	S	S	49
Rail	S	S	S	S	S	S	624
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	19	.6	1	—	1	.1	1 424
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	166	5.3	14	1.1	S	S	558
Parcel, U.S. Postal Service or courier	145	4.6	8	.7	6	.8	557
Truck and rail	S	S	S	S	S	S	1 678
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	145	4.6	43	3.4	25	3.5	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	S	S	S	S	S	S	201
Single modes	S	S	S	S	S	S	201
Truck ¹	S	S	S	S	S	S	201
For-hire truck	—	—	—	—	—	—	—
Private truck	S	S	S	S	S	S	201
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 26, WOOD PRODUCTS							
Total	939	100.0	1 184	100.0	152	100.0	203
Single modes	920	98.0	1 164	98.3	151	99.4	158
Truck ¹	920	98.0	1 164	98.3	151	99.4	158
For-hire truck	326	34.7	325	27.4	91	59.5	614
Private truck	594	63.3	839	70.9	61	39.9	64
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	5	.6	S	S	S	S	825
Parcel, U.S. Postal Service or courier	5	.6	S	S	S	S	825
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	13	1.4	S	S	S	S	39
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	592	100.0	570	100.0	115	100.0	85
Single modes	578	97.7	567	99.5	115	99.5	53
Truck ¹	578	97.7	567	99.5	115	99.5	53
For-hire truck	131	22.1	164	28.7	63	54.6	202
Private truck	323	54.6	328	57.5	17	14.4	34
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	887
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	8	1.3	2	.4	1	.5	447
Parcel, U.S. Postal Service or courier	8	1.3	2	.4	1	.5	447
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	—	—	14

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	1 364	100.0	979	100.0	461	100.0	335
Single modes	1 340	98.3	974	99.5	458	99.4	317
Truck ¹	1 334	97.8	927	94.7	416	90.3	316
For-hire truck	1 147	84.1	732	74.8	S	S	641
Private truck	188	13.8	195	19.9	S	S	49
Rail	S	S	S	S	S	S	905
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 038
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	18	1.3	3	.3	2	.3	606
Parcel, U.S. Postal Service or courier	18	1.3	3	.3	2	.3	606
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	6	.4	S	S	S	S	S
SCTG 29, PRINTED PRODUCTS							
Total	3 614	100.0	1 442	100.0	590	100.0	585
Single modes	2 062	57.1	1 291	89.5	471	79.8	S
Truck ¹	2 013	55.7	1 281	88.8	458	77.5	S
For-hire truck	1 765	48.8	1 167	81.0	451	76.3	258
Private truck	248	6.9	114	7.9	7	1.2	S
Rail	S	S	S	S	S	S	1 611
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	21	.6	S	S	S	S	1 178
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 364	37.7	121	8.4	99	16.7	734
Parcel, U.S. Postal Service or courier	1 285	35.6	91	6.3	52	8.8	734
Truck and rail	79	2.2	30	2.1	47	8.0	1 545
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	30	2.1	S	S	456
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	S	S	S	S	S	S	871
Single modes	S	S	S	S	S	S	613
Truck ¹	S	S	S	S	S	S	592
For-hire truck	S	S	S	S	S	S	1 006
Private truck	108	4.0	S	S	4	1.2	82
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	7	.2	S	S	S	S	1 115
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	340	12.7	9	2.4	7	2.1	900
Parcel, U.S. Postal Service or courier	340	12.7	9	2.4	7	2.1	900
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	14	.5	S	S	2	.5	1 021

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	1 333	100.0	6 885	100.0	1 028	100.0	195
Single modes	1 298	97.3	6 777	98.4	1 023	99.5	111
Truck ¹	1 268	95.1	6 593	95.8	900	87.5	97
For-hire truck	526	39.4	1 504	21.8	584	56.8	349
Private truck	481	36.1	4 614	67.0	167	16.2	38
Rail	20	1.5	183	2.7	123	11.9	647
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 657
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	1 064
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 064
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	23	1.7	106	1.5	3	.3	49
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	1 201	100.0	1 189	100.0	308	100.0	139
Single modes	1 150	95.7	1 140	96.0	303	98.6	119
Truck ¹	1 092	91.0	1 010	85.0	231	75.1	115
For-hire truck	538	44.8	411	34.6	158	51.5	335
Private truck	520	43.3	570	48.0	S	S	46
Rail	S	S	S	S	S	S	556
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 470
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	15	1.2	S	S	S	S	359
Parcel, U.S. Postal Service or courier	15	1.2	S	S	S	S	359
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	22
SCTG 33, ARTICLES OF BASE METAL							
Total	2 065	100.0	915	100.0	330	100.0	238
Single modes	1 845	89.3	864	94.5	319	96.7	235
Truck ¹	1 841	89.2	864	94.5	319	96.7	225
For-hire truck	1 578	76.4	701	76.6	298	90.3	636
Private truck	263	12.7	163	17.9	21	6.3	33
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	—	—	—	—	1 301
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	141	6.9	6	.7	3	.8	366
Parcel, U.S. Postal Service or courier	141	6.9	6	.7	3	.8	366
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	78	3.8	S	S	8	2.5	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 34, MACHINERY							
Total	6 171	100.0	800	100.0	492	100.0	264
Single modes	5 203	84.3	749	93.7	466	94.7	233
Truck ¹	4 961	80.4	735	91.9	452	91.7	187
For-hire truck	3 520	57.0	532	66.5	394	80.1	644
Private truck	1 441	23.4	203	25.3	57	11.6	55
Rail	S	S	S	S	S	S	608
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	216	3.5	2	.3	3	.5	1 216
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	636	10.3	22	2.7	20	4.1	486
Parcel, U.S. Postal Service or courier	627	10.2	20	2.6	11	2.3	486
Truck and rail	S	S	S	S	S	S	1 978
Truck and water	S	S	S	S	S	S	7 965
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	4 469	100.0	677	100.0	574	100.0	450
Single modes	2 749	61.5	645	95.2	552	96.1	216
Truck ¹	2 407	53.9	632	93.4	530	92.4	183
For-hire truck	1 669	37.3	515	76.1	492	85.8	640
Private truck	739	16.5	117	17.3	S	S	32
Rail	24	.5	12	1.7	20	3.5	1 684
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	1	.1	1	.2	1 204
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 594	35.7	26	3.8	21	3.7	788
Parcel, U.S. Postal Service or courier	1 586	35.5	24	3.6	18	3.1	788
Truck and rail	S	S	S	S	S	S	1 774
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	126	2.8	6	.9	S	S	S
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	3 209	100.0	496	100.0	231	100.0	209
Single modes	2 404	74.9	384	77.4	164	70.9	S
Truck ¹	2 374	74.0	382	77.1	163	70.3	S
For-hire truck	1 265	39.4	209	42.2	131	56.8	692
Private truck	1 108	34.5	173	34.9	31	13.5	35
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	30	.9	1	.2	1	.6	1 233
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	327	10.2	37	7.4	31	13.4	692
Parcel, U.S. Postal Service or courier	242	7.5	13	2.7	10	4.2	692
Truck and rail	85	2.6	23	4.7	21	9.2	910
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	478	14.9	75	15.2	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	6 641	100.0	S	S	S	S	1 011
Single modes	6 349	95.6	S	S	S	S	1 086
Truck ¹	2 296	34.6	S	S	S	S	562
For-hire truck	S	S	S	S	S	S	907
Private truck	S	S	S	S	S	S	17
Rail	S	S	S	S	S	S	2 282
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	2 812	42.3	8	6.7	11	5.5	1 409
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	268	4.0	1	.7	1	.3	812
Parcel, U.S. Postal Service or courier	268	4.0	1	.7	1	.3	812
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	373
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	1 239	100.0	15	100.0	10	100.0	812
Single modes	937	75.7	12	78.1	7	73.3	877
Truck ¹	668	53.9	S	S	S	S	390
For-hire truck	S	S	S	S	S	S	826
Private truck	516	41.6	S	S	S	S	63
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	270	21.8	1	5.9	1	13.0	1 328
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	286	23.1	3	20.1	3	26.5	803
Parcel, U.S. Postal Service or courier	286	23.1	3	20.1	3	26.5	803
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	—	.2	331
SCTG 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	580	100.0	116	100.0	59	100.0	271
Single modes	521	89.8	109	93.3	58	97.3	219
Truck ¹	518	89.3	107	92.2	56	93.8	216
For-hire truck	147	25.3	56	48.0	S	S	571
Private truck	371	63.9	51	44.2	13	22.0	143
Rail	S	S	S	S	S	S	1 665
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 348
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	7	1.3	1	.8	1	1.0	833
Parcel, U.S. Postal Service or courier	7	1.3	1	.8	1	1.0	833
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 40, MISCELLANEOUS MANUFACTURED PRODUCTS							
Total	2 338	100.0	605	100.0	236	100.0	720
Single modes	1 842	78.8	575	95.1	211	89.1	631
Truck ¹	1 706	72.9	569	94.1	203	85.8	593
For-hire truck	1 298	55.5	376	62.2	175	74.1	1 029
Private truck	401	17.1	S	S	28	11.7	45
Rail	S	S	S	S	S	S	1 722
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	64	2.7	1	.1	1	.4	1 401
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	436	18.7	18	2.9	17	7.2	823
Parcel, U.S. Postal Service or courier	417	17.9	14	2.3	12	5.1	822
Truck and rail	S	S	S	S	S	S	1 287
Truck and water	S	S	S	S	S	S	7 861
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	60	2.6	S	S	S	S	S
SCTG 41, WASTE AND SCRAP							
Total	145	100.0	740	100.0	334	100.0	400
Single modes	144	99.4	739	99.9	333	99.9	403
Truck ¹	101	69.7	328	44.3	143	43.0	366
For-hire truck	76	52.3	266	35.9	128	38.3	432
Private truck	25	17.4	62	8.4	S	S	186
Rail	43	29.7	411	55.6	190	56.9	512
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	395
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	394
Truck and rail	S	S	S	S	S	S	578
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	11
SCTG 43, MIXED FREIGHT							
Total	4 066	100.0	2 019	100.0	224	100.0	211
Single modes	4 009	98.6	2 008	99.5	222	99.2	S
Truck ¹	4 007	98.5	2 008	99.5	222	99.1	S
For-hire truck	818	20.1	262	13.0	67	29.8	405
Private truck	3 189	78.4	1 746	86.5	155	69.3	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 466
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	43	1.0	3	.2	1	.6	534
Parcel, U.S. Postal Service or courier	43	1.0	3	.2	1	.6	534
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	
COMMODITY UNKNOWN							
Total	478	100.0	S	S	S	S	322
Single modes	377	78.8	203	84.5	S	S	284
Truck ¹	364	76.3	134	55.8	S	S	271
For-hire truck	309	64.8	120	49.9	S	S	482
Private truck	S	S	S	S	1	.3	S
Rail	S	S	S	S	S	S	1 417
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 316
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	429
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	429
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	76 502	100.0	141 428	100.0	47 055	100.0
NEW ENGLAND STATES						
Connecticut	353	.5	126	—	184	.4
Maine	249	.3	69	—	113	.2
Massachusetts	384	.5	117	—	182	.4
New Hampshire	47	—	S	S	S	S
Rhode Island	26	—	5	—	7	—
Vermont	50	—	S	S	S	S
MIDDLE ATLANTIC STATES						
New Jersey	808	1.1	244	.2	332	.7
New York	1 463	1.9	501	.4	735	1.6
Pennsylvania	1 345	1.8	514	.4	699	1.5
EAST NORTH CENTRAL STATES						
Illinois	3 346	4.4	2 337	1.7	1 511	3.2
Indiana	859	1.1	492	.3	348	.7
Michigan	1 109	1.5	371	.3	331	.7
Ohio	1 979	2.6	573	.4	460	1.0
Wisconsin	984	1.3	732	.5	541	1.2
WEST NORTH CENTRAL STATES						
Iowa	1 402	1.8	1 588	1.1	666	1.4
Kansas	21 586	28.2	71 412	50.5	4 138	8.8
Minnesota	1 100	1.4	1 024	.7	682	1.5
Missouri	8 445	11.0	15 506	11.0	2 372	5.0
Nebraska	1 637	2.1	2 766	2.0	619	1.3
North Dakota	127	.2	50	—	38	—
South Dakota	178	.2	132	—	65	.1
SOUTH ATLANTIC STATES						
Delaware	34	—	6	—	8	—
District of Columbia	4	—	—	—	—	—
Florida	1 917	2.5	1 813	1.3	2 535	5.4
Georgia	1 321	1.7	403	.3	415	.9
Maryland	359	.5	122	—	155	.3
North Carolina	1 111	1.5	1 170	.8	1 415	3.0
South Carolina	400	.5	123	—	144	.3
Virginia	479	.6	284	.2	347	.7
West Virginia	102	.1	23	—	21	—
EAST SOUTH CENTRAL STATES						
Alabama	473	.6	260	.2	243	.5
Kentucky	475	.6	200	.1	153	.3
Mississippi	297	.4	158	.1	122	.3
Tennessee	1 223	1.6	624	.4	491	1.0
WEST SOUTH CENTRAL STATES						
Arkansas	811	1.1	1 259	.9	475	1.0
Louisiana	676	.9	S	S	S	S
Oklahoma	2 203	2.9	11 291	8.0	2 690	5.7
Texas	5 506	7.2	13 073	9.2	10 086	21.4
MOUNTAIN STATES						
Arizona	945	1.2	498	.4	638	1.4
Colorado	1 821	2.4	S	S	1 821	3.9
Idaho	110	.1	47	—	55	.1
Montana	209	.3	76	—	97	.2
Nevada	S	—	S	—	S	—
New Mexico	172	.2	452	.3	319	.7
Utah	577	.8	142	.1	164	.3
Wyoming	116	.2	79	—	56	.1
PACIFIC STATES						
Alaska	S	—	S	—	S	—
California	4 905	6.4	3 582	2.5	6 100	13.0
Hawaii	S	—	S	—	S	—
Oregon	467	.6	S	—	S	—
Washington	S	—	194	.1	380	.8

