

Mississippi

1997

Issued December 1999

EC97TCF-MS

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	60 975	100.0	121 577	100.0	28 838	100.0	116
Single modes	56 804	93.2	117 107	96.3	25 755	89.3	190
Truck ¹	49 970	82.0	86 784	71.4	13 051	45.3	184
For-hire truck	27 019	44.3	28 856	23.7	8 717	30.2	614
Private truck	22 579	37.0	56 703	46.6	3 943	13.7	84
Rail	3 697	6.1	12 881	10.6	8 210	28.5	651
Water	1 687	2.8	10 727	8.8	3 867	13.4	S
Shallow draft	523	.9	S	S	S	S	S
Great Lakes	—	—	—	—	—	—	—
Deep draft	1 165	1.9	S	S	S	S	301
Air (includes truck and air)	287	.5	S	S	S	S	1 150
Pipeline ²	1 162	1.9	6 702	5.5	S	S	S
Multiple modes	1 883	3.1	899	.7	646	2.2	551
Parcel, U.S. Postal Service or courier	1 417	2.3	61	—	35	.1	548
Truck and rail	433	.7	721	.6	551	1.9	907
Truck and water	S	S	S	S	60	.2	S
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	2 288	3.8	3 570	2.9	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 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	60 975	56 261	8.4	121 577	117 789	3.2	28 838	27 151	6.2	116	311	-62.8
Single modes	56 804	51 963	9.3	117 107	109 988	6.5	25 755	25 529	.9	190	219	-13.3
Truck ¹	49 970	46 256	8.0	86 784	81 977	5.9	13 051	12 543	4.1	184	205	-10.5
For-hire truck	27 019	25 559	5.7	28 856	33 091	-12.8	8 717	8 723	-.1	614	619	-.7
Private truck	22 579	20 636	9.4	56 703	48 450	17.0	3 943	3 791	4.0	84	81	3.3
Rail	3 697	2 891	27.9	12 881	9 664	33.3	8 210	5 814	41.2	651	665	-2.2
Water	1 687	1 883	-10.4	10 727	13 667	-21.5	3 867	6 272	-38.3	S	831	S
Shallow draft	523	487	7.3	S	2 681	S	S	1 315	S	S	275	S
Great Lakes	—	—	—	—	—	—	—	—	—	—	—	—
Deep draft	1 165	1 396	-16.6	S	10 986	S	S	4 957	S	301	2 025	-85.2
Air (includes truck and air)	287	194	48.1	S	16	S	S	17	S	1 150	1 150	.1
Pipeline ²	1 162	740	57.1	6 702	4 663	43.7	S	S	S	S	S	S
Multiple modes	1 883	2 108	-10.7	899	S	S	646	724	-10.8	551	669	-17.7
Parcel, U.S. Postal Service or courier	1 417	1 737	-18.5	61	86	-28.7	35	52	-33.6	548	669	-18.2
Truck and rail	433	256	68.9	721	240	200.5	551	280	96.9	907	1 186	-23.6
Truck and water	S	S	S	S	S	S	60	S	S	S	S	S
Rail and water	—	—	—	—	—	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—	—	—	—	—	—
Other and unknown modes	2 288	2 190	4.5	3 570	S	S	S	898	S	S	155	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 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	93.2	92.4	96.3	93.4	89.3	94.0
Truck ¹	82.0	82.2	71.4	69.6	45.3	46.2
For-hire truck	44.3	45.4	23.7	28.1	30.2	32.1
Private truck	37.0	36.7	46.6	41.1	13.7	14.0
Rail	6.1	5.1	10.6	8.2	28.5	21.4
Water	2.8	3.3	8.8	11.6	13.4	23.1
Shallow draft .....	.9	.9	S	2.3	S	4.8
Great Lakes	—	—	—	—	—	—
Deep draft	1.9	2.5	S	9.3	S	18.3
Air (includes truck and air) .....	.5	.3	S	—	S	—
Pipeline ²	1.9	1.3	5.5	4.0	S	S
Multiple modes	3.1	3.7	.7	S	2.2	2.7
Parcel, U.S. Postal Service or courier	2.3	3.1	—	—	.1	.2
Truck and rail .....	.7	.5	.6	.2	1.9	1.0
Truck and water	S	S	S	S	.2	S
Rail and water	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—
Other and unknown modes	3.8	3.9	2.9	S	S	3.3

— 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	28 838	100.0	116
Truck	13 080	45.4	183
Rail	8 740	30.3	693
Shallow draft	S	S	S
Great Lakes	—	—	—
Deep draft	S	S	S
Air	S	S	1 064
Parcel, U.S. Postal Service or courier	35	.1	548
Pipeline	S	S	S
Other and unknown modes	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.

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	60 975	100.0	121 577	100.0	28 838	100.0
Less than 50 miles	11 898	19.5	55 961	46.0	1 313	4.6
50 to 99 miles	7 194	11.8	15 963	13.1	1 489	5.2
100 to 249 miles	13 710	22.5	24 229	19.9	5 019	17.4
250 to 499 miles	10 234	16.8	11 610	9.5	5 394	18.7
500 to 749 miles	8 954	14.7	7 053	5.8	5 301	18.4
750 to 999 miles	4 577	7.5	3 688	3.0	3 981	13.8
1,000 to 1,499 miles	1 855	3.0	1 306	1.1	2 002	6.9
1,500 to 1,999 miles	2 317	3.8	974	.8	2 098	7.3
2,000 miles or more	237	.4	S	S	S	S
Single modes	56 804	100.0	117 107	100.0	25 755	100.0
Less than 50 miles	11 217	19.7	54 079	46.2	1 302	5.1
50 to 99 miles	6 648	11.7	15 727	13.4	1 464	5.7
100 to 249 miles	12 627	22.2	23 233	19.8	4 755	18.5
250 to 499 miles	9 763	17.2	11 395	9.7	5 304	20.6
500 to 749 miles	8 614	15.2	6 942	5.9	5 220	20.3
750 to 999 miles	4 256	7.5	3 616	3.1	3 903	15.2
1,000 to 1,499 miles	1 688	3.0	1 242	1.1	1 909	7.4
1,500 to 1,999 miles	1 908	3.4	826	.7	1 762	6.8
2,000 miles or more	82	.1	47	—	135	.5
Truck¹	49 970	100.0	86 784	100.0	13 051	100.0
Less than 50 miles	10 876	21.8	51 877	59.8	1 267	9.7
50 to 99 miles	6 372	12.8	13 467	15.5	1 194	9.2
100 to 249 miles	10 347	20.7	10 053	11.6	1 950	14.9
250 to 499 miles	8 140	16.3	5 039	5.8	2 245	17.2
500 to 749 miles	7 432	14.9	3 434	4.0	2 501	19.2
750 to 999 miles	3 584	7.2	1 588	1.8	1 592	12.2
1,000 to 1,499 miles	1 498	3.0	666	.8	920	7.1
1,500 to 1,999 miles	1 662	3.3	627	.7	1 296	9.9
2,000 miles or more	59	.1	33	—	85	.6
For-hire truck	27 019	100.0	28 856	100.0	8 717	100.0
Less than 50 miles	2 612	9.7	10 401	36.0	302	3.5
50 to 99 miles	2 098	7.8	4 338	15.0	396	4.5
100 to 249 miles	4 188	15.5	5 060	17.5	1 027	11.8
250 to 499 miles	6 345	23.5	3 884	13.5	1 743	20.0
500 to 749 miles	6 045	22.4	2 741	9.5	2 004	23.0
750 to 999 miles	2 997	11.1	1 354	4.7	1 350	15.5
1,000 to 1,499 miles	1 152	4.3	510	1.8	697	8.0
1,500 to 1,999 miles	1 526	5.6	540	1.9	1 121	12.9
2,000 miles or more	56	.2	29	.1	77	.9
Private truck	22 579	100.0	56 703	100.0	3 943	100.0
Less than 50 miles	8 256	36.6	41 020	72.3	934	23.7
50 to 99 miles	4 237	18.8	8 824	15.6	775	19.7
100 to 249 miles	6 106	27.0	4 852	8.6	887	22.5
250 to 499 miles	1 714	7.6	1 058	1.9	455	11.5
500 to 749 miles	1 265	5.6	613	1.1	439	11.1
750 to 999 miles	555	2.5	180	.3	185	4.7
1,000 to 1,499 miles	317	1.4	95	.2	138	3.5
1,500 to 1,999 miles	126	.6	58	.1	121	3.1
2,000 miles or more	S	S	S	S	S	S
Rail	3 697	100.0	12 881	100.0	8 210	100.0
Less than 50 miles	68	1.8	237	1.8	10	.1
50 to 99 miles	273	7.4	S	S	S	S
100 to 249 miles	676	18.3	2 669	20.7	711	8.7
250 to 499 miles	797	21.6	2 631	20.4	1 493	18.2
500 to 749 miles	893	24.1	2 278	17.7	1 947	23.7
750 to 999 miles	641	17.3	2 026	15.7	2 309	28.1
1,000 to 1,499 miles	158	4.3	574	4.5	984	12.0
1,500 to 1,999 miles	187	5.1	198	1.5	465	5.7
2,000 miles or more	4	.1	S	S	S	S
Water	1 687	100.0	10 727	100.0	3 867	100.0
Less than 50 miles	154	9.1	989	9.2	14	.4
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	558	33.1	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Shallow draft	523	100.0	S	S	S	S
Less than 50 miles	75	14.3	386	8.4	S	S
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	417	79.8	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—