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

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

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

State of origin	Value		Tons		Ton-miles	
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent
Total	68 301	100.0	113 467	100.0	27 417	100.0
NEW ENGLAND STATES						
Connecticut	124	.2	7	—	10	—
Maine	39	—	23	—	41	.1
Massachusetts	361	.5	26	—	39	.1
New Hampshire	81	.1	9	—	13	—
Rhode Island	S	S	S	S	S	S
Vermont	22	—	5	—	9	—
MIDDLE ATLANTIC STATES						
New Jersey	S	S	183	.2	239	.9
New York	S	S	129	.1	155	.6
Pennsylvania	1 101	1.6	426	.4	467	1.7
EAST NORTH CENTRAL STATES						
Illinois	2 625	3.8	1 319	1.2	705	2.6
Indiana	1 375	2.0	774	.7	475	1.7
Michigan	1 526	2.2	516	.5	410	1.5
Ohio	2 300	3.4	626	.6	489	1.8
Wisconsin	1 501	2.2	888	.8	638	2.3
WEST NORTH CENTRAL STATES						
Iowa	1 840	2.7	1 253	1.1	450	1.6
Kansas	21 586	31.6	71 412	62.9	4 138	15.1
Minnesota	1 004	1.5	348	.3	207	.8
Missouri	7 328	10.7	7 270	6.4	973	3.5
Nebraska	2 747	4.0	4 376	3.9	1 120	4.1
North Dakota	129	.2	81	—	62	.2
South Dakota	166	.2	95	—	50	.2
SOUTH ATLANTIC STATES						
Delaware	S	S	S	S	S	S
District of Columbia	S	S	S	S	S	S
Florida	1 058	1.5	173	.2	258	.9
Georgia	608	.9	440	.4	482	1.8
Maryland	S	S	S	S	S	S
North Carolina	1 105	1.6	657	.6	763	2.8
South Carolina	398	.6	152	.1	172	.6
Virginia	300	.4	87	—	98	.4
West Virginia	61	—	20	—	20	—
EAST SOUTH CENTRAL STATES						
Alabama	492	.7	215	.2	179	.7
Kentucky	700	1.0	244	.2	155	.6
Mississippi	355	.5	266	.2	203	.7
Tennessee	788	1.2	488	.4	390	1.4
WEST SOUTH CENTRAL STATES						
Arkansas	779	1.1	824	.7	388	1.4
Louisiana	485	.7	1 195	1.1	1 044	3.8
Oklahoma	1 693	2.5	4 518	4.0	1 084	4.0
Texas	3 691	5.4	2 680	2.4	1 486	5.4
MOUNTAIN STATES						
Arizona	253	.4	S	S	S	S
Colorado	1 064	1.6	1 264	1.1	829	3.0
Idaho	235	.3	194	.2	252	.9
Montana	26	—	26	—	37	.1
Nevada	26	—	7	—	10	—
New Mexico	47	—	237	.2	172	.6
Utah	178	.3	S	S	S	S
Wyoming	142	.2	8 574	7.6	6 745	24.6
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	3 637	5.3	407	.4	671	2.4
Hawaii	S	S	S	S	S	S
Oregon	166	.2	103	—	203	.7
Washington	561	.8	99	—	189	.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	4.9	—	6.6	—	6.6	—	10.9
Single modes	5.6	1.2	6.7	.3	6.9	.8	13.9
Truck	6.3	2.0	7.6	2.6	9.9	4.4	8.3
For-hire truck	9.7	2.6	10.8	3.4	11.0	4.2	7.6
Private truck	5.3	1.9	11.3	2.8	11.9	.6	10.1
Rail	23.1	1.6	12.5	3.1	12.4	4.4	11.1
Water	S	S	S	S	S	S	31.6
Shallow draft	S	S	S	S	S	S	31.6
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	27.6	1.3	33.3	—	30.4	—	1.9
Pipeline	24.0	.5	29.9	1.0	S	S	S
Multiple modes	10.4	1.0	19.8	.2	23.8	.8	6.3
Parcel, U.S. Postal Service or courier	11.5	1.0	12.0	—	8.2	—	6.4
Truck and rail	8.3	—	23.7	.2	20.9	.5	7.2
Truck and water	S	S	S	S	S	S	28.5
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	20.4	.5	25.2	.2	27.4	.3	40.1

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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	4.9	6.5	8.9	6.6	5.5	9.0	6.6	8.0	12.6	10.9	6.1	13.0
Single modes	5.6	7.3	10.2	6.7	6.1	9.6	6.9	8.3	13.8	13.9	8.8	12.7
Truck	6.3	7.7	10.6	7.6	8.1	11.1	9.9	5.1	13.2	8.3	6.9	9.9
For-hire truck	9.7	10.1	14.3	10.8	11.8	15.3	11.0	6.3	16.5	7.6	10.0	14.7
Private truck	5.3	5.5	8.7	11.3	7.4	13.9	11.9	4.7	9.4	10.1	6.4	9.2
Rail	23.1	20.9	27.5	12.5	15.3	25.2	12.4	15.8	26.5	11.1	6.5	11.8
Water	S	S	S	S	S	S	S	S	S	31.6	31.6	—
Shallow draft	S	—	S	S	—	S	S	—	S	31.6	—	S
Great Lakes	—	—	—	—	—	—	—	—	—	—	—	—
Deep draft	—	S	S	—	S	S	—	S	S	—	31.6	—
Air (includes truck and air)	27.6	14.5	93.0	33.3	16.8	59.4	30.4	17.3	55.3	1.9	4.9	5.1
Pipeline	24.0	26.1	71.9	29.9	24.9	47.6	S	S	S	S	S	S
Multiple modes	10.4	20.6	23.4	19.8	36.3	19.2	23.8	37.5	29.0	6.3	8.0	14.0
Parcel, U.S. Postal Service or courier	11.5	23.3	26.0	12.0	6.7	15.9	8.2	6.9	12.8	6.4	7.9	14.0
Truck and rail	8.3	19.9	45.3	23.7	21.2	77.5	20.9	25.4	123.4	7.2	9.7	12.3
Truck and water	S	S	S	S	44.0	S	S	48.8	S	28.5	22.5	23.0
Rail and water	—	42.9	—	—	48.3	—	—	48.3	—	—	25.8	—
Other multiple modes	—	—	—	—	—	—	—	—	—	—	—	—
Other and unknown modes	20.4	12.1	20.0	25.2	37.5	27.1	27.4	S	S	40.1	25.8	8.3

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

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

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

Mode of transportation	Value (percent)		Tons (percent)		Ton-miles (percent)	
	1997	1993	1997	1993	1997	1993
All modes	-	-	-	-	-	-
Single modes	1.2	1.7	.3	1.1	.8	3.0
Truck	2.0	1.6	2.6	2.7	4.4	4.3
For-hire truck	2.6	1.8	3.4	3.1	4.2	3.6
Private truck	1.9	1.6	2.8	1.9	.6	1.0
Rail	1.6	1.8	3.1	3.1	4.4	4.7
Water	S	S	S	S	S	S
Shallow draft	S	-	S	-	S	-
Great Lakes	-	-	-	-	-	-
Deep draft	-	S	-	S	-	S
Air (includes truck and air)	1.3	.2	-	-	-	-
Pipeline5	.4	1.0	1.0	S	S
Multiple modes	1.0	1.8	.2	.9	.8	2.6
Parcel, U.S. Postal Service or courier	1.0	1.9	-	-	-	-
Truck and rail	-	-	.2	-	.5	.2
Truck and water	S	S	S	-	S	.2
Rail and water	-	-	-	.9	-	2.6
Other multiple modes	-	-	-	-	-	-
Other and unknown modes5	.3	.2	.8	.3	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-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	6.6	-	10.5
Truck	9.5	4.3	7.9
Rail	11.8	4.3	10.5
Shallow draft	S	S	S
Great Lakes	-	-	-
Deep draft	S	S	31.1
Air	30.9	-	2.1
Parcel, U.S. Postal Service or courier	8.2	-	6.4
Pipeline	S	S	S
Other and unknown modes	27.4	.3	40.1

- 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	4.9	—	6.6	—	6.6	—
Less than 50 miles	4.3	1.1	10.7	2.1	14.9	.4
50 to 99 miles	9.7	.6	15.0	1.4	11.9	.3
100 to 249 miles	7.3	1.5	18.6	2.5	22.5	3.3
250 to 499 miles	8.4	.9	12.2	1.5	13.5	2.2
500 to 749 miles	8.2	1.0	17.1	1.7	19.7	4.2
750 to 999 miles	16.0	1.1	32.6	1.0	36.7	3.9
1,000 to 1,499 miles	14.2	2.0	18.9	1.2	20.4	5.0
1,500 to 1,999 miles	42.0	—	S	S	S	S
2,000 miles or more	49.7	—	S	S	S	S
Single modes	5.6	—	6.7	—	6.9	—
Less than 50 miles	5.0	1.2	10.7	2.1	14.9	.4
50 to 99 miles	9.9	.7	14.9	1.4	11.8	.3
100 to 249 miles	7.6	1.5	19.0	2.6	23.0	3.5
250 to 499 miles	10.3	1.1	12.4	1.5	13.8	2.1
500 to 749 miles	8.7	1.1	17.4	1.8	20.0	4.5
750 to 999 miles	17.4	1.1	33.1	1.0	37.2	4.0
1,000 to 1,499 miles	17.0	2.4	20.7	1.3	22.6	5.2
1,500 to 1,999 miles	40.3	—	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Truck	6.3	—	7.6	—	9.9	—
Less than 50 miles	5.0	1.4	11.3	2.7	16.8	1.5
50 to 99 miles	7.2	.5	11.9	1.2	11.2	.7
100 to 249 miles	7.0	1.5	9.2	1.3	12.6	3.1
250 to 499 miles	10.6	.8	14.3	1.0	13.4	1.4
500 to 749 miles	7.9	.6	24.2	.7	24.1	1.9
750 to 999 miles	14.2	.8	15.1	.3	15.3	1.1
1,000 to 1,499 miles	17.6	2.1	19.3	.7	19.7	3.7
1,500 to 1,999 miles	42.9	—	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
For-hire truck	9.7	—	10.8	—	11.0	—
Less than 50 miles	9.3	1.2	22.0	5.2	25.6	1.5
50 to 99 miles	10.5	.4	16.9	1.7	15.4	.8
100 to 249 miles	9.2	1.8	16.1	2.1	20.3	3.7
250 to 499 miles	13.3	1.1	14.3	2.0	12.8	1.7
500 to 749 miles	8.1	.9	27.0	1.6	26.9	2.2
750 to 999 miles	16.4	1.2	16.0	.6	16.2	1.2
1,000 to 1,499 miles	18.3	2.5	19.9	1.6	20.2	4.0
1,500 to 1,999 miles	42.5	—	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Private truck	5.3	—	11.3	—	11.9	—
Less than 50 miles	6.4	2.9	12.4	2.1	11.4	2.5
50 to 99 miles	9.5	.7	13.6	1.4	12.7	1.7
100 to 249 miles	13.6	2.3	18.4	1.6	15.0	2.9
250 to 499 miles	12.0	.6	23.8	.4	26.0	2.0
500 to 749 miles	18.3	.7	29.4	.2	28.3	1.6
750 to 999 miles	27.7	.3	27.0	—	27.8	.8
1,000 to 1,499 miles	29.9	.6	35.1	—	33.7	1.3
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	—	—	—	—	—	—
Rail	23.1	—	12.5	—	12.4	—
Less than 50 miles	40.1	2.4	43.9	3.5	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	38.2	5.0	42.0	6.9	41.1	4.2
250 to 499 miles	17.5	4.0	25.0	4.0	25.0	4.0
500 to 749 miles	22.3	4.0	24.7	5.7	27.7	6.3
750 to 999 miles	37.8	5.4	44.5	5.9	47.8	6.6
1,000 to 1,499 miles	S	S	33.4	3.4	35.5	6.7
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	—	—	—	—	—	—
Water	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
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	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
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)	27.6	—	33.3	—	30.4	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	39.9	—	49.2	.4	S	S
100 to 249 miles	40.9	.2	44.2	.9	44.8	.2
250 to 499 miles	32.1	6.6	28.0	8.3	32.3	7.6
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	S	S	45.5	1.5	47.9	1.5
1,000 to 1,499 miles	45.4	7.8	18.3	5.5	19.2	6.3
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Pipeline	24.0	—	29.9	—	S	S
Less than 50 miles	37.1	16.5	33.9	17.7	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	—	—	—	—	S	S
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	10.4	—	19.8	—	23.8	—
Less than 50 miles	21.2	1.1	22.4	.7	30.8	—
50 to 99 miles	25.2	.7	28.4	.8	28.8	—
100 to 249 miles	20.1	1.6	S	S	S	S
250 to 499 miles	20.0	2.0	42.1	7.9	40.5	7.0
500 to 749 miles	11.9	1.2	18.9	1.0	20.1	.9
750 to 999 miles	17.5	1.6	29.1	2.0	33.6	2.2
1,000 to 1,499 miles	12.0	2.3	25.1	7.1	25.6	9.1
1,500 to 1,999 miles	49.1	.3	35.3	—	35.0	.2
2,000 miles or more	32.0	.1	S	S	S	S
Parcel, U.S. Postal Service or courier	11.5	—	12.0	—	8.2	—
Less than 50 miles	21.2	1.2	22.4	1.5	30.8	.3
50 to 99 miles	25.2	.8	28.4	1.9	28.8	.5
100 to 249 miles	20.4	1.8	26.4	3.4	24.5	1.7
250 to 499 miles	19.7	1.9	18.8	1.6	16.5	1.5
500 to 749 miles	12.1	1.3	13.5	2.5	13.1	1.5
750 to 999 miles	20.3	1.6	11.4	1.4	11.4	1.3
1,000 to 1,499 miles	14.1	2.1	11.0	2.2	11.1	2.6
1,500 to 1,999 miles	49.1	.3	35.3	.2	35.0	.5
2,000 miles or more	37.9	.1	46.6	.2	S	S
Truck and rail	8.3	—	23.7	—	20.9	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	38.5	3.7	47.3	10.0	44.5	8.1
500 to 749 miles	36.5	3.2	31.6	2.4	31.7	1.5
750 to 999 miles	28.1	6.4	38.5	2.8	42.4	2.3
1,000 to 1,499 miles	15.9	6.5	26.6	9.7	26.8	9.1
1,500 to 1,999 miles	—	—	—	—	—	—
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	S	S	S	S	S	S
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	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—
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	20.4	—	25.2	—	27.4	—
Less than 50 miles	22.2	5.3	43.7	9.1	40.3	1.1
50 to 99 miles	34.0	2.2	37.5	5.6	36.5	2.2
100 to 249 miles	26.7	1.7	33.2	5.4	36.3	5.0
250 to 499 miles	35.4	1.5	33.1	1.0	34.4	1.1
500 to 749 miles	28.4	2.8	S	S	S	S
750 to 999 miles	29.1	1.4	33.1	1.0	32.1	3.1
1,000 to 1,499 miles	36.9	5.0	41.2	2.6	42.6	9.5
1,500 to 1,999 miles	—	—	—	—	—	—
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	4.9	—	6.6	—	6.6	—	10.9
Less than 50 lb	9.1	.9	11.3	—	9.5	—	12.9
50 to 99 lb	7.9	.2	12.9	—	7.9	—	15.2
100 to 499 lb	7.3	.7	10.7	—	6.4	—	14.1
500 to 749 lb	16.9	.5	14.1	—	7.3	—	14.4
750 to 999 lb	9.4	.2	18.5	—	8.7	—	20.1
1,000 to 9,999 lb	9.7	1.5	11.9	.8	11.7	.5	9.8
10,000 to 49,999 lb	10.9	2.6	6.8	1.4	9.3	2.9	9.6
50,000 to 99,999 lb	9.4	.7	12.5	2.9	15.6	2.3	13.6
100,000 lb or more	9.5	.9	11.3	2.9	12.5	4.1	11.2
Single modes	5.6	—	6.7	—	6.9	—	13.9
Less than 50 lb	12.7	.5	17.6	—	17.6	—	28.8
50 to 99 lb	9.6	.1	18.5	—	18.4	—	20.2
100 to 499 lb	9.3	.7	12.8	—	7.5	—	17.6
500 to 749 lb	17.4	.5	14.6	—	7.7	—	15.4
750 to 999 lb	10.0	.2	19.4	—	8.9	—	21.3
1,000 to 9,999 lb	10.2	1.5	12.0	.8	11.2	.5	10.4
10,000 to 49,999 lb	11.2	2.9	6.7	1.4	10.6	2.9	10.6
50,000 to 99,999 lb	9.9	.8	12.8	3.1	18.0	2.5	14.7
100,000 lb or more	10.0	1.1	11.6	3.0	12.8	4.4	11.3
Truck	6.3	—	7.6	—	9.9	—	8.3
Less than 50 lb	9.3	.4	19.3	—	19.5	—	17.2
50 to 99 lb	11.4	.2	19.0	—	21.9	—	12.7
100 to 499 lb	6.8	.7	12.9	.1	7.3	.1	18.3
500 to 749 lb	17.7	.5	14.6	—	7.8	—	15.8
750 to 999 lb	9.5	.2	19.4	—	9.0	—	21.4
1,000 to 9,999 lb	7.3	1.6	11.9	1.1	10.4	.7	10.8
10,000 to 49,999 lb	11.8	3.2	7.0	2.5	11.6	3.9	11.0
50,000 to 99,999 lb	9.1	1.0	12.8	3.1	18.5	3.8	15.0
100,000 lb or more	18.3	.2	26.8	.8	48.6	.8	S
For-hire truck	9.7	—	10.8	—	11.0	—	7.6
Less than 50 lb	23.6	.2	19.3	—	29.4	—	13.0
50 to 99 lb	15.8	.2	46.6	—	30.0	—	26.5
100 to 499 lb	15.9	1.0	11.0	—	11.9	.2	8.3
500 to 749 lb	27.9	.7	10.2	—	9.5	—	10.7
750 to 999 lb	17.0	.3	13.5	—	14.3	—	9.1
1,000 to 9,999 lb	11.8	2.1	9.0	1.0	13.2	1.0	8.5
10,000 to 49,999 lb	14.4	3.6	9.2	3.1	14.0	4.6	10.6
50,000 to 99,999 lb	9.3	1.5	15.5	3.8	20.6	4.7	19.0
100,000 lb or more	21.8	.3	35.0	.5	S	S	23.5
Private truck	5.3	—	11.3	—	11.9	—	10.1
Less than 50 lb	12.9	.8	20.3	—	23.9	—	15.9
50 to 99 lb	14.8	.6	16.2	—	19.5	—	12.1
100 to 499 lb	9.7	1.4	16.3	.3	15.4	.3	9.2
500 to 749 lb	10.0	.4	17.6	.2	16.1	.2	12.4
750 to 999 lb	14.1	.4	23.8	.2	18.6	.2	16.8
1,000 to 9,999 lb	11.0	2.2	15.7	2.3	14.0	2.2	10.0
10,000 to 49,999 lb	11.3	3.7	12.7	2.6	14.8	2.7	10.6
50,000 to 99,999 lb	15.3	.7	19.0	2.8	13.7	1.6	10.5
100,000 lb or more	32.2	.2	38.9	1.7	34.7	.7	S
Rail	23.1	—	12.5	—	12.4	—	11.1
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	31.6
500 to 749 lb	S	S	S	S	S	S	31.6
750 to 999 lb	S	S	S	S	S	S	31.6
1,000 to 9,999 lb	S	S	S	S	S	S	26.1
10,000 to 49,999 lb	S	S	21.4	.5	23.8	.8	11.3
50,000 to 99,999 lb	S	S	43.7	.3	S	S	23.3
100,000 lb or more	11.7	7.2	12.6	.6	12.7	.8	10.1
Water	S	S	S	S	S	S	31.6
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	31.6
Shallow draft	S	S	S	S	S	S	31.6
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	31.6