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	1 165	100.0	S	S	S	S
Less than 50 miles	79	6.8	603	9.9	7	.3
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Air (includes truck and air)	287	100.0	S	S	S	S
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	7	2.5	—	3.4	—	.5
250 to 499 miles	63	21.9	1	7.8	1	2.0
500 to 749 miles	75	26.0	1	9.8	1	3.7
750 to 999 miles	31	10.7	S	S	S	S
1,000 to 1,499 miles	32	11.3	2	15.8	S	S
1,500 to 1,999 miles	59	20.4	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Pipeline²	1 162	100.0	6 702	100.0	S	S
Less than 50 miles	119	10.2	976	14.6	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	1 040	89.5	5 718	85.3	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	S	S
1,000 to 1,499 miles	—	—	—	—	S	S
1,500 to 1,999 miles	—	—	—	—	S	S
2,000 miles or more	—	—	—	—	S	S
Multiple modes	1 883	100.0	899	100.0	646	100.0
Less than 50 miles	154	8.2	S	S	S	S
50 to 99 miles	201	10.6	S	S	S	S
100 to 249 miles	337	17.9	S	S	S	S
250 to 499 miles	285	15.1	25	2.8	12	1.9
500 to 749 miles	226	12.0	20	2.2	17	2.6
750 to 999 miles	158	8.4	23	2.5	27	4.1
1,000 to 1,499 miles	136	7.2	S	S	S	S
1,500 to 1,999 miles	372	19.7	134	14.9	308	47.6
2,000 miles or more	14	.8	S	S	S	S
Parcel, U.S. Postal Service or courier	1 417	100.0	61	100.0	35	100.0
Less than 50 miles	113	8.0	5	7.9	—	.5
50 to 99 miles	188	13.3	8	12.3	1	2.1
100 to 249 miles	285	20.1	12	18.9	2	6.6
250 to 499 miles	261	18.4	16	25.3	7	20.4
500 to 749 miles	210	14.8	10	15.9	7	20.6
750 to 999 miles	124	8.7	6	9.8	6	17.9
1,000 to 1,499 miles	99	7.0	3	4.4	4	11.0
1,500 to 1,999 miles	131	9.3	3	5.0	7	19.1
2,000 miles or more	6	.4	—	.4	1	1.8
Truck and rail	433	100.0	721	100.0	551	100.0
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	22	5.0	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	17	3.8	10	1.4	10	1.7
750 to 999 miles	34	7.9	17	2.3	20	3.7
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	240	55.5	131	18.1	301	54.6
2,000 miles or more	S	S	S	S	S	S
Truck and water	S	S	S	S	60	100.0
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	2 288	100.0	3 570	100.0	S	S
Less than 50 miles	527	23.0	S	S	9	4
50 to 99 miles	S	S	206	5.8	20	8
100 to 249 miles	746	32.6	401	11.2	84	3.4
250 to 499 miles	185	8.1	189	5.3	78	3.2
500 to 749 miles	113	5.0	91	2.6	64	2.6
750 to 999 miles	162	7.1	S	S	S	S
1,000 to 1,499 miles	31	1.3	14	.4	18	.8
1,500 to 1,999 miles	37	1.6	14	.4	28	1.1
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	60 975	100.0	121 577	100.0	28 838	100.0	116
Less than 50 lb	2 536	4.2	136	.1	30	.1	S
50 to 99 lb	1 093	1.8	152	.1	32	.1	195
100 to 499 lb	3 147	5.2	688	.6	119	.4	155
500 to 749 lb	1 225	2.0	352	.3	71	.2	194
750 to 999 lb	1 001	1.6	235	.2	62	.2	262
1,000 to 9,999 lb	15 395	25.2	5 750	4.7	1 556	5.4	268
10,000 to 49,999 lb	25 759	42.2	36 479	30.0	9 672	33.5	260
50,000 to 99,999 lb	3 374	5.5	28 809	23.7	2 093	7.3	72
100,000 lb or more	7 446	12.2	48 976	40.3	15 204	52.7	305
Single modes	56 804	100.0	117 107	100.0	25 755	100.0	190
Less than 50 lb	1 408	2.5	82	—	17	—	198
50 to 99 lb	717	1.3	132	.1	23	—	159
100 to 499 lb	2 865	5.0	652	.6	106	.4	141
500 to 749 lb	1 143	2.0	340	.3	67	.3	190
750 to 999 lb	975	1.7	227	.2	59	.2	259
1,000 to 9,999 lb	14 654	25.8	5 569	4.8	1 511	5.9	269
10,000 to 49,999 lb	24 677	43.4	35 157	30.0	8 918	34.6	249
50,000 to 99,999 lb	3 325	5.9	28 573	24.4	2 048	8.0	71
100,000 lb or more	7 040	12.4	46 376	39.6	13 006	50.5	304
Truck¹	49 970	100.0	86 784	100.0	13 051	100.0	184
Less than 50 lb	1 270	2.5	81	—	16	.1	191
50 to 99 lb	688	1.4	132	.2	22	.2	156
100 to 499 lb	2 769	5.5	647	.7	103	.8	139
500 to 749 lb	1 136	2.3	339	.4	67	.5	189
750 to 999 lb	969	1.9	226	.3	59	.5	257
1,000 to 9,999 lb	14 628	29.3	5 563	6.4	1 504	11.5	267
10,000 to 49,999 lb	24 507	49.0	35 017	40.3	8 715	66.8	245
50,000 to 99,999 lb	3 269	6.5	28 370	32.7	1 961	15.0	69
100,000 lb or more	733	1.5	S	S	603	4.6	S
For-hire truck	27 019	100.0	28 856	100.0	8 717	100.0	614
Less than 50 lb	279	1.0	13	—	10	.1	700
50 to 99 lb	144	.5	9	—	6	—	642
100 to 499 lb	820	3.0	85	.3	59	.7	678
500 to 749 lb	474	1.8	59	.2	46	.5	779
750 to 999 lb	481	1.8	58	.2	40	.5	678
1,000 to 9,999 lb	7 248	26.8	1 517	5.3	992	11.4	701
10,000 to 49,999 lb	15 758	58.3	15 766	54.6	6 426	73.7	409
50,000 to 99,999 lb	1 494	5.5	9 104	31.5	868	10.0	94
100,000 lb or more	321	1.2	S	S	270	3.1	144
Private truck	22 579	100.0	56 703	100.0	3 943	100.0	84
Less than 50 lb	991	4.4	68	.1	6	.2	69
50 to 99 lb	544	2.4	122	.2	S	S	S
100 to 499 lb	1 948	8.6	561	1.0	44	1.1	73
500 to 749 lb	660	2.9	279	.5	21	.5	71
750 to 999 lb	487	2.2	168	.3	19	.5	112
1,000 to 9,999 lb	7 347	32.5	4 008	7.1	477	12.1	104
10,000 to 49,999 lb	8 469	37.5	18 862	33.3	2 006	50.9	109
50,000 to 99,999 lb	1 753	7.8	18 800	33.2	1 046	26.5	57
100,000 lb or more	381	1.7	S	S	309	7.8	S
Rail	3 697	100.0	12 881	100.0	8 210	100.0	651
Less than 50 lb	S	S	S	S	S	S	214
50 to 99 lb	S	S	S	S	S	S	188
100 to 499 lb	S	S	S	S	S	S	S
500 to 749 lb	S	S	S	S	S	S	1 077
750 to 999 lb	S	S	S	S	S	S	1 169
1,000 to 9,999 lb	11	.3	3	—	3	—	1 171
10,000 to 49,999 lb	155	4.2	120	.9	174	2.1	1 454
50,000 to 99,999 lb	42	1.1	137	1.1	85	1.0	632
100,000 lb or more	3 485	94.3	12 620	98.0	7 948	96.8	656
Water	1 687	100.0	10 727	100.0	3 867	100.0	S
Less than 50 lb	1	—	—	—	—	—	15
50 to 99 lb	1	—	—	—	—	—	15
100 to 499 lb	6	.4	2	—	—	—	15
500 to 749 lb	2	.1	—	—	—	—	15
750 to 999 lb	S	S	S	S	S	S	15
1,000 to 9,999 lb	S	S	S	S	S	S	15
10,000 to 49,999 lb	S	S	S	S	S	S	15
50,000 to 99,999 lb	S	S	S	S	S	S	29
100,000 lb or more	1 667	98.8	10 669	99.5	3 866	100.0	184
Shallow draft	523	100.0	S	S	S	S	S
Less than 50 lb	1	.3	—	—	—	—	15
50 to 99 lb	1	.1	—	—	—	—	15
100 to 499 lb	6	1.2	2	—	—	—	15
500 to 749 lb	2	.3	—	—	—	—	15
750 to 999 lb	S	S	S	S	S	S	15
1,000 to 9,999 lb	S	S	S	S	S	S	15
10,000 to 49,999 lb	S	S	S	S	S	S	15
50,000 to 99,999 lb	S	S	S	S	S	S	29
100,000 lb or more	502	96.1	S	S	S	S	S

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	1 165	100.0	S	S	S	S	301
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	1 165	100.0	S	S	S	S	301
Air (includes truck and air)	287	100.0	S	S	S	S	1 150
Less than 50 lb	136	47.2	1	4.7	1	1.8	1 132
50 to 99 lb	28	9.7	—	3.2	—	1.4	1 192
100 to 499 lb	89	31.0	2	16.7	3	6.7	1 118
500 to 749 lb	5	1.7	—	2.6	—	1.1	1 158
750 to 999 lb	4	1.5	—	2.5	—	1.1	1 288
1,000 to 9,999 lb	16	5.5	S	S	S	S	1 639
10,000 to 49,999 lb	S	S	S	S	S	S	3 584
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Pipeline²	1 162	100.0	6 702	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
10,000 to 49,999 lb	S	S	S	S	S	S	S
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	1 155	99.4	6 678	99.6	S	S	S
Multiple modes	1 883	100.0	899	100.0	646	100.0	551
Less than 50 lb	794	42.2	23	2.6	12	1.9	541
50 to 99 lb	326	17.3	15	1.7	9	1.3	570
100 to 499 lb	227	12.0	17	1.9	11	1.6	631
500 to 749 lb	53	2.8	3	.4	2	.3	629
750 to 999 lb	16	.9	2	.3	1	.2	458
1,000 to 9,999 lb	15	.8	5	.6	11	1.7	2 141
10,000 to 49,999 lb	379	20.1	646	71.9	529	81.9	912
50,000 to 99,999 lb	S	S	S	S	34	5.2	S
100,000 lb or more	S	S	93	10.3	38	5.8	303
Parcel, U.S. Postal Service or courier	1 417	100.0	61	100.0	35	100.0	548
Less than 50 lb	794	56.1	23	37.8	12	34.8	541
50 to 99 lb	326	23.0	15	24.7	9	25.1	570
100 to 499 lb	226	16.0	17	28.0	11	30.7	631
500 to 749 lb	53	3.7	3	5.3	2	6.0	629
750 to 999 lb	16	1.2	2	4.0	1	3.3	458
1,000 to 9,999 lb	S	S	S	S	S	S	138
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	433	100.0	721	100.0	551	100.0	907
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	S	S	S	S	S	S	974
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	4	.6	7	1.3	1 694
10,000 to 49,999 lb	356	82.1	589	81.6	500	90.6	946
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	S	S	S	S	13	2.3	293
Truck and water	S	S	S	S	60	100.0	S
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	7 308
10,000 to 49,999 lb	S	S	S	S	S	S	S
50,000 to 99,999 lb	S	S	S	S	S	S	363
100,000 lb or more	S	S	S	S	S	S	462