See footnote at end of table.

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

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

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
Single modes—Con.							
Great Lakes	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
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)	27.6	—	33.3	—	30.4	—	1.9
Less than 50 lb	35.0	8.6	36.5	2.9	38.7	3.1	2.0
50 to 99 lb	23.4	4.0	19.9	1.9	22.4	1.5	5.4
100 to 499 lb	49.5	6.4	28.1	3.7	28.2	4.3	6.8
500 to 749 lb	S	S	S	S	42.2	1.7	20.1
750 to 999 lb	S	S	34.7	.9	32.0	.9	26.0
1,000 to 9,999 lb	37.2	2.2	S	S	S	S	6.9
10,000 to 49,999 lb	S	S	36.5	9.2	37.4	9.6	25.1
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Pipeline	24.0	—	29.9	—	S	S	S
Less than 50 lb	—	—	—	—	S	S	S
50 to 99 lb	—	—	—	—	S	S	S
100 to 499 lb	—	—	—	—	S	S	S
500 to 749 lb	—	—	—	—	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	—	—	—	—	—	—	—
50,000 to 99,999 lb	40.8	5.1	S	S	S	S	S
100,000 lb or more	27.9	5.2	30.1	.6	S	S	S
Multiple modes	10.4	—	19.8	—	23.8	—	6.3
Less than 50 lb	13.0	2.9	13.5	1.2	11.2	1.4	6.0
50 to 99 lb	15.1	1.4	15.9	.7	11.4	.5	10.0
100 to 499 lb	13.4	1.3	17.2	2.8	9.2	1.1	16.4
500 to 749 lb	19.7	.3	45.8	.1	29.0	.1	20.2
750 to 999 lb	27.3	.2	41.7	.2	26.1	—	34.1
1,000 to 9,999 lb	S	S	S	S	S	S	S
10,000 to 49,999 lb	8.7	1.5	19.7	8.5	22.1	9.7	5.2
50,000 to 99,999 lb	S	S	S	S	S	S	29.8
100,000 lb or more	S	S	42.5	8.6	49.0	6.6	24.1
Parcel, U.S. Postal Service or courier	11.5	—	12.0	—	8.2	—	6.4
Less than 50 lb	13.0	2.7	13.5	3.6	11.2	2.9	6.0
50 to 99 lb	15.1	1.7	15.9	1.7	11.4	2.1	10.1
100 to 499 lb	13.4	1.5	17.2	4.5	9.3	2.6	16.5
500 to 749 lb	19.7	.3	45.8	1.0	29.0	.6	20.2
750 to 999 lb	27.3	.2	41.7	1.2	26.1	.4	34.1
1,000 to 9,999 lb	S	S	S	S	S	S	31.6
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	8.3	—	23.7	—	20.9	—	7.2
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	30.0
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	26.7
10,000 to 49,999 lb	8.7	3.7	19.6	11.6	21.8	8.9	5.0
50,000 to 99,999 lb	S	S	S	S	S	S	36.4
100,000 lb or more	45.8	1.7	38.2	9.3	42.9	7.6	24.9
Truck and water	S	S	S	S	S	S	28.5
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	S	S	S	S	S	S	31.6
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	S	S	S	S	S	S	31.6
50,000 to 99,999 lb	S	S	S	S	S	S	31.6
100,000 lb or more	S	S	S	S	S	S	31.6

See footnote at end of table.

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

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

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
Multiple modes—Con.							
Rail and water	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
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	20.4	—	25.2	—	27.4	—	40.1
Less than 50 lb	22.6	2.4	38.0	.8	30.8	.1	S
50 to 99 lb	24.9	.5	33.5	.3	39.8	.1	30.2
100 to 499 lb	26.5	2.2	30.5	1.0	34.6	.4	S
500 to 749 lb	41.1	.8	22.1	.4	48.0	.3	47.3
750 to 999 lb	34.7	.5	21.4	.3	S	S	S
1,000 to 9,999 lb	30.3	4.9	18.2	5.7	33.6	8.2	40.0
10,000 to 49,999 lb	20.2	2.5	27.2	7.3	33.3	9.9	49.7
50,000 to 99,999 lb	S	S	37.5	7.2	46.5	3.9	30.1
100,000 lb or more	S	S	S	S	S	S	29.8

— 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	4.9	—	6.6	—	6.6	—	10.9
01	Live animals and live fish	24.7	—	23.8	—	36.4	—	20.8
02	Cereal grains	12.0	1.0	11.6	3.0	22.6	6.0	29.0
03	Other agricultural products	39.5	.4	31.4	.5	48.3	.6	23.0
04	Animal feed and products of animal origin, n.e.c.	11.1	.2	15.8	1.0	26.3	1.4	S
05	Meat, fish, seafood, and their preparations	29.2	2.4	27.9	.6	34.9	2.1	S
06	Milled grain products and preparations, and bakery products	18.5	.7	23.6	.8	30.9	2.3	37.4
07	Other prepared foodstuffs and fats and oils	13.1	.7	16.4	.5	27.0	.6	22.8
08	Alcoholic beverages	30.2	.3	23.7	.1	S	S	10.8
09	Tobacco products	37.7	.1	40.7	—	41.1	—	22.0
10	Monumental or building stone	S	S	S	S	S	S	31.6
11	Natural sands	40.5	—	47.1	3.8	49.2	.7	21.4
12	Gravel and crushed stone	33.0	—	31.6	2.6	35.7	.2	20.6
13	Nonmetallic minerals n.e.c.	46.9	.1	31.5	.8	33.7	1.3	26.1
14	Metallic ores and concentrates	S	S	S	S	S	S	41.5
15	Coal	S	S	S	S	S	S	27.9
17	Gasoline and aviation turbine fuel	29.8	.6	30.8	1.1	S	S	41.5
18	Fuel oils	27.6	.2	25.7	.2	S	S	37.7
19	Coal and petroleum products, n.e.c.	31.9	.5	35.2	1.9	38.2	2.0	35.4
20	Basic chemicals	22.4	.3	34.5	1.9	34.5	4.5	S
21	Pharmaceutical products	44.5	.7	S	S	S	S	24.3
22	Fertilizers	21.5	.1	23.5	.4	24.3	.2	S
23	Chemical products and preparations, n.e.c.	25.2	.7	29.7	.3	37.2	.6	19.7
24	Plastics and rubber	10.5	.4	17.1	.2	24.1	.3	14.8
25	Logs and other wood in the rough	S	S	S	S	S	S	30.3
26	Wood products	16.7	.2	18.8	.2	15.8	—	32.2
27	Pulp, newsprint, paper, and paperboard	14.3	.1	11.6	—	18.0	—	21.1
28	Paper or paperboard articles	40.3	.6	14.2	.1	43.9	.5	27.1
29	Printed products	8.6	.6	24.8	.2	21.2	.3	12.5
30	Textiles, leather, and articles of textiles or leather	S	S	S	S	S	S	10.9
31	Nonmetallic mineral products	13.0	.3	13.2	.6	15.7	.4	39.4
32	Base metal in primary or semifinished forms and in finished basic shapes	28.4	.6	30.1	.3	29.5	.2	37.6
33	Articles of base metal	21.8	.6	17.8	.1	23.0	.2	28.0
34	Machinery	9.4	.7	9.9	—	11.1	.1	18.4
35	Electronic and other electrical equipment and components and office equipment	11.7	.7	15.1	—	17.2	.2	10.7
36	Motorized and other vehicles (including parts)	10.7	.5	16.6	—	12.7	—	31.0
37	Transportation equipment, n.e.c.	40.2	3.1	S	S	S	S	12.7
38	Precision instruments and apparatus	24.7	.3	36.2	—	36.6	—	6.7
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	36.3	.4	33.8	—	44.8	—	25.0
40	Miscellaneous manufactured products	11.8	.3	27.0	.1	18.6	.1	9.4
41	Waste and scrap	23.2	—	28.5	.1	30.7	.2	9.4
43	Mixed freight	17.1	.9	18.5	.3	21.8	.2	42.5
--	Commodity unknown	36.1	.2	S	S	S	S	28.8

— 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-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	4.9	—	6.6	—	6.6	—	10.9
Single modes	5.6	1.2	6.7	.3	6.9	.8	13.9
Truck	6.3	2.0	7.6	2.6	9.9	4.4	8.3
For-hire truck	9.7	2.6	10.8	3.4	11.0	4.2	7.6
Private truck	5.3	1.9	11.3	2.8	11.9	.6	10.1
Rail	23.1	1.6	12.5	3.1	12.4	4.4	11.1
Water	S	S	S	S	S	S	31.6
Shallow draft	S	S	S	S	S	S	31.6
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	27.6	1.3	33.3	—	30.4	—	1.9
Pipeline	24.0	.5	29.9	1.0	S	S	S
Multiple modes	10.4	1.0	19.8	.2	23.8	.8	6.3
Parcel, U.S. Postal Service or courier	11.5	1.0	12.0	—	8.2	—	6.4
Truck and rail	8.3	—	23.7	.2	20.9	.5	7.2
Truck and water	S	S	S	S	S	S	28.5
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	20.4	.5	25.2	.2	27.4	.3	40.1
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	24.7	—	23.8	—	36.4	—	20.8
Single modes	24.7	—	23.8	—	36.4	—	20.8
Truck	24.7	—	23.8	—	36.4	—	20.8
For-hire truck	25.7	5.8	24.7	5.7	36.8	5.7	20.8
Private truck	S	S	S	S	S	S	28.5
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	12.0	—	11.6	—	22.6	—	29.0
Single modes	12.0	.1	11.6	.1	21.9	1.1	23.7
Truck	17.6	6.4	17.6	6.5	33.4	7.7	29.3
For-hire truck	18.6	6.1	18.4	6.3	33.6	7.5	28.1
Private truck	39.2	2.6	40.0	2.8	30.6	.2	20.8
Rail	19.0	6.6	17.8	6.7	27.6	7.4	19.4
Water	S	S	S	S	S	S	31.6
Shallow draft	S	S	S	S	S	S	31.6
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	S	S	S	S	S	S	S
Multiple modes	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.9

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 03, OTHER AGRICULTURAL PRODUCTS							
Total	39.5	—	31.4	—	48.3	—	23.0
Single modes	40.0	2.3	31.8	2.4	48.4	2.3	11.0
Truck	48.8	8.0	30.5	9.2	42.0	19.1	12.0
For-hire truck	47.4	9.6	28.1	9.0	40.5	12.4	20.4
Private truck	S	S	40.6	10.4	S	S	15.9
Rail	S	S	S	S	S	S	S
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	32.2
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	32.2
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	11.1	—	15.8	—	26.3	—	S
Single modes	10.4	3.8	15.8	2.2	28.1	7.9	S
Truck	11.5	5.1	16.1	3.7	31.1	9.0	S
For-hire truck	15.6	5.0	26.7	5.3	35.9	7.1	8.6
Private truck	18.1	5.2	14.3	4.7	14.6	3.1	S
Rail	31.8	4.7	30.4	4.1	33.6	7.8	22.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	S	S	S	S	S	S	S
Multiple modes	34.9	3.9	37.7	2.3	37.0	8.1	21.4
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	34.9	3.9	37.7	2.3	37.0	8.1	21.4
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	35.8
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	29.2	—	27.9	—	34.9	—	S
Single modes	29.4	2.3	28.0	3.4	34.9	1.3	S
Truck	29.4	2.3	28.0	3.4	34.9	1.3	S
For-hire truck	32.9	4.9	32.4	5.7	37.1	3.3	8.4
Private truck	33.1	4.1	38.2	4.9	45.9	3.0	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	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	48.1	.6	47.4	1.0	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 06, MILLED GRAIN PRODUCTS AND PREPARATIONS, AND BAKERY PRODUCTS							
Total	18.5	—	23.6	—	30.9	—	37.4
Single modes	18.0	1.6	21.7	2.6	29.5	3.0	37.0
Truck	19.9	5.5	20.0	8.0	20.4	9.4	32.2
For-hire truck	27.1	6.9	23.7	6.2	26.0	7.8	13.1
Private truck	34.5	7.4	42.3	5.8	32.9	3.0	25.0
Rail	33.8	5.2	33.5	6.6	36.6	8.0	13.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	45.7	—	45.7	—	S	S	26.0
Pipeline	—	—	—	—	S	S	S
Multiple modes	39.0	.9	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	S
Truck and rail	36.8	.8	S	S	S	S	28.7
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	13.1	—	16.4	—	27.0	—	22.8
Single modes	12.4	1.0	16.4	.2	26.9	.3	S
Truck	12.8	2.4	17.3	4.6	19.9	8.9	S
For-hire truck	23.5	3.7	39.0	4.2	29.1	5.0	S
Private truck	15.7	4.2	19.8	6.6	26.3	7.9	49.6
Rail	30.1	1.9	29.5	4.5	36.4	8.7	21.4
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	26.0
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	20.8
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	20.8
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 08, ALCOHOLIC BEVERAGES							
Total	30.2	—	23.7	—	S	S	10.8
Single modes	32.1	5.2	26.9	6.8	S	S	11.6
Truck	32.6	5.3	28.5	7.9	S	S	11.6
For-hire truck	S	S	S	S	S	S	40.9
Private truck	34.1	6.9	25.6	10.4	S	S	10.9
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

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	37.7	—	40.7	—	41.1	—	22.0
Single modes	37.7	—	40.7	—	41.1	—	22.1
Truck	37.7	—	40.7	—	41.1	—	22.1
For-hire truck	—	—	—	—	—	—	—
Private truck	37.7	—	40.7	—	41.1	—	22.1
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	29.8
SCTG 10, MONUMENTAL OR BUILDING STONE							
Total	S	S	S	S	S	S	31.6
Single modes	S	S	S	S	S	S	31.6
Truck	S	S	S	S	S	S	31.6
For-hire truck	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—
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	40.5	—	47.1	—	49.2	—	21.4
Single modes	40.6	.2	47.3	.4	50.0	1.3	20.8
Truck	40.6	.2	47.3	.4	50.0	1.3	20.8
For-hire truck	S	S	S	S	S	S	30.6
Private truck	47.1	13.9	S	S	S	S	16.0
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	37.8

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 12, GRAVEL AND CRUSHED STONE							
Total	33.0	—	31.6	—	35.7	—	20.6
Single modes	32.8	1.1	31.5	—	35.7	—	20.8
Truck	33.3	2.4	32.2	2.4	35.8	.3	21.5
For-hire truck	S	S	S	S	S	S	S
Private truck	41.9	10.7	40.3	10.5	S	S	15.7
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
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	31.9
SCTG 13, NONMETALLIC MINERALS N.E.C.							
Total	46.9	—	31.5	—	33.7	—	26.1
Single modes	41.3	3.5	30.2	2.8	34.5	2.3	24.1
Truck	37.5	6.4	30.0	10.1	35.9	13.1	25.6
For-hire truck	33.0	9.1	27.0	8.8	30.5	9.6	29.7
Private truck	S	S	39.9	11.7	47.7	13.0	24.6
Rail	S	S	38.1	8.3	37.4	11.6	23.3
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	37.7	1.6	44.1	2.2	40.0	2.4	37.3
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	38.6	1.6	44.1	2.2	40.0	2.4	28.2
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	S	S	S	S	S	S	41.5
Single modes	S	S	S	S	S	S	31.2
Truck	S	S	S	S	S	S	31.2
For-hire truck	S	S	S	S	S	S	31.6
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	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

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 15, COAL							
Total	S	S	S	S	S	S	27.9
Single modes	S	S	S	S	S	S	27.9
Truck	S	S	S	S	S	S	27.9
For-hire truck	S	S	S	S	S	S	27.9
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 17, GASOLINE AND AVIATION TURBINE FUEL							
Total	29.8	-	30.8	-	S	S	41.5
Single modes	29.0	.6	30.2	.5	S	S	41.2
Truck	27.0	9.6	32.1	9.8	44.5	18.3	27.9
For-hire truck	42.9	3.7	40.3	4.2	42.3	10.4	29.1
Private truck	36.8	10.9	43.0	10.8	S	S	31.6
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	27.9
Pipeline	35.2	11.4	37.9	11.7	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	35.0
SCTG 18, FUEL OILS							
Total	27.6	-	25.7	-	S	S	37.7
Single modes	28.0	1.2	25.9	1.2	S	S	38.7
Truck	25.9	11.5	25.9	1.2	S	S	38.8
For-hire truck	47.7	6.3	44.1	12.6	S	S	28.3
Private truck	27.2	17.3	27.0	12.4	38.4	19.0	30.9
Rail	-	-	-	-	-	-	-
Water	-	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline	40.8	11.7	40.8	-	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	31.3