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	2 288	100.0	3 570	100.0	S	S	S
Less than 50 lb	333	14.6	31	.9	1	—	19
50 to 99 lb	50	2.2	5	.1	—	—	S
100 to 499 lb	55	2.4	18	.5	2	—	S
500 to 749 lb	29	1.3	9	.3	2	—	S
750 to 999 lb	10	.4	6	.2	2	—	286
1,000 to 9,999 lb	725	31.7	176	4.9	34	1.4	210
10,000 to 49,999 lb	703	30.7	676	18.9	224	9.2	311
50,000 to 99,999 lb	36	1.6	142	4.0	12	.5	S
100,000 lb or more	347	15.2	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 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	60 975	100.0	121 577	100.0	28 838	100.0	116
01	Live animals and live fish	S	S	S	S	S	S	666
02	Cereal grains	S	S	S	S	S	S	S
03	Other agricultural products	501	.8	S	S	S	S	S
04	Animal feed and products of animal origin, n.e.c.	1 039	1.7	4 100	3.4	437	1.5	S
05	Meat, fish, seafood, and their preparations	3 258	5.3	1 590	1.3	611	2.1	220
06	Milled grain products and preparations, and bakery products	637	1.0	821	.7	711	2.5	S
07	Other prepared foodstuffs and fats and oils	1 841	3.0	3 358	2.8	559	1.9	57
08	Alcoholic beverages	561	.9	369	.3	12	—	23
09	Tobacco products	123	.2	7	—	—	—	63
10	Monumental or building stone	—	—	—	—	—	—	—
11	Natural sands	S	S	S	S	51	.2	22
12	Gravel and crushed stone	S	S	7 732	6.4	264	.9	205
13	Nonmetallic minerals n.e.c.	97	.2	1 317	1.1	394	1.4	888
14	Metallic ores and concentrates	S	S	S	S	S	S	547
15	Coal	S	S	S	S	S	S	41
17	Gasoline and aviation turbine fuel	3 336	5.5	15 736	12.9	2 604	9.0	39
18	Fuel oils	977	1.6	5 430	4.5	744	2.6	26
19	Coal and petroleum products, n.e.c.	666	1.1	4 445	3.7	701	2.4	72
20	Basic chemicals	1 703	2.8	2 532	2.1	1 077	3.7	452
21	Pharmaceutical products	960	1.6	161	.1	S	S	179
22	Fertilizers	341	.6	2 176	1.8	S	S	S
23	Chemical products and preparations, n.e.c.	1 310	2.1	958	.8	S	S	218
24	Plastics and rubber	2 993	4.9	1 717	1.4	1 209	4.2	210
25	Logs and other wood in the rough	507	.8	13 181	10.8	S	S	S
26	Wood products	3 230	5.3	13 848	11.4	4 619	16.0	221
27	Pulp, newsprint, paper, and paperboard	2 101	3.4	4 680	3.8	2 791	9.7	182
28	Paper or paperboard articles	404	.7	237	.2	73	.3	S
29	Printed products	998	1.6	453	.4	266	.9	S
30	Textiles, leather, and articles of textiles or leather	5 369	8.8	698	.6	501	1.7	740
31	Nonmetallic mineral products	1 206	2.0	22 475	18.5	1 258	4.4	121
32	Base metal in primary or semifinished forms and in finished basic shapes	1 731	2.8	1 502	1.2	476	1.7	200
33	Articles of base metal	1 622	2.7	718	.6	306	1.1	221
34	Machinery	3 557	5.8	565	.5	354	1.2	267
35	Electronic and other electrical equipment and components and office equipment	4 266	7.0	972	.8	536	1.9	262
36	Motorized and other vehicles (including parts)	2 569	4.2	667	.5	281	1.0	123
37	Transportation equipment, n.e.c.	S	S	S	S	S	S	664
38	Precision instruments and apparatus	221	.4	S	S	4	—	367
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	2 351	3.9	766	.6	433	1.5	634
40	Miscellaneous manufactured products	2 647	4.3	1 123	.9	724	2.5	350
41	Waste and scrap	151	.2	534	.4	160	.6	S
43	Mixed freight	6 095	10.0	2 067	1.7	278	1.0	95
--	Commodity unknown	S	S	702	.6	74	.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. 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	60 975	100.0	121 577	100.0	28 838	100.0	116
Single modes	56 804	93.2	117 107	96.3	25 755	89.3	190
Truck ¹	49 970	82.0	86 784	71.4	13 051	45.3	184
For-hire truck	27 019	44.3	28 856	23.7	8 717	30.2	614
Private truck	22 579	37.0	56 703	46.6	3 943	13.7	84
Rail	3 697	6.1	12 881	10.6	8 210	28.5	651
Water	1 687	2.8	10 727	8.8	3 867	13.4	S
Shallow draft	523	.9	S	S	S	S	S
Great Lakes	—	—	—	—	—	—	—
Deep draft	1 165	1.9	S	S	S	S	301
Air (includes truck and air)	287	.5	S	S	S	S	1 150
Pipeline ²	1 162	1.9	6 702	5.5	S	S	S
Multiple modes	1 883	3.1	899	.7	646	2.2	551
Parcel, U.S. Postal Service or courier	1 417	2.3	61	—	35	.1	548
Truck and rail	433	.7	721	.6	551	1.9	907
Truck and water	S	S	S	S	60	.2	S
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	2 288	3.8	3 570	2.9	S	S	S
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	S	S	S	S	S	S	666
Single modes	S	S	S	S	S	S	666
Truck ¹	S	S	S	S	S	S	666
For-hire truck	S	S	S	S	S	S	790
Private truck	S	S	S	S	10	8.1	254
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	S	S	S	S	S	S	S
Single modes	S	S	S	S	S	S	S
Truck ¹	S	S	S	S	S	S	S
For-hire truck	—	—	—	—	—	—	—
Private truck	S	S	S	S	S	S	S
Rail	S	S	S	S	S	S	136
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	21

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	501	100.0	S	S	S	S	S
Single modes	470	93.8	S	S	S	S	S
Truck ¹	284	56.7	358	29.8	S	S	S
For-hire truck	78	15.5	188	15.7	29	5.7	1 021
Private truck	201	40.1	167	13.9	S	S	S
Rail	S	S	S	S	S	S	571
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline ²	-	-	-	-	S	S	S
Multiple modes	S	S	S	S	S	S	700
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	700
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	11
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	1 039	100.0	4 100	100.0	437	100.0	S
Single modes	1 035	99.6	4 086	99.7	435	99.6	S
Truck ¹	829	79.8	3 334	81.3	316	72.3	S
For-hire truck	S	S	S	S	S	S	S
Private truck	433	41.7	S	S	142	32.5	S
Rail	S	S	S	S	84	19.2	205
Water	S	S	S	S	S	S	189
Shallow draft	S	S	S	S	S	S	189
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline ²	-	-	-	-	S	S	S
Multiple modes	S	S	S	S	S	S	586
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	586
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	S
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	3 258	100.0	1 590	100.0	611	100.0	220
Single modes	3 128	96.0	1 520	95.6	592	96.9	220
Truck ¹	3 114	95.6	1 512	95.1	563	92.2	220
For-hire truck	1 748	53.7	965	60.7	435	71.2	613
Private truck	1 365	41.9	545	34.3	128	21.0	124
Rail	-	-	-	-	-	-	-
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	S	S	S	S	S	S	4 258
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	80
Truck and rail	S	S	S	S	S	S	917
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	160

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	637	100.0	821	100.0	711	100.0	S
Single modes	603	94.6	773	94.1	637	89.7	S
Truck ¹	511	80.2	523	63.7	381	53.6	S
For-hire truck	302	47.4	375	45.6	332	46.7	932
Private truck	S	S	149	18.1	S	S	121
Rail	92	14.4	249	30.4	257	36.1	1 095
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline ²	-	-	-	-	S	S	S
Multiple modes	S	S	S	S	S	S	1 562
Parcel, U.S. Postal Service or courier	-	-	-	-	-	-	-
Truck and rail	S	S	S	S	S	S	1 562
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	-	-	-	-	-	-	-
SCTG 07, OTHER PREPARED FOODSTUFFS AND FATS AND OILS							
Total	1 841	100.0	3 358	100.0	559	100.0	57
Single modes	1 825	99.2	3 338	99.4	554	99.1	60
Truck ¹	1 625	88.3	2 661	79.3	365	65.2	59
For-hire truck	348	18.9	1 093	32.6	206	36.9	284
Private truck	1 277	69.4	1 568	46.7	158	28.3	53
Rail	169	9.2	621	18.5	170	30.4	S
Water	S	S	S	S	S	S	S
Shallow draft	S	S	S	S	S	S	S
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline ²	-	-	-	-	S	S	S
Multiple modes	S	S	S	S	S	S	85
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	85
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	21
SCTG 08, ALCOHOLIC BEVERAGES							
Total	561	100.0	369	100.0	12	100.0	23
Single modes	546	97.4	357	96.7	11	97.2	23
Truck ¹	546	97.4	357	96.7	11	97.2	23
For-hire truck	198	35.3	44	11.9	5	38.8	111
Private truck	348	62.1	313	84.8	7	58.4	20
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	28