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	31.9	—	35.2	—	38.2	—	35.4
Single modes	32.1	.6	35.6	2.4	38.5	2.1	35.9
Truck	23.3	10.9	20.6	15.6	26.4	15.1	37.7
For-hire truck	42.2	6.5	48.5	4.5	49.7	6.7	22.4
Private truck	37.5	11.1	30.1	14.3	35.7	11.3	30.6
Rail	46.0	9.4	S	S	47.6	16.9	33.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	S	S	S	S	S	S	S
Multiple modes	48.7	.2	S	S	S	S	24.4
Parcel, U.S. Postal Service or courier	47.2	—	S	S	S	S	27.8
Truck and rail	S	S	S	S	S	S	27.9
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	27.6
SCTG 20, BASIC CHEMICALS							
Total	22.4	—	34.5	—	34.5	—	S
Single modes	22.7	.9	34.6	.1	34.6	.1	S
Truck	14.4	10.1	28.0	14.5	44.7	13.6	S
For-hire truck	20.4	7.6	38.5	6.9	46.4	10.0	16.0
Private truck	13.3	5.7	33.3	12.3	27.0	9.0	S
Rail	45.5	9.9	49.0	14.3	41.3	13.7	19.0
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	31.6
Pipeline	45.4	1.5	45.4	.5	S	S	S
Multiple modes	S	S	S	S	S	S	21.5
Parcel, U.S. Postal Service or courier	36.2	.1	S	S	S	S	21.6
Truck and rail	S	S	S	S	S	S	29.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	44.1	.6	49.7	—	S	S	S
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	44.5	—	S	S	S	S	24.3
Single modes	48.6	5.7	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	S	S	S	S	S	S	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	47.0	5.5	S	S	S	S	26.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	16.5
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	16.5
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	49.9	.1	28.1

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 22, FERTILIZERS							
Total	21.5	—	23.5	—	24.3	—	S
Single modes	22.8	5.0	25.7	7.0	27.1	6.7	S
Truck	24.9	6.7	28.3	8.6	30.1	14.7	S
For-hire truck	38.1	3.6	41.5	3.4	27.3	9.2	S
Private truck	23.3	7.1	26.2	8.4	38.5	9.2	42.4
Rail	31.4	4.2	40.7	4.9	41.5	13.6	22.3
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	S	S	S	S	S	S	S
Multiple modes	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	25.2	—	29.7	—	37.2	—	19.7
Single modes	29.1	6.1	31.9	4.8	40.7	5.9	16.7
Truck	27.6	4.9	30.3	4.1	37.8	5.9	15.9
For-hire truck	32.0	6.9	33.1	5.9	38.9	8.6	13.3
Private truck	30.5	4.7	29.6	5.7	43.1	2.4	18.9
Rail	S	S	S	S	S	S	27.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	35.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	43.0	5.9	39.0	4.8	41.7	5.9	10.6
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	14.3
Truck and rail	44.6	4.4	44.8	5.0	44.6	6.1	25.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	27.7	.7	46.1	.9	S	S	24.0
SCTG 24, PLASTICS AND RUBBER							
Total	10.5	—	17.1	—	24.1	—	14.8
Single modes	11.5	2.2	17.7	2.0	25.6	2.9	19.1
Truck	12.4	3.4	17.1	3.9	22.0	5.1	22.5
For-hire truck	15.6	5.0	18.2	5.1	22.8	4.6	9.5
Private truck	25.2	4.5	39.0	5.3	S	S	25.0
Rail	S	S	S	S	S	S	29.1
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	33.3	.2	34.9	—	34.1	—	15.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	14.6	1.1	35.3	.7	S	S	9.6
Parcel, U.S. Postal Service or courier	15.2	1.1	17.8	.4	21.2	.5	9.3
Truck and rail	S	S	S	S	S	S	28.0
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	39.2	1.6	43.4	1.5	49.5	1.6	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	S	S	S	S	S	S	30.3
Single modes	S	S	S	S	S	S	30.3
Truck	S	S	S	S	S	S	30.3
For-hire truck	—	—	—	—	—	—	—
Private truck	S	S	S	S	S	S	30.3
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 26, WOOD PRODUCTS							
Total	16.7	—	18.8	—	15.8	—	32.2
Single modes	17.3	1.9	19.6	3.7	15.7	.3	34.0
Truck	17.3	1.9	19.6	3.7	15.7	.3	34.0
For-hire truck	28.6	6.2	35.4	7.5	23.6	8.6	17.2
Private truck	23.5	6.2	27.9	8.8	32.5	8.6	14.7
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	43.4	.3	S	S	S	S	20.3
Parcel, U.S. Postal Service or courier	43.4	.3	S	S	S	S	20.3
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	49.7	1.9	S	S	S	S	27.4
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	14.3	—	11.6	—	18.0	—	21.1
Single modes	14.2	1.0	11.6	.2	18.0	.7	18.0
Truck	14.2	1.0	11.6	.2	18.0	.7	18.0
For-hire truck	38.0	5.5	41.6	8.4	42.9	15.4	14.8
Private truck	24.8	9.6	17.6	8.2	30.2	12.1	21.2
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	38.2	.6	40.5	.2	38.3	.7	26.1
Parcel, U.S. Postal Service or courier	38.2	.6	40.5	.2	38.3	.7	26.1
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	43.8	—	29.6

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 28, PAPER OR PAPERBOARD ARTICLES							
Total	40.3	—	14.2	—	43.9	—	27.1
Single modes	41.1	2.2	14.2	.2	44.2	.4	32.6
Truck	41.4	3.8	16.3	5.6	49.7	8.7	32.9
For-hire truck	49.7	12.2	25.3	11.9	S	S	21.2
Private truck	27.0	9.7	46.7	9.4	S	S	22.0
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	29.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	42.1	2.2	36.5	.1	29.1	.3	11.7
Parcel, U.S. Postal Service or courier	42.1	2.2	36.5	.1	29.1	.3	11.7
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	36.4	.2	S	S	S	S	S
SCTG 29, PRINTED PRODUCTS							
Total	8.6	—	24.8	—	21.2	—	12.5
Single modes	10.1	5.3	27.4	4.1	24.1	4.0	S
Truck	10.1	5.3	27.4	4.0	24.7	4.2	S
For-hire truck	11.6	5.9	28.5	5.4	25.0	4.4	38.1
Private truck	28.2	1.8	39.1	3.4	47.7	1.0	S
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	43.3	.3	S	S	S	S	6.4
Pipeline	—	—	—	—	S	S	S
Multiple modes	19.5	5.7	24.9	3.6	21.2	3.3	11.9
Parcel, U.S. Postal Service or courier	20.3	5.7	30.4	3.9	20.1	4.1	11.9
Truck and rail	43.4	.8	42.7	.6	42.7	2.4	25.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	40.4	2.2	S	S	32.8
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	S	S	S	S	S	S	10.9
Single modes	S	S	S	S	S	S	19.7
Truck	S	S	S	S	S	S	23.2
For-hire truck	S	S	S	S	S	S	14.1
Private truck	30.2	6.5	S	S	47.5	3.4	45.3
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	46.5	1.5	S	S	S	S	21.5
Pipeline	—	—	—	—	S	S	S
Multiple modes	39.3	15.5	27.5	12.3	31.7	13.3	7.4
Parcel, U.S. Postal Service or courier	39.3	15.5	27.5	12.3	31.7	13.3	7.4
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	31.9	.8	S	S	39.7	1.3	39.4

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	13.0	—	13.2	—	15.7	—	39.4
Single modes	13.0	.9	13.1	.6	15.7	.2	18.2
Truck	13.1	1.1	12.8	.8	12.5	2.9	21.9
For-hire truck	12.9	7.3	14.5	5.5	11.6	5.8	18.9
Private truck	25.1	6.1	18.3	5.5	16.0	5.6	20.4
Rail	37.5	.5	42.9	.8	43.1	2.9	27.2
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	21.2
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	21.2
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	46.3	.5	44.8	.6	30.8	.1	37.5
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	28.4	—	30.1	—	29.5	—	37.6
Single modes	29.1	2.0	31.3	3.0	29.4	.5	22.2
Truck	27.0	2.7	28.5	5.4	27.2	7.4	22.1
For-hire truck	26.7	6.3	22.1	6.4	20.4	7.0	17.9
Private truck	36.6	6.7	39.4	7.5	S	S	35.0
Rail	S	S	S	S	S	S	27.7
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	25.9
Pipeline	—	—	—	—	S	S	S
Multiple modes	44.2	.5	S	S	S	S	39.2
Parcel, U.S. Postal Service or courier	44.2	.5	S	S	S	S	39.2
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	37.1
SCTG 33, ARTICLES OF BASE METAL							
Total	21.8	—	17.8	—	23.0	—	28.0
Single modes	24.6	4.2	19.4	3.8	22.9	.6	33.0
Truck	24.6	4.3	19.4	3.8	22.9	.6	33.8
For-hire truck	29.3	7.9	18.4	4.1	22.0	1.4	11.9
Private truck	19.1	4.3	35.2	3.6	37.3	1.1	16.0
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	46.1	—	46.0	—	13.3
Pipeline	—	—	—	—	S	S	S
Multiple modes	28.0	2.8	30.7	.4	30.5	.4	14.7
Parcel, U.S. Postal Service or courier	28.0	2.8	30.7	.4	30.5	.4	14.7
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	35.7	2.0	S	S	43.0	.7	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 34, MACHINERY							
Total	9.4	—	9.9	—	11.1	—	18.4
Single modes	11.0	3.7	10.8	2.5	10.9	1.1	17.7
Truck	11.6	4.4	11.1	2.7	10.5	2.0	20.5
For-hire truck	11.1	4.8	15.1	4.9	11.4	2.9	4.0
Private truck	25.4	3.8	21.0	5.4	14.5	2.0	20.1
Rail	S	S	S	S	S	S	32.3
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	33.9	1.1	26.3	.1	24.7	.1	7.9
Pipeline	S	S	S	S	S	S	S
Multiple modes	16.4	1.4	15.6	.5	38.3	1.1	12.6
Parcel, U.S. Postal Service or courier	17.0	1.4	17.4	.6	14.0	.5	12.7
Truck and rail	S	S	S	S	S	S	29.8
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	11.7	—	15.1	—	17.2	—	10.7
Single modes	9.5	4.8	15.7	1.5	17.5	1.3	28.1
Truck	13.3	6.4	16.2	1.9	18.6	2.1	26.6
For-hire truck	14.5	6.3	15.4	4.0	17.4	2.5	13.5
Private truck	39.3	5.2	32.3	3.5	S	S	19.5
Rail	35.1	.3	34.9	.8	35.7	1.6	23.7
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	19.5	—	22.6	—	7.3
Pipeline	—	—	—	—	S	S	S
Multiple modes	26.4	5.2	19.7	1.2	25.2	1.1	8.6
Parcel, U.S. Postal Service or courier	26.5	5.2	19.5	1.2	22.2	1.2	8.6
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	23.2	.9	18.2	.4	S	S	S
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	10.7	—	16.6	—	12.7	—	31.0
Single modes	11.8	5.2	14.9	4.2	10.0	6.4	S
Truck	11.7	5.2	15.0	4.2	10.1	6.4	S
For-hire truck	11.1	4.5	19.2	4.4	13.0	5.3	12.5
Private truck	20.7	4.9	15.6	4.9	16.2	3.3	34.0
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	37.8	.3	28.7	—	21.6	.2	5.3
Pipeline	—	—	—	—	S	S	S
Multiple modes	19.8	2.1	25.4	2.7	30.1	5.1	3.4
Parcel, U.S. Postal Service or courier	22.5	1.5	24.0	.6	29.7	1.1	3.4
Truck and rail	41.2	1.4	41.2	2.9	41.3	5.1	25.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	48.6	5.2	49.7	4.7	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	40.2	—	S	S	S	S	12.7
Single modes	41.3	1.9	S	S	S	S	15.1
Truck	49.1	11.9	S	S	S	S	18.3
For-hire truck	S	S	S	S	S	S	7.6
Private truck	S	S	S	S	S	S	37.7
Rail	S	S	S	S	S	S	27.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	40.3	10.6	44.3	5.5	43.1	8.8	11.0
Pipeline	—	—	—	—	S	S	S
Multiple modes	37.2	1.9	43.7	1.6	44.7	1.6	18.7
Parcel, U.S. Postal Service or courier	37.2	1.9	43.7	1.6	44.7	1.6	18.7
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	32.6
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	24.7	—	36.2	—	36.6	—	6.7
Single modes	34.1	10.3	47.4	11.7	49.8	13.0	15.0
Truck	44.2	11.1	S	S	S	S	24.3
For-hire truck	S	S	S	S	S	S	20.7
Private truck	42.2	10.1	S	S	S	S	28.1
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	21.5	6.7	31.0	5.9	32.9	8.3	12.3
Pipeline	—	—	—	—	S	S	S
Multiple modes	25.2	9.2	29.4	9.9	27.8	13.0	6.0
Parcel, U.S. Postal Service or courier	25.2	9.2	29.4	9.9	27.8	13.0	6.0
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	37.9	.2	34.1
SCTG 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	36.3	—	33.8	—	44.8	—	25.0
Single modes	31.9	2.3	31.5	2.5	44.9	2.9	27.2
Truck	31.6	2.5	30.9	2.6	43.0	2.9	27.2
For-hire truck	39.9	4.7	46.7	8.7	S	S	9.4
Private truck	30.1	5.1	21.8	9.4	19.4	11.6	44.8
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	28.1
Pipeline	—	—	—	—	S	S	S
Multiple modes	23.7	.6	42.5	1.6	39.2	1.8	9.1
Parcel, U.S. Postal Service or courier	23.7	.6	42.5	1.6	39.2	1.8	9.1
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 40, MISCELLANEOUS MANUFACTURED PRODUCTS							
Total	11.8	—	27.0	—	18.6	—	9.4
Single modes	11.0	3.0	27.2	.9	17.1	1.9	18.5
Truck	11.6	3.1	27.7	1.7	17.8	2.1	20.4
For-hire truck	15.8	5.5	26.2	9.4	21.9	6.2	10.5
Private truck	25.8	4.5	S	S	32.6	5.9	13.0
Rail	S	S	S	S	S	S	28.4
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	39.0	1.6	37.3	—	36.3	.4	11.9
Pipeline	—	—	—	—	S	S	S
Multiple modes	20.6	2.7	19.8	.7	21.7	1.5	5.3
Parcel, U.S. Postal Service or courier	22.1	2.7	23.4	.7	24.2	1.1	5.4
Truck and rail	S	S	S	S	S	S	28.6
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	46.1	.8	S	S	S	S	S
SCTG 41, WASTE AND SCRAP							
Total	23.2	—	28.5	—	30.7	—	9.4
Single modes	23.5	.9	28.5	.3	30.7	.3	10.2
Truck	21.3	5.7	26.1	7.4	29.0	7.5	11.3
For-hire truck	22.3	6.6	33.9	8.5	34.3	8.6	12.0
Private truck	29.5	4.3	31.5	4.9	S	S	21.4
Rail	36.7	5.8	35.4	7.3	35.7	7.4	18.5
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	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	S	S	S	S	S	S	31.8
SCTG 43, MIXED FREIGHT							
Total	17.1	—	18.5	—	21.8	—	42.5
Single modes	17.0	.6	18.6	.6	21.9	.6	S
Truck	17.0	.6	18.6	.6	22.0	.6	S
For-hire truck	18.3	12.2	27.2	14.2	33.4	11.2	27.0
Private truck	21.7	12.5	22.4	14.5	26.1	11.5	S
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	50.0	.5	47.9	.4	47.0	.5	22.9
Parcel, U.S. Postal Service or courier	50.0	.5	47.9	.4	47.0	.5	22.9
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	
COMMODITY UNKNOWN							
Total	36.1	—	S	S	S	S	28.8
Single modes	33.2	4.1	49.6	5.1	S	S	31.9
Truck	33.6	4.5	41.3	11.4	S	S	31.1
For-hire truck	38.3	10.7	45.6	11.6	S	S	18.0
Private truck	S	S	S	S	41.9	10.8	S
Rail	S	S	S	S	S	S	31.5
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	28.9
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	30.3
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	30.3
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	4.9	—	6.6	—	6.6	—
NEW ENGLAND STATES						
Connecticut	23.6	.1	18.7	—	18.6	—
Maine	39.4	.1	48.7	—	49.2	.1
Massachusetts	23.4	.1	31.1	—	30.3	.1
New Hampshire	44.2	—	S	S	S	S
Rhode Island	32.7	—	49.7	—	50.0	—
Vermont	38.3	—	S	S	S	S
MIDDLE ATLANTIC STATES						
New Jersey	18.1	.2	12.7	—	12.3	.1
New York	24.5	.4	31.0	.1	31.3	.6
Pennsylvania	17.7	.3	28.2	.1	32.7	.6
EAST NORTH CENTRAL STATES						
Illinois	15.9	.6	36.7	.5	42.3	1.3
Indiana	12.5	.1	18.0	—	21.6	.2
Michigan	7.5	—	11.0	—	15.4	.1
Ohio	19.1	.4	17.1	—	16.6	.2
Wisconsin	13.2	.2	29.4	.1	33.0	.4
WEST NORTH CENTRAL STATES						
Iowa	14.9	.3	12.6	.1	16.1	.3
Kansas	3.9	1.6	11.1	2.8	16.3	1.8
Minnesota	15.8	.2	37.0	.3	43.7	.7
Missouri	5.8	.7	10.7	1.2	21.3	1.1
Nebraska	11.8	.3	30.9	.7	21.4	.3
North Dakota	11.9	—	12.4	—	12.5	—
South Dakota	11.4	—	12.0	—	11.7	—
SOUTH ATLANTIC STATES						
Delaware	28.6	—	30.9	—	30.7	—
District of Columbia	36.6	—	44.0	—	43.2	—
Florida	26.7	.5	39.3	.5	36.7	1.9
Georgia	35.1	.5	17.1	—	16.4	.2
Maryland	19.3	—	18.7	—	21.7	—
North Carolina	37.6	.5	31.9	.3	34.9	1.1
South Carolina	26.3	.1	26.4	—	30.6	.2
Virginia	14.3	—	45.1	—	44.1	.4
West Virginia	39.0	—	42.9	—	41.3	—
EAST SOUTH CENTRAL STATES						
Alabama	13.9	.1	29.6	—	32.2	.2
Kentucky	8.4	—	17.2	—	21.8	—
Mississippi	40.4	.1	36.9	—	39.9	.2
Tennessee	22.0	.4	16.9	—	18.3	.2
WEST SOUTH CENTRAL STATES						
Arkansas	5.9	—	12.6	.1	13.6	.2
Louisiana	19.0	.2	S	S	S	S
Oklahoma	10.5	.4	23.0	1.5	27.6	1.8
Texas	6.8	.4	20.2	1.5	31.7	4.6
MOUNTAIN STATES						
Arizona	28.9	.3	35.0	.1	37.6	.6
Colorado	25.8	.6	S	S	48.9	1.6
Idaho	29.8	—	33.6	—	33.1	—
Montana	33.9	—	44.8	—	45.5	—
Nevada	S	S	S	S	S	S
New Mexico	19.4	—	38.9	.2	43.6	.3
Utah	44.2	.3	22.9	—	22.8	—
Wyoming	30.8	—	33.1	—	30.4	—
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	13.4	.9	27.0	.8	28.3	3.4
Hawaii	S	S	S	S	S	S
Oregon	27.6	.1	S	S	S	S
Washington	S	S	29.4	—	32.8	.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-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	3.4	-	7.9	-	8.7	-
NEW ENGLAND STATES						
Connecticut	17.8	-	17.6	-	18.1	-
Maine	32.5	-	46.1	-	46.3	-
Massachusetts	22.1	.1	29.0	-	27.8	-
New Hampshire	23.9	-	32.1	-	31.6	-
Rhode Island	S	S	S	S	S	S
Vermont	41.6	-	30.6	-	32.1	-
MIDDLE ATLANTIC STATES						
New Jersey	S	S	23.1	-	23.3	.2
New York	S	S	20.5	-	19.9	.1
Pennsylvania	14.1	.2	25.0	-	23.1	.3
EAST NORTH CENTRAL STATES						
Illinois	9.6	.3	10.3	.2	11.4	.4
Indiana	17.5	.3	20.6	.2	19.1	.4
Michigan	17.2	.4	22.3	-	22.8	.4
Ohio	26.3	.8	13.4	-	14.2	.3
Wisconsin	26.9	.6	33.9	.2	33.5	.9
WEST NORTH CENTRAL STATES						
Iowa	12.3	.3	16.8	.1	18.5	.3
Kansas	3.9	1.2	11.1	2.8	16.3	2.5
Minnesota	21.7	.3	15.2	-	15.8	.1
Missouri	5.8	.6	10.1	.8	18.8	.5
Nebraska	18.0	.7	38.5	1.5	37.2	1.9
North Dakota	46.8	-	34.3	-	35.5	.1
South Dakota	32.2	-	35.6	-	35.2	-
SOUTH ATLANTIC STATES						
Delaware	S	S	S	S	S	S
District of Columbia	S	S	S	S	S	S
Florida	27.7	.5	33.9	-	36.1	.4
Georgia	17.2	.2	34.7	.2	39.1	.9
Maryland	S	S	S	S	S	S
North Carolina	17.0	.2	44.2	.2	44.8	1.6
South Carolina	19.2	.1	31.8	-	32.9	.3
Virginia	15.2	-	24.7	-	26.1	.1
West Virginia	26.0	-	20.9	-	20.4	-
EAST SOUTH CENTRAL STATES						
Alabama	17.6	.1	17.0	-	18.3	.1
Kentucky	25.7	.3	13.9	-	13.5	.1
Mississippi	13.2	-	15.3	-	16.7	.1
Tennessee	21.8	.3	26.2	.1	27.8	.4
WEST SOUTH CENTRAL STATES						
Arkansas	10.9	.1	9.2	-	11.7	.2
Louisiana	22.3	.1	36.0	.5	36.2	1.6
Oklahoma	7.4	.2	20.6	.8	22.0	.9
Texas	13.2	.7	14.1	.4	14.0	1.1
MOUNTAIN STATES						
Arizona	34.3	.1	S	S	S	S
Colorado	16.2	.3	36.5	.3	44.9	1.0
Idaho	46.9	.2	23.6	-	24.8	.2
Montana	27.5	-	37.5	-	39.9	-
Nevada	23.3	-	48.6	-	46.8	-
New Mexico	21.0	-	36.3	-	40.2	.2
Utah	29.5	-	S	S	S	S
Wyoming	21.0	-	32.4	2.5	32.3	6.3
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	21.7	1.2	18.6	-	19.8	.6
Hawaii	S	S	S	S	S	S
Oregon	13.1	-	20.6	-	19.7	.1
Washington	36.3	.3	22.4	-	23.0	.1