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	123	100.0	7	100.0	—	100.0	63
Single modes	119	97.3	6	96.6	—	99.5	64
Truck ¹	119	97.3	6	96.6	—	99.5	64
For-hire truck	—	—	—	—	—	—	—
Private truck	119	97.3	6	96.6	—	99.5	64
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	36
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	36
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	10
SCTG 10, MONUMENTAL OR BUILDING STONE							
Total	—	—	—	—	—	—	—
Single modes	—	—	—	—	—	—	—
Truck ¹	—	—	—	—	—	—	—
For-hire truck	—	—	—	—	—	—	—
Private truck	—	—	—	—	—	—	—
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 11, NATURAL SANDS							
Total	S	S	S	S	51	100.0	22
Single modes	S	S	S	S	50	98.7	22
Truck ¹	S	S	S	S	50	98.7	22
For-hire truck	1	6.0	325	15.5	14	27.1	39
Private truck	S	S	S	S	36	71.6	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	32

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	S	S	7 732	100.0	264	100.0	205
Single modes	S	S	7 703	99.6	263	99.7	205
Truck ¹	S	S	7 680	99.3	263	99.6	205
For-hire truck	8	4.6	1 312	17.0	49	18.5	37
Private truck	S	S	5 952	77.0	186	70.4	231
Rail	S	S	S	S	S	S	12
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	32
SCTG 13, NONMETALLIC MINERALS N.E.C.							
Total	97	100.0	1 317	100.0	394	100.0	888
Single modes	94	96.9	1 308	99.3	382	97.0	887
Truck ¹	75	77.1	S	S	226	57.4	887
For-hire truck	36	37.5	265	20.1	156	39.7	620
Private truck	S	S	S	S	S	S	899
Rail	11	10.9	167	12.7	154	39.1	995
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	1 865
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	2 009
Truck and rail	S	S	S	S	S	S	1 840
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	878
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	S	S	S	S	S	S	547
Single modes	S	S	S	S	S	S	547
Truck ¹	S	S	S	S	S	S	547
For-hire truck	-	-	-	-	-	-	-
Private truck	S	S	S	S	S	S	7
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	-	-	-	-	-	-	-

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	\$	\$	\$	\$	\$	\$	41
Single modes	\$	\$	\$	\$	\$	\$	41
Truck ¹	\$	\$	\$	\$	\$	\$	48
For-hire truck	\$	\$	\$	\$	\$	\$	48
Private truck	\$	\$	\$	\$	\$	\$	48
Rail	-	-	-	-	-	-	-
Water	\$	\$	\$	\$	\$	\$	15
Shallow draft	\$	\$	\$	\$	\$	\$	15
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline ²	-	-	-	-	\$	\$	\$
Multiple modes	-	-	-	-	-	-	-
Parcel, U.S. Postal Service or courier	-	-	-	-	-	-	-
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	-	-	-	-	-	-	-
SCTG 17, GASOLINE AND AVIATION TURBINE FUEL							
Total	3 336	100.0	15 736	100.0	2 604	100.0	39
Single modes	3 336	100.0	15 736	100.0	2 604	100.0	39
Truck ¹	1 478	44.3	6 014	38.2	\$	\$	38
For-hire truck	280	8.4	1 302	8.3	53	2.0	36
Private truck	1 198	35.9	4 712	29.9	225	8.6	38
Rail	\$	\$	\$	\$	\$	\$	8
Water	\$	\$	\$	\$	\$	\$	274
Shallow draft	\$	\$	\$	\$	\$	\$	128
Great Lakes	-	-	-	-	-	-	-
Deep draft	\$	\$	\$	\$	\$	\$	433
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline ²	980	29.4	5 251	33.4	\$	\$	\$
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	\$	\$	\$	\$	\$	\$	17
SCTG 18, FUEL OILS							
Total	977	100.0	5 430	100.0	744	100.0	26
Single modes	977	100.0	5 430	100.0	744	100.0	26
Truck ¹	544	55.6	2 589	47.7	\$	\$	26
For-hire truck	162	16.5	860	15.8	39	5.2	50
Private truck	382	39.1	1 728	31.8	57	7.7	23
Rail	-	-	-	-	-	-	-
Water	324	33.1	2 143	39.5	\$	\$	\$
Shallow draft	\$	\$	\$	\$	\$	\$	15
Great Lakes	-	-	-	-	-	-	-
Deep draft	281	28.7	1 856	34.2	\$	\$	191
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline ²	\$	\$	\$	\$	\$	\$	\$
Multiple modes	-	-	-	-	-	-	-
Parcel, U.S. Postal Service or courier	-	-	-	-	-	-	-
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	\$	\$	\$	\$	\$	\$	29