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

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

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

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

Month	Day	Year

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

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

Number and street

City, town, village, etc.

State

ZIP Code

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

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

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

--

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



DO NOT PROCEED UNTIL YOU HAVE COMPLETED ITEM D.



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

Item E SAMPLING INSTRUCTIONS

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

FINDING YOUR SELECTION RATE

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

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

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

Please enter your selection rate. →

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

CONTINUE ON NEXT PAGE. ↗

Item F SHIPMENT CHARACTERISTICS

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

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

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

2 — Private truck
3 — For-hire truck

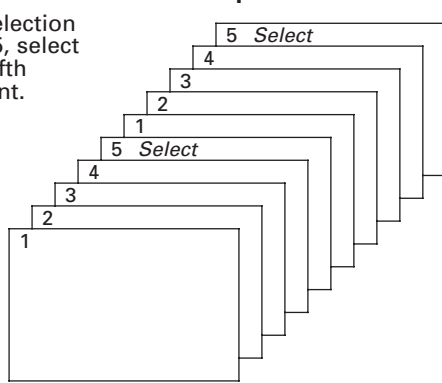
4 — Railroad
Continued →

SELECTING YOUR SAMPLE OF SHIPMENTS

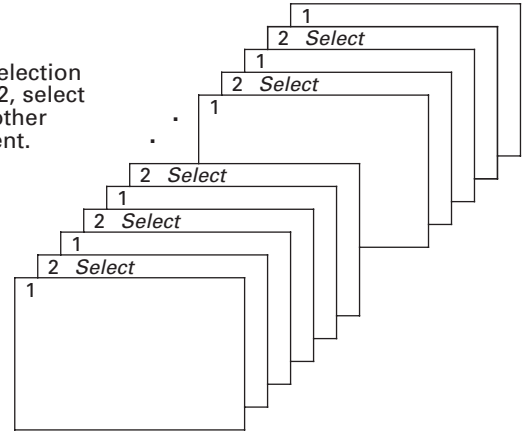
1. Use the file or combination of files that best reflects your full range of outbound shipping activities.
2. Begin with the first shipment. Count the shipments until you reach your selection rate. Select this shipment to report on in item F.
3. Continue counting with the next shipment. Count this shipment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

In the following examples, each rectangle represents one shipment.

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



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



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

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

Containerized? (Y/N)	U.S. destination <i>(Complete for all shipments.)</i>			Mode(s) of transport to U.S. destination <i>Enter all that apply in order used. Use codes below.</i>	Export? (Y/N)	Foreign destination <i>(for export shipments only)</i> Note: In column (j) enter the U.S. port, airport, or border crossing of exit.		Export mode	Line No.
	(i)	(j)				(k)	(l)		
	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								
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16								
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21								
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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
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									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
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Signature	Title
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Containerized? (Y/N)	U.S. destination (Complete for all shipments.)			Mode(s) of transport to U.S. destination <i>Enter all that apply in order used. Use codes below.</i>	Export? (Y/N)	Foreign destination (for export shipments only) Note: In column (j) enter the U.S. port, airport, or border crossing of exit.		Export mode	Line No.
	(j)					(m)			
(i)	City	State	ZIP Code	(k)	(l)	City	Country	(n)	(o)
									35
									36
									37
									38
									39
									40

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

Remarks

THANK YOU FOR COMPLETING YOUR REPORT

**1997 COMMODITY FLOW SURVEY
CENSUS OF TRANSPORTATION**

Reporting period:

Please return by:

RETURN TO

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

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

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

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

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

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

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

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

Month	Day	Year

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

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

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

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

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

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

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

DO NOT PROCEED UNTIL YOU HAVE COMPLETED ITEM D.

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

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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
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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								

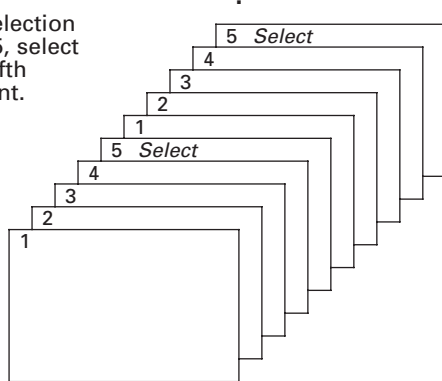
Mode of transport codes for columns (k) and (n) **1** — Parcel delivery, courier, or U.S. Postal Service **2** — Private truck **3** — For-hire truck **4** — Railroad *Continued* →

SELECTING YOUR SAMPLE OF SHIPMENTS

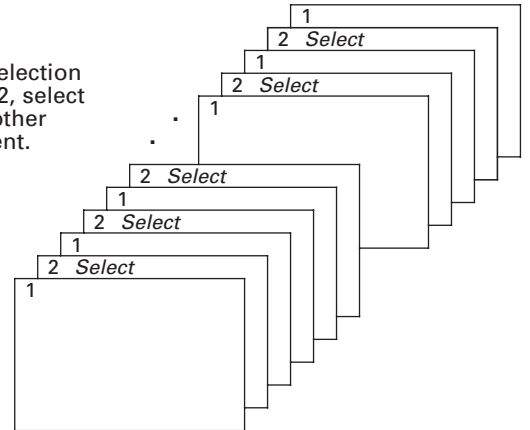
1. Use the file or combination of files that best reflects your full range of outbound shipping activities.
2. Begin with the first shipment. Count the shipments until you reach your selection rate. Select this shipment to report on in item F.
3. Continue counting with the next shipment. Count this shipment 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)		
	City	State	ZIP Code			City	Country		
N	Los Angeles	CA	90040	2, 4, 3	N				0
N	New York	NY	10454	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								
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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
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									32
									33
									34

5 — Shallow draft vessel
6 — Deep draft vessel

7 — Pipeline
8 — Air

9 — Other mode
0 — Unknown

Item F SHIPMENT CHARACTERISTICS — Continued

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

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

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

2 — Private truck
3 — For-hire truck

4 — Railroad
Continued →

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

Total value in whole dollars

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

Yes

No

Item I AVAILABILITY AND USE OF ON-SITE SHIPPING FACILITIES

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

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

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

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

Item J USE OF OFF-SITE SHIPPING FACILITIES

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

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

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

PLEASE CONTINUE ON PAGE 8.

Item K USE AND AVAILABILITY OF TRANSPORTATION EQUIPMENT

During 1997, did this location use any of the following types of equipment for outbound shipments? Please check "Yes" or "No." For rail cars reported in number 1 below, enter the approximate percentage of your total outbound rail shipments that used that type of rail car. These percentages should add to 100%. If you had no rail shipments, leave the percentages blank.

Equipment (a)	Was this type of equipment used for outbound shipments during 1993? (b)	Percentage of total rail shipments (c)
1. Rail cars that:	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	
a. Your company owned/leased	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	
b. A common carrier owned/leased	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	
c. Another party owned/leased (e.g. receiver)	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	
2. Trucks with 6 or more tires or truck-tractors that:	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
a. Your company owned	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
b. Your company leased, with driver	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
c. Your company leased, without driver	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
3. Truck trailers that your company owned or leased	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
4. Aircraft that your company owned or leased	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
5. Barges that your company owned or leased	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	
6. Other equipment that your company owned or leased – Specify ↴	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	

Item L TRANSPORTATION DECISIONS

During 1997, who generally decided on the mode of transportation for your outbound shipments? *Check the appropriate box.*

1 Your company 2 Receiver of shipment 3 Other

Remarks

Item M CERTIFICATION

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

Instructions for Completing the Commodity Flow Survey

TIPS FOR COMPLETING THE CFS QUESTIONNAIRE

Please read all instructions.

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

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

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

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

Why are you conducting the CFS?

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

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

Who reports in the CFS?

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

Why is my participation important?

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

Your report helps ensure quality results.

Is this survey mandatory?

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

Will my data be kept confidential?

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

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

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

How often must I report?

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

The CFS will not be conducted again until 2002.

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE

Items A – C

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

Item D

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

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

What we mean by a "shipment":

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

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

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

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

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

A special note about "shipments":

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

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

Item E: Sampling Instructions

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

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

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

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

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

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE – Continued

Item F: Shipment Characteristics

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

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

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

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE – Continued

Item F: Shipment Characteristics – Continued

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

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

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

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE – Continued

Item F: Shipment Characteristics – Continued

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

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

Items G – I

Please enter the information requested.

Item J: Certification

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

PART III – MODE DEFINITIONS

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

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

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

Railroad– Any common carrier or private railroad.

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

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

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

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

Other mode – Any mode not listed above.

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

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

PART IV -- STATE ABBREVIATION LIST

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

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