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	666	100.0	4 445	100.0	701	100.0	72
Single modes	626	94.1	2 944	66.2	686	97.9	71
Truck ¹	431	64.7	2 069	46.5	256	36.6	63
For-hire truck	159	23.8	421	9.5	161	22.9	392
Private truck	272	40.9	1 648	37.1	96	13.7	36
Rail	49	7.3	239	5.4	165	23.6	684
Water	147	22.1	637	14.3	264	37.7	240
Shallow draft	S	S	S	S	S	S	75
Great Lakes	—	—	—	—	—	—	—
Deep draft	146	21.9	587	13.2	220	31.4	412
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	1 507
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	402
Truck and rail	S	S	S	S	S	S	2 169
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	65
SCTG 20, BASIC CHEMICALS							
Total	1 703	100.0	2 532	100.0	1 077	100.0	452
Single modes	1 634	95.9	2 495	98.5	1 023	95.0	456
Truck ¹	1 089	63.9	1 180	46.6	421	39.0	452
For-hire truck	958	56.3	671	26.5	307	28.5	480
Private truck	131	7.7	S	S	113	10.5	450
Rail	443	26.0	994	39.3	550	51.1	580
Water	S	S	S	S	S	S	230
Shallow draft	S	S	S	S	S	S	511
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	85
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	S	S	S	S	S	S	1 584
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	925
Truck and rail	S	S	S	S	S	S	2 060
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	3	.1	S	S	S
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	960	100.0	161	100.0	S	S	179
Single modes	622	64.8	134	83.2	S	S	151
Truck ¹	620	64.6	133	82.6	45	65.4	148
For-hire truck	200	20.9	115	71.6	S	S	455
Private truck	420	43.7	S	S	S	S	102
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 137
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	91	9.5	4	2.7	2	2.5	231
Parcel, U.S. Postal Service or courier	91	9.5	4	2.4	1	1.3	230
Truck and rail	S	S	S	S	S	S	1 972
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 22, FERTILIZERS							
Total	341	100.0	2 176	100.0	S	S	S
Single modes	200	58.6	1 411	64.8	S	S	34
Truck ¹	105	31.0	617	28.3	64	2.8	S
For-hire truck	29	8.7	193	8.8	13	.6	63
Private truck	76	22.3	424	19.5	51	2.3	30
Rail	39	11.5	300	13.8	121	5.3	410
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	1 310	100.0	958	100.0	S	S	218
Single modes	1 257	96.0	937	97.9	S	S	205
Truck ¹	1 234	94.2	869	90.7	S	S	198
For-hire truck	S	S	S	S	S	S	713
Private truck	627	47.8	361	37.7	46	10.3	174
Rail	16	1.3	45	4.7	S	S	756
Water	S	S	—	—	—	—	15
Shallow draft	S	S	—	—	—	—	15
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 126
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	15	1.1	S	S	S	S	419
Parcel, U.S. Postal Service or courier	14	1.1	1	—	1	.1	414
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	7 309
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	38	2.9	18	1.9	S	S	54
SCTG 24, PLASTICS AND RUBBER							
Total	2 993	100.0	1 717	100.0	1 209	100.0	210
Single modes	2 939	98.2	1 687	98.2	1 189	98.4	185
Truck ¹	2 297	76.8	1 114	64.9	675	55.8	174
For-hire truck	1 537	51.3	850	49.5	617	51.0	625
Private truck	760	25.4	264	15.4	58	4.8	92
Rail	639	21.3	S	S	S	S	1 108
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	2	—	—	—	S	S	1 616
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	29	1.0	4	.3	6	.5	540
Parcel, U.S. Postal Service or courier	20	.7	1	—	1	—	531
Truck and rail	S	S	S	S	S	S	1 436
Truck and water	S	S	S	S	S	S	7 274
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	25	.8	26	1.5	13	1.1	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	507	100.0	13 181	100.0	S	S	S
Single modes	477	94.1	12 833	97.4	S	S	S
Truck ¹	380	75.1	9 519	72.2	S	S	S
For-hire truck	245	48.3	5 627	42.7	398	13.9	S
Private truck	136	26.8	3 892	29.5	277	9.7	70
Rail	S	S	S	S	S	S	332
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	270
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	270
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	375
SCTG 26, WOOD PRODUCTS							
Total	3 230	100.0	13 848	100.0	4 619	100.0	221
Single modes	3 067	94.9	13 479	97.3	4 459	96.5	216
Truck ¹	2 432	75.3	9 127	65.9	2 096	45.4	192
For-hire truck	1 422	44.0	3 685	26.6	1 454	31.5	409
Private truck	985	30.5	5 352	38.6	622	13.5	96
Rail	501	15.5	1 522	11.0	1 277	27.6	882
Water	S	S	S	S	S	S	384
Shallow draft	S	S	S	S	S	S	384
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	1 074
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	569
Truck and rail	S	S	S	S	S	S	1 511
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	328	2.4	S	S	214
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	2 101	100.0	4 680	100.0	2 791	100.0	182
Single modes	1 934	92.0	4 178	89.3	2 661	95.3	190
Truck ¹	766	36.4	1 495	31.9	638	22.8	118
For-hire truck	569	27.1	1 186	25.3	583	20.9	459
Private truck	174	8.3	298	6.4	47	1.7	S
Rail	1 157	55.0	2 650	56.6	2 014	72.2	755
Water	S	S	S	S	S	S	267
Shallow draft	S	S	S	S	S	S	267
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	4 300
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	46	2.2	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	154
Truck and rail	17	.8	S	S	S	S	S
Truck and water	S	S	S	S	S	S	363
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 28, PAPER OR PAPERBOARD ARTICLES							
Total	404	100.0	237	100.0	73	100.0	S
Single modes	369	91.4	228	96.2	68	93.7	S
Truck ¹	368	91.1	228	96.2	68	93.6	S
For-hire truck	148	36.7	60	25.2	45	61.6	659
Private truck	220	54.4	169	71.0	23	32.0	S
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	943
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	2	.4	1	.2	S	S	925
Parcel, U.S. Postal Service or courier	1	.3	—	—	S	S	924
Truck and rail	S	S	S	S	S	S	1 204
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 29, PRINTED PRODUCTS							
Total	998	100.0	453	100.0	266	100.0	S
Single modes	782	78.3	367	80.9	134	50.5	S
Truck ¹	777	77.9	366	80.7	132	49.8	S
For-hire truck	352	35.3	192	42.4	127	47.8	272
Private truck	425	42.6	174	38.3	6	2.1	S
Rail	S	S	S	S	S	S	2 335
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 059
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	165	16.6	64	14.1	131	49.3	706
Parcel, U.S. Postal Service or courier	78	7.8	7	1.5	4	1.5	691
Truck and rail	87	8.7	57	12.6	127	47.8	2 238
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	51	5.1	23	5.0	1	.2	S
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	5 369	100.0	698	100.0	501	100.0	740
Single modes	5 009	93.3	668	95.7	472	94.2	798
Truck ¹	4 991	92.9	665	95.3	468	93.5	798
For-hire truck	S	S	515	73.8	S	S	850
Private truck	893	16.6	149	21.3	49	9.7	234
Rail	S	S	S	S	S	S	1 126
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	7	.1	S	S	S	S	1 093
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	324	6.0	24	3.5	26	5.1	604
Parcel, U.S. Postal Service or courier	S	S	S	S	6	1.3	603
Truck and rail	80	1.5	12	1.7	19	3.8	1 589
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 31, NONMETALLIC MINERAL PRODUCTS							
Total	1 206	100.0	22 475	100.0	1 258	100.0	121
Single modes	1 198	99.3	22 458	99.9	1 253	99.7	114
Truck ¹	1 155	95.8	21 928	97.6	1 015	80.7	112
For-hire truck	552	45.7	1 984	8.8	459	36.5	465
Private truck	604	50.0	19 944	88.7	556	44.3	45
Rail	43	3.5	531	2.4	238	18.9	560
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	769
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	6	.5	2	—	2	.1	531
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	527
Truck and rail	S	S	S	S	S	S	2 219
Truck and water	S	S	S	S	S	S	567
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	1 731	100.0	1 502	100.0	476	100.0	200
Single modes	1 664	96.1	1 477	98.3	457	96.1	197
Truck ¹	1 627	94.0	1 362	90.7	428	89.9	197
For-hire truck	987	57.0	660	44.0	340	71.4	464
Private truck	640	37.0	702	46.8	88	18.5	115
Rail	S	S	S	S	S	S	1 136
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	603
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	3	.2	1	—	S	S	297
Parcel, U.S. Postal Service or courier	3	.2	1	—	S	S	297
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 33, ARTICLES OF BASE METAL							
Total	1 622	100.0	718	100.0	306	100.0	221
Single modes	1 452	89.5	678	94.4	288	94.1	179
Truck ¹	1 451	89.4	678	94.4	288	94.1	179
For-hire truck	970	59.8	466	64.9	239	78.1	515
Private truck	463	28.5	206	28.7	45	14.8	63
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 257
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	79	4.9	S	S	S	S	559
Parcel, U.S. Postal Service or courier	64	4.0	3	.4	1	.3	559
Truck and rail	S	S	S	S	S	S	574
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	91	5.6	33	4.5	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 34, MACHINERY							
Total	3 557	100.0	565	100.0	354	100.0	267
Single modes	3 215	90.4	546	96.5	343	97.0	180
Truck ¹	3 079	86.6	544	96.2	341	96.4	159
For-hire truck	2 223	62.5	400	70.7	279	78.7	390
Private truck	856	24.1	144	25.5	62	17.7	71
Rail	S	S	S	S	S	S	845
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	130	3.6	S	S	S	S	1 161
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	233	6.6	8	1.4	8	2.2	570
Parcel, U.S. Postal Service or courier	232	6.5	7	1.3	4	1.3	569
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	7 340
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	109	3.1	12	2.1	S	S	S
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	4 266	100.0	972	100.0	536	100.0	262
Single modes	3 908	91.6	948	97.6	517	96.4	161
Truck ¹	3 818	89.5	948	97.5	516	96.3	146
For-hire truck	3 051	71.5	781	80.3	469	87.5	547
Private truck	718	16.8	152	15.6	36	6.7	55
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	89	2.1	1	—	1	2	1 346
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	271	6.4	10	1.0	12	2.2	667
Parcel, U.S. Postal Service or courier	253	5.9	6	.6	2	.5	665
Truck and rail	18	.4	4	.4	9	1.7	2 479
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	87	2.0	14	1.4	7	1.4	333
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	2 569	100.0	667	100.0	281	100.0	123
Single modes	2 361	91.9	637	95.4	262	93.3	109
Truck ¹	2 336	90.9	634	95.0	258	92.0	99
For-hire truck	1 241	48.3	325	48.7	187	66.7	676
Private truck	1 090	42.4	308	46.1	S	S	49
Rail	S	S	S	S	S	S	181
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 050
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	77	3.0	S	S	S	S	303
Parcel, U.S. Postal Service or courier	43	1.7	2	.2	1	.2	298
Truck and rail	S	S	S	S	S	S	2 188
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	23	3.4	S	S	S

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 37, TRANSPORTATION EQUIPMENT, N.E.C.							
Total	S	S	S	S	S	S	664
Single modes	S	S	S	S	S	S	626
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	498
Rail	-	-	-	-	-	-	-
Water	-	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	S	S	S	S	S	S	1 072
Pipeline ²	-	-	-	-	S	S	S
Multiple modes	S	S	S	S	S	S	835
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	835
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	187
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	221	100.0	S	S	4	100.0	367
Single modes	S	S	S	S	3	94.2	S
Truck ¹	S	S	S	S	3	93.2	S
For-hire truck	68	30.6	S	S	3	89.3	875
Private truck	S	S	S	S	S	S	82
Rail	-	-	-	-	-	-	-
Water	S	S	S	S	S	S	15
Shallow draft	S	S	S	S	S	S	15
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	S	S	S	S	S	S	1 228
Pipeline ²	-	-	-	-	S	S	S
Multiple modes	35	15.7	-	2.8	-	4.8	910
Parcel, U.S. Postal Service or courier	35	15.7	-	2.8	-	4.8	910
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	114
SCTG 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	2 351	100.0	766	100.0	433	100.0	634
Single modes	2 324	98.9	759	99.1	427	98.6	623
Truck ¹	2 324	98.8	759	99.1	427	98.6	623
For-hire truck	1 006	42.8	285	37.2	201	46.4	836
Private truck	1 253	53.3	454	59.2	212	49.0	401
Rail	S	S	S	S	S	S	707
Water	-	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	S	S	S	S	S	S	907
Pipeline ²	-	-	-	-	S	S	S
Multiple modes	15	.6	3	.4	S	S	857
Parcel, U.S. Postal Service or courier	8	.3	1	.2	1	.3	846
Truck and rail	S	S	S	S	S	S	1 593
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	12	.5	4	.5	2	.4	543

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	2 647	100.0	1 123	100.0	724	100.0	350
Single modes	2 247	84.9	1 081	96.2	694	95.8	215
Truck ¹	2 213	83.6	1 070	95.2	676	93.3	212
For-hire truck	1 052	39.8	380	33.8	249	34.4	673
Private truck	1 037	39.2	322	28.7	146	20.1	S
Rail	29	1.1	11	1.0	18	2.4	1 307
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	790
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	296	11.2	18	1.6	17	2.3	692
Parcel, U.S. Postal Service or courier	286	10.8	14	1.3	11	1.5	691
Truck and rail	10	.4	4	.3	6	.9	1 791
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	104	3.9	25	2.2	S	S	139
SCTG 41, WASTE AND SCRAP							
Total	151	100.0	534	100.0	160	100.0	S
Single modes	115	76.3	S	S	S	S	139
Truck ¹	104	68.9	S	S	S	S	133
For-hire truck	49	32.5	S	S	31	19.4	245
Private truck	55	36.4	135	25.3	S	S	82
Rail	S	S	S	S	S	S	153
Water	S	S	S	S	S	S	275
Shallow draft	S	S	S	S	S	S	275
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 909
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	2 008
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 886
Truck and rail	S	S	S	S	S	S	2 265
Truck and water	S	S	S	S	S	S	462
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	318
SCTG 43, MIXED FREIGHT							
Total	6 095	100.0	2 067	100.0	278	100.0	95
Single modes	5 515	90.5	1 897	91.8	254	91.2	105
Truck ¹	5 515	90.5	1 897	91.8	254	91.2	105
For-hire truck	1 310	21.5	863	41.7	101	36.4	111
Private truck	S	S	1 034	50.0	152	54.7	105
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	143
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	143
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	S	S	702	100.0	74	100.0	S
Single modes	S	S	697	99.3	71	95.5	S
Truck ¹	S	S	692	98.6	66	88.9	S
For-hire truck	S	S	S	S	S	S	564
Private truck	S	S	676	96.3	49	65.8	62
Rail	S	S	S	S	S	S	1 021
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	734
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	403
Parcel, U.S. Postal Service or courier	3	.5	—	—	—	—	393
Truck and rail	S	S	S	S	S	S	1 166
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	48

— 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	60 975	100.0	121 577	100.0	28 838	100.0
NEW ENGLAND STATES						
Connecticut	160	.3	71	—	89	.3
Maine	54	—	S	S	S	S
Massachusetts	226	.4	148	.1	224	.8
New Hampshire	48	—	S	S	S	S
Rhode Island	69	.1	36	—	57	.2
Vermont	11	—	S	S	S	S
MIDDLE ATLANTIC STATES						
New Jersey	568	.9	397	.3	494	1.7
New York	523	.9	323	.3	422	1.5
Pennsylvania	845	1.4	519	.4	573	2.0
EAST NORTH CENTRAL STATES						
Illinois	1 399	2.3	1 111	.9	811	2.8
Indiana	854	1.4	556	.5	363	1.3
Michigan	1 263	2.1	760	.6	717	2.5
Ohio	1 720	2.8	1 388	1.1	1 097	3.8
Wisconsin	623	1.0	S	S	S	S
WEST NORTH CENTRAL STATES						
Iowa	200	.3	196	.2	169	.6
Kansas	355	.6	266	.2	203	.7
Minnesota	437	.7	179	.1	189	.7
Missouri	782	1.3	639	.5	327	1.1
Nebraska	204	.3	148	.1	139	.5
North Dakota	54	—	18	—	26	—
South Dakota	40	—	15	—	S	S
SOUTH ATLANTIC STATES						
Delaware	198	.3	18	—	19	—
District of Columbia	9	—	S	S	S	S
Florida	2 562	4.2	6 525	5.4	3 028	10.5
Georgia	2 535	4.2	2 009	1.7	898	3.1
Maryland	294	.5	151	.1	145	.5
North Carolina	892	1.5	554	.5	397	1.4
South Carolina	552	.9	371	.3	253	.9
Virginia	579	.9	403	.3	361	1.3
West Virginia	207	.3	130	.1	133	.5
EAST SOUTH CENTRAL STATES						
Alabama	3 008	4.9	9 782	8.0	S	S
Kentucky	595	1.0	605	.5	326	1.1
Mississippi	20 357	33.4	72 557	59.7	3 603	12.5
Tennessee	3 388	5.6	3 803	3.1	866	3.0
WEST SOUTH CENTRAL STATES						
Arkansas	1 970	3.2	2 176	1.8	455	1.6
Louisiana	5 260	8.6	8 841	7.3	1 657	5.7
Oklahoma	432	.7	283	.2	169	.6
Texas	4 267	7.0	2 924	2.4	1 685	5.8
MOUNTAIN STATES						
Arizona	267	.4	112	—	181	.6
Colorado	220	.4	88	—	110	.4
Idaho	29	—	S	S	S	S
Montana	28	—	16	—	31	.1
Nevada	66	.1	26	—	50	.2
New Mexico	81	.1	48	—	56	.2
Utah	261	.4	80	—	134	.5
Wyoming	5	—	1	—	1	—
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	1 834	3.0	789	.6	1 654	5.7
Hawaii	S	S	S	S	S	S
Oregon	209	.3	94	—	236	.8
Washington	407	.7	S	S	S	S

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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	63 165	100.0	148 086	100.0	38 611	100.0
NEW ENGLAND STATES						
Connecticut	254	.4	36	—	45	.1
Maine	112	.2	44	—	69	.2
Massachusetts	430	.7	38	—	52	.1
New Hampshire	S	S	S	S	S	S
Rhode Island	46	—	5	—	7	—
Vermont	21	—	6	—	8	—
MIDDLE ATLANTIC STATES						
New Jersey	689	1.1	122	—	170	.4
New York	595	.9	191	.1	218	.6
Pennsylvania	825	1.3	269	.2	279	.7
EAST NORTH CENTRAL STATES						
Illinois	1 810	2.9	3 474	2.3	2 583	6.7
Indiana	1 181	1.9	653	.4	441	1.1
Michigan	705	1.1	303	.2	265	.7
Ohio	1 311	2.1	645	.4	496	1.3
Wisconsin	953	1.5	250	.2	205	.5
WEST NORTH CENTRAL STATES						
Iowa	506	.8	275	.2	252	.7
Kansas	297	.5	158	.1	122	.3
Minnesota	464	.7	S	—	S	S
Missouri	1 159	1.8	365	.2	176	.5
Nebraska	375	.6	S	—	S	S
North Dakota	S	S	S	—	S	S
South Dakota	164	.3	S	—	S	S
SOUTH ATLANTIC STATES						
Delaware	27	—	S	—	S	S
District of Columbia	S	S	S	—	S	S
Florida	767	1.2	499	.3	342	.9
Georgia	2 470	3.9	2 158	1.5	931	2.4
Maryland	93	.1	S	—	24	—
North Carolina	1 209	1.9	402	.3	271	.7
South Carolina	577	.9	250	.2	148	.4
Virginia	240	.4	84	—	74	.2
West Virginia	72	.1	21	—	18	—
EAST SOUTH CENTRAL STATES						
Alabama	2 748	4.4	11 319	7.6	1 480	3.8
Kentucky	1 073	1.7	1 708	1.2	861	2.2
Mississippi	20 357	32.2	72 557	49.0	3 603	9.3
Tennessee	3 976	6.3	5 327	3.6	860	2.2
WEST SOUTH CENTRAL STATES						
Arkansas	2 257	3.6	S	—	S	S
Louisiana	6 447	10.2	24 805	16.8	3 984	10.3
Oklahoma	384	.6	349	.2	184	.5
Texas	S	S	2 344	1.6	1 214	3.1
MOUNTAIN STATES						
Arizona	217	.3	S	—	S	S
Colorado	160	.3	166	.1	227	.6
Idaho	17	—	16	—	32	—
Montana	60	.1	6 862	4.6	12 994	33.7
Nevada	22	—	S	—	S	S
New Mexico	215	.3	257	.2	318	.8
Utah	S	S	S	—	S	S
Wyoming	S	S	S	—	S	S
PACIFIC STATES						
Alaska	S	S	S	—	S	S
California	1 780	2.8	292	.2	613	1.6
Hawaii	S	S	S	—	S	S
Oregon	126	.2	40	—	103	.3
Washington	S	S	34	—	95	.2

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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	7.3	—	7.5	—	11.1	—	31.2
Single modes	7.2	.7	7.8	1.2	8.2	3.1	14.5
Truck	8.2	2.3	12.4	5.6	3.6	6.0	15.1
For-hire truck	12.0	3.4	11.7	3.9	6.3	4.5	7.4
Private truck	13.0	2.9	18.6	5.6	9.2	2.2	31.8
Rail	14.0	.9	23.1	2.0	23.8	4.4	5.3
Water	35.3	.9	36.3	3.8	38.9	4.8	S
Shallow draft	26.2	.2	S	S	S	S	S
Great Lakes	—	—	—	—	—	—	—
Deep draft	49.3	.9	S	S	S	S	25.9
Air (includes truck and air)	16.9	.1	S	S	S	S	3.9
Pipeline	40.8	.7	39.3	2.0	S	S	S
Multiple modes	11.6	.3	37.0	.2	19.0	.6	7.3
Parcel, U.S. Postal Service or courier	16.4	.3	15.7	—	12.8	—	7.6
Truck and rail	16.5	.1	42.2	.2	20.7	.5	32.9
Truck and water	S	S	S	S	45.0	.1	S
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	24.2	.7	41.9	1.3	S	S	S

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

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	7.3	4.1	9.1	7.5	10.3	13.1	11.1	11.6	17.0	31.2	9.2	12.1
Single modes	7.2	4.5	9.3	7.8	8.8	12.5	8.2	11.3	14.0	14.5	11.0	15.8
Truck	8.2	5.2	10.5	12.4	6.9	15.0	3.6	4.9	6.3	15.1	10.7	16.6
For-hire truck	12.0	3.5	13.2	11.7	12.0	14.6	6.3	6.2	8.8	7.4	6.1	9.5
Private truck	13.0	9.4	17.5	18.6	8.6	24.0	9.2	7.0	12.1	31.8	9.9	34.4
Rail	14.0	8.5	20.9	23.1	11.7	34.5	23.8	6.7	34.9	5.3	7.4	8.9
Water	35.3	30.4	41.7	36.3	34.2	39.2	38.9	35.8	32.6	S	39.5	S
Shallow draft	26.2	31.7	44.2	S	31.8	S	S	37.3	S	S	22.2	S
Great Lakes	—	—	—	—	—	—	—	—	—	—	—	—
Deep draft	49.3	44.1	55.2	S	43.4	S	S	46.2	S	25.9	26.4	5.5
Air (includes truck and air)	16.9	26.4	46.4	S	48.8	S	S	48.2	S	3.9	5.6	6.8
Pipeline	40.8	43.2	93.3	39.3	43.3	84.0	S	S	S	S	S	S
Multiple modes	11.6	9.9	13.6	37.0	S	S	19.0	40.3	39.8	7.3	7.6	8.7
Parcel, U.S. Postal Service or courier	16.4	12.7	16.9	15.7	14.8	15.4	12.8	11.5	11.4	7.6	7.7	8.9
Truck and rail	16.5	20.7	44.7	42.2	17.2	137.0	20.7	21.7	59.0	32.9	13.6	27.2
Truck and water	S	S	S	S	S	S	45.0	S	S	S	S	S
Rail and water	—	—	—	—	—	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—	—	—	—	—	—
Other and unknown modes	24.2	41.8	50.5	41.9	S	S	S	40.4	S	S	49.4	S

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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 .....	.7	1.6	1.2	2.4	3.1	1.4
Truck	2.3	2.1	5.6	4.5	6.0	4.0
For-hire truck	3.4	1.1	3.9	2.8	4.5	2.3
Private truck	2.9	2.5	5.6	4.2	2.2	1.8
Rail .....	.9	.3	2.0	1.6	4.4	3.5
Water .....	.9	1.0	3.8	3.2	4.8	5.5
Shallow draft .....	.2	.3	S	.7	S	2.0
Great Lakes	—	—	—	—	—	—
Deep draft .....	.9	1.1	S	3.3	S	5.8
Air (includes truck and air) .....	.1	—	S	—	S	—
Pipeline .....	.7	.6	2.0	1.4	S	S
Multiple modes .....	.3	.4	.2	S	.6	1.0
Parcel, U.S. Postal Service or courier .....	.3	.4	—	—	—	—
Truck and rail .....	.1	—	.2	—	.5	.3
Truck and water	S	S	S	S	.1	S
Rail and water	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—
Other and unknown modes .....	.7	1.6	1.3	S	S	1.0

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

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

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	11.1	—	31.1
Truck	3.6	6.0	15.0
Rail	23.0	4.5	6.7
Shallow draft	S	S	S
Great Lakes	—	—	—
Deep draft	S	S	S
Air	S	S	4.3
Parcel, U.S. Postal Service or courier	12.8	—	7.6
Pipeline	S	S	S
Other and unknown modes	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-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	7.3	—	7.5	—	11.1	—
Less than 50 miles	5.4	1.5	17.3	4.8	12.8	.8
50 to 99 miles	13.2	.9	21.4	2.4	22.9	1.0
100 to 249 miles	17.5	2.2	13.0	3.4	19.8	3.4
250 to 499 miles	9.3	1.0	22.7	2.0	22.2	2.7
500 to 749 miles	9.1	.7	9.4	.6	8.4	1.3
750 to 999 miles	11.9	.7	22.5	.6	24.4	2.3
1,000 to 1,499 miles	10.8	.4	17.8	.2	21.6	1.3
1,500 to 1,999 miles	18.8	.5	11.2	.1	11.0	1.0
2,000 miles or more	43.1	.2	S	S	S	S
Single modes	7.2	—	7.8	—	8.2	—
Less than 50 miles	5.4	1.5	18.5	5.1	13.0	.8
50 to 99 miles	11.8	.9	21.6	2.4	23.1	1.0
100 to 249 miles	17.7	2.3	13.8	3.5	20.6	3.4
250 to 499 miles	9.0	1.1	22.9	2.4	22.4	3.3
500 to 749 miles	9.1	.7	9.6	.7	8.7	1.0
750 to 999 miles	11.9	.6	23.0	.6	24.9	2.3
1,000 to 1,499 miles	11.1	.4	18.3	.2	22.4	1.2
1,500 to 1,999 miles	22.2	.5	13.1	.2	13.2	1.1
2,000 miles or more	24.8	—	21.7	—	24.6	.1
Truck	8.2	—	12.4	—	3.6	—
Less than 50 miles	5.3	1.9	19.9	3.9	13.4	1.3
50 to 99 miles	11.4	.9	16.6	2.4	16.1	1.5
100 to 249 miles	19.6	2.4	10.7	1.4	10.7	1.2
250 to 499 miles	10.1	.8	4.5	.7	4.5	.7
500 to 749 miles	11.4	.8	6.3	.7	6.1	1.0
750 to 999 miles	13.6	.5	11.8	.3	11.4	1.3
1,000 to 1,499 miles	12.0	.4	6.3	.1	5.9	.5
1,500 to 1,999 miles	24.8	.5	13.6	.2	13.3	1.3
2,000 miles or more	33.4	—	28.5	—	28.8	.2
For-hire truck	12.0	—	11.7	—	6.3	—
Less than 50 miles	17.4	1.5	24.4	4.7	28.2	1.1
50 to 99 miles	12.1	.9	15.7	1.4	18.4	.7
100 to 249 miles	14.6	.9	17.4	2.3	17.4	1.6
250 to 499 miles	12.8	1.2	6.7	1.2	7.0	1.4
500 to 749 miles	14.8	1.1	8.4	1.2	8.3	1.3
750 to 999 miles	14.6	.5	13.3	1.0	12.9	1.9
1,000 to 1,499 miles	10.5	.4	6.5	.3	6.1	.7
1,500 to 1,999 miles	27.9	.7	16.6	.3	16.4	1.7
2,000 miles or more	35.1	—	32.3	—	32.7	.2
Private truck	13.0	—	18.6	—	9.2	—
Less than 50 miles	6.2	3.5	25.8	4.9	15.4	3.3
50 to 99 miles	16.7	1.1	22.7	3.2	21.8	3.1
100 to 249 miles	32.8	3.4	13.1	3.0	12.8	3.7
250 to 499 miles	10.3	.6	10.9	.2	10.3	.6
500 to 749 miles	15.3	.8	16.0	.4	15.5	1.9
750 to 999 miles	20.7	.5	16.8	—	16.8	.6
1,000 to 1,499 miles	24.9	.4	29.1	—	31.9	1.0
1,500 to 1,999 miles	30.2	.1	28.1	—	28.8	.8
2,000 miles or more	S	S	S	S	S	S
Rail	14.0	—	23.1	—	23.8	—
Less than 50 miles	28.7	.5	26.7	.6	29.2	—
50 to 99 miles	33.0	2.6	S	S	S	S
100 to 249 miles	10.3	3.5	12.2	4.9	13.0	2.3
250 to 499 miles	26.5	3.9	34.7	5.3	34.9	4.3
500 to 749 miles	13.4	2.0	19.2	1.3	18.5	1.7
750 to 999 miles	40.1	2.9	43.0	2.1	43.8	3.5
1,000 to 1,499 miles	14.7	.8	40.5	.8	44.7	2.1
1,500 to 1,999 miles	32.6	1.2	27.0	.6	26.3	2.0
2,000 miles or more	44.5	—	S	S	S	S
Water	35.3	—	36.3	—	38.9	—
Less than 50 miles	29.6	13.8	31.9	13.8	32.0	14.9
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	35.0	13.4	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Shallow draft	26.2	—	S	S	S	S
Less than 50 miles	44.7	14.1	49.8	14.8	S	S
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	34.9	15.9	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—

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	49.3	—	S	S	S	S
Less than 50 miles	49.6	9.8	42.3	9.6	48.2	10.5
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Air (includes truck and air)	16.9	—	S	S	S	S
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	28.8	.8	31.8	3.4	30.8	1.5
250 to 499 miles	37.6	5.0	37.3	8.0	39.7	6.3
500 to 749 miles	26.8	4.6	26.4	6.2	26.7	7.6
750 to 999 miles	41.4	2.3	S	S	S	S
1,000 to 1,499 miles	23.3	2.1	49.1	6.3	S	S
1,500 to 1,999 miles	30.5	5.9	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Pipeline	40.8	—	39.3	—	S	S
Less than 50 miles	46.5	19.0	36.3	18.1	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	43.4	18.9	44.1	18.1	S	S
250 to 499 miles	—	—	—	—	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	S	S
1,000 to 1,499 miles	—	—	—	—	S	S
1,500 to 1,999 miles	—	—	—	—	S	S
2,000 miles or more	—	—	—	—	S	S
Multiple modes	11.6	—	37.0	—	19.0	—
Less than 50 miles	32.6	2.0	S	S	S	S
50 to 99 miles	32.4	2.2	S	S	S	S
100 to 249 miles	20.6	3.0	S	S	S	S
250 to 499 miles	24.1	2.2	29.4	2.4	32.3	.8
500 to 749 miles	16.7	1.6	22.5	1.4	27.2	1.6
750 to 999 miles	17.1	1.7	30.5	.9	31.3	1.0
1,000 to 1,499 miles	19.2	2.0	S	S	S	S
1,500 to 1,999 miles	10.1	2.2	29.8	10.3	28.8	10.4
2,000 miles or more	34.6	.2	S	S	S	S
Parcel, U.S. Postal Service or courier	16.4	—	15.7	—	12.8	—
Less than 50 miles	33.3	2.2	21.1	1.5	26.1	.1
50 to 99 miles	35.0	2.9	25.9	1.7	27.3	.3
100 to 249 miles	25.2	3.4	20.2	2.5	20.0	1.0
250 to 499 miles	26.8	2.1	27.4	3.0	26.1	2.7
500 to 749 miles	18.9	2.6	17.4	2.5	17.3	2.3
750 to 999 miles	18.2	1.6	19.6	1.8	20.7	3.2
1,000 to 1,499 miles	15.5	2.0	12.3	1.4	12.7	2.4
1,500 to 1,999 miles	24.1	1.6	16.0	.9	16.3	2.3
2,000 miles or more	43.0	.2	36.9	.1	33.4	.6
Truck and rail	16.5	—	42.2	—	20.7	—
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	36.9	3.3	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	27.3	2.9	40.4	2.4	43.5	1.9
750 to 999 miles	40.1	2.6	42.3	1.4	41.6	1.2
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	18.9	8.4	30.7	13.7	29.6	11.2
2,000 miles or more	S	S	S	S	S	S
Truck and water	S	S	S	S	45.0	—
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	24.2	—	41.9	—	S	S
Less than 50 miles	24.7	7.0	S	S	29.4	2.9
50 to 99 miles	S	S	30.8	3.9	34.0	1.6
100 to 249 miles	35.3	5.6	43.2	8.0	46.6	6.4
250 to 499 miles	33.1	2.9	43.1	2.5	40.3	4.3
500 to 749 miles	29.3	1.1	44.2	2.7	45.6	7.4
750 to 999 miles	42.5	3.9	S	S	S	S
1,000 to 1,499 miles	43.0	.7	39.1	.8	37.2	4.7
1,500 to 1,999 miles	38.8	.4	44.7	.4	44.8	2.0
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	7.3	—	7.5	—	11.1	—	31.2
Less than 50 lb	8.2	.5	11.0	—	11.4	—	S
50 to 99 lb	13.0	.2	17.7	—	33.6	—	28.2
100 to 499 lb	11.7	.8	15.2	—	12.0	—	11.7
500 to 749 lb	12.9	.2	14.5	—	15.0	—	10.1
750 to 999 lb	15.1	.1	10.2	—	20.7	—	7.8
1,000 to 9,999 lb	20.8	3.1	13.4	.8	16.3	1.5	10.7
10,000 to 49,999 lb	5.4	1.9	11.0	2.7	3.2	3.7	10.6
50,000 to 99,999 lb	13.7	.5	11.6	3.4	8.7	1.3	5.5
100,000 lb or more	18.7	2.1	18.3	5.7	21.7	6.1	22.8
Single modes	7.2	—	7.8	—	8.2	—	14.5
Less than 50 lb	11.0	.4	10.0	—	22.4	—	21.0
50 to 99 lb	9.6	.2	20.5	—	46.8	—	40.0
100 to 499 lb	12.7	.8	16.3	—	13.3	—	12.6
500 to 749 lb	13.7	.2	15.3	—	15.6	—	11.4
750 to 999 lb	15.4	.2	10.3	—	20.7	—	7.7
1,000 to 9,999 lb	20.8	3.1	13.7	.8	16.6	1.5	10.8
10,000 to 49,999 lb	5.4	2.0	11.3	2.7	4.1	3.3	11.1
50,000 to 99,999 lb	13.8	.6	11.5	3.3	8.5	1.2	5.5
100,000 lb or more	19.2	2.2	18.6	5.5	17.9	5.5	23.1
Truck	8.2	—	12.4	—	3.6	—	15.1
Less than 50 lb	11.6	.4	10.1	—	23.0	—	22.3
50 to 99 lb	10.3	.2	20.7	—	48.1	—	40.3
100 to 499 lb	12.6	.9	16.5	.1	13.2	.1	12.8
500 to 749 lb	13.8	.2	15.4	—	15.5	—	11.4
750 to 999 lb	15.3	.2	10.3	—	20.7	—	7.7
1,000 to 9,999 lb	20.8	3.1	13.7	.8	16.5	1.5	10.7
10,000 to 49,999 lb	5.4	2.6	11.4	3.6	4.3	2.2	11.0
50,000 to 99,999 lb	14.2	.6	11.6	3.2	9.2	1.3	6.3
100,000 lb or more	16.7	.3	S	S	16.3	.8	S
For-hire truck	12.0	—	11.7	—	6.3	—	7.4
Less than 50 lb	20.1	.3	25.0	—	29.1	—	13.2
50 to 99 lb	20.8	.1	18.3	—	23.3	—	9.9
100 to 499 lb	11.0	.3	10.5	—	13.2	—	5.1
500 to 749 lb	15.2	.1	13.6	—	19.3	—	8.6
750 to 999 lb	31.4	.3	23.9	—	29.9	.1	6.6
1,000 to 9,999 lb	33.8	3.9	17.2	1.1	24.5	2.3	6.1
10,000 to 49,999 lb	7.6	4.2	12.1	4.0	7.7	2.9	8.4
50,000 to 99,999 lb	20.8	.6	21.6	4.1	15.1	1.3	10.7
100,000 lb or more	25.7	.3	S	S	25.7	.9	47.0
Private truck	13.0	—	18.6	—	9.2	—	31.8
Less than 50 lb	14.9	.8	13.2	—	48.3	.1	36.3
50 to 99 lb	15.1	.5	22.5	—	S	S	S
100 to 499 lb	14.5	1.8	18.7	.3	23.4	.4	23.9
500 to 749 lb	14.5	.5	17.3	—	11.9	—	11.2
750 to 999 lb	17.2	.4	6.3	—	16.8	—	14.8
1,000 to 9,999 lb	24.4	2.8	14.0	1.1	17.3	1.5	9.9
10,000 to 49,999 lb	16.5	2.2	14.8	4.2	10.2	3.2	7.8
50,000 to 99,999 lb	11.8	1.2	15.7	3.6	13.1	2.5	12.4
100,000 lb or more	24.5	.4	S	S	33.8	2.6	S
Rail	14.0	—	23.1	—	23.8	—	5.3
Less than 50 lb	S	S	S	S	S	S	37.6
50 to 99 lb	S	S	S	S	S	S	31.6
100 to 499 lb	S	S	S	S	S	S	S
500 to 749 lb	S	S	S	S	S	S	31.6
750 to 999 lb	S	S	S	S	S	S	30.0
1,000 to 9,999 lb	49.0	.2	45.5	—	48.2	—	24.0
10,000 to 49,999 lb	13.6	.5	20.4	.2	21.0	.8	10.8
50,000 to 99,999 lb	47.8	.4	35.6	.4	40.3	.4	19.3
100,000 lb or more	14.0	.6	23.5	.5	24.5	1.0	3.3
Water	35.3	—	36.3	—	38.9	—	S
Less than 50 lb	41.5	.5	44.2	—	44.2	—	25.8
50 to 99 lb	45.9	.4	45.4	—	45.4	—	25.8
100 to 499 lb	43.6	4.0	44.2	.4	44.2	.4	25.8
500 to 749 lb	43.0	.5	41.0	—	41.0	—	25.8
750 to 999 lb	S	S	S	S	S	S	29.8
1,000 to 9,999 lb	S	S	S	S	S	S	31.6
10,000 to 49,999 lb	S	S	S	S	S	S	27.9
50,000 to 99,999 lb	S	S	S	S	S	S	30.2
100,000 lb or more	35.5	10.4	36.5	10.5	38.9	10.5	26.9
Shallow draft	26.2	—	S	S	S	S	S
Less than 50 lb	41.5	.5	44.2	—	44.2	—	25.8
50 to 99 lb	45.9	.4	45.4	—	45.4	—	25.8
100 to 499 lb	43.6	3.9	44.2	.4	44.2	.4	25.8
500 to 749 lb	43.0	.5	41.0	—	41.0	—	25.8
750 to 999 lb	S	S	S	S	S	S	29.8
1,000 to 9,999 lb	S	S	S	S	S	S	31.6
10,000 to 49,999 lb	S	S	S	S	S	S	27.9
50,000 to 99,999 lb	S	S	S	S	S	S	30.2
100,000 lb or more	27.4	10.4	S	S	S	S	S

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	49.3	—	S	S	S	S	25.9
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	49.3	—	S	S	S	S	25.9
Air (includes truck and air)	16.9	—	S	S	S	S	3.9
Less than 50 lb	27.8	7.1	23.1	5.0	22.2	5.2	4.0
50 to 99 lb	25.5	1.7	30.1	2.4	32.8	4.7	24.9
100 to 499 lb	28.9	5.1	26.6	10.4	28.3	13.3	9.0
500 to 749 lb	36.8	1.0	35.6	1.8	40.6	1.9	17.6
750 to 999 lb	45.1	.9	49.6	2.6	46.6	2.7	24.1
1,000 to 9,999 lb	41.5	1.9	S	S	S	S	21.7
10,000 to 49,999 lb	S	S	S	S	S	S	30.7
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Pipeline	40.8	—	39.3	—	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
10,000 to 49,999 lb	S	S	S	S	S	S	S
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	41.0	14.8	39.5	14.9	S	S	S
Multiple modes	11.6	—	37.0	—	19.0	—	7.3
Less than 50 lb	14.9	3.4	15.8	2.4	16.6	1.1	8.1
50 to 99 lb	31.2	3.0	21.4	1.6	16.0	.8	12.5
100 to 499 lb	16.6	1.5	15.3	1.8	13.9	.9	5.6
500 to 749 lb	49.0	1.2	33.3	.6	30.0	.3	28.1
750 to 999 lb	25.8	.2	35.1	.6	33.5	.2	20.6
1,000 to 9,999 lb	46.9	.3	37.7	1.4	36.8	2.0	26.2
10,000 to 49,999 lb	15.2	4.5	43.4	9.6	22.8	5.9	37.6
50,000 to 99,999 lb	S	S	S	S	46.9	2.7	S
100,000 lb or more	S	S	39.5	6.8	41.3	2.6	35.6
Parcel, U.S. Postal Service or courier	16.4	—	15.7	—	12.8	—	7.6
Less than 50 lb	14.9	4.9	15.8	3.0	16.6	2.8	8.1
50 to 99 lb	31.2	3.1	21.4	1.7	16.0	2.4	12.5
100 to 499 lb	16.6	2.3	15.3	2.0	14.0	3.6	5.6
500 to 749 lb	49.0	1.5	33.3	1.2	30.0	1.4	28.1
750 to 999 lb	25.8	.3	35.1	1.1	33.5	.8	20.6
1,000 to 9,999 lb	S	S	S	S	S	S	30.5
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	16.5	—	42.2	—	20.7	—	32.9
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	S	S	45.3	2.7	46.9	2.4	20.3
10,000 to 49,999 lb	18.2	6.9	44.5	9.1	23.0	4.9	37.4
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	S	S	S	S	49.2	3.6	38.7
Truck and water	S	S	S	S	45.0	—	S
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	29.8
10,000 to 49,999 lb	S	S	S	S	S	S	S
50,000 to 99,999 lb	S	S	S	S	S	S	31.6
100,000 lb or more	S	S	S	S	S	S	29.8

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	24.2	—	41.9	—	S	S	S
Less than 50 lb	47.0	5.1	37.6	2.2	32.1	.3	41.5
50 to 99 lb	46.4	1.1	32.8	.3	36.9	.1	S
100 to 499 lb	27.7	2.4	31.2	1.7	25.9	.3	S
500 to 749 lb	27.9	.7	28.3	.5	40.4	.2	S
750 to 999 lb	28.2	.1	31.2	—	34.5	.2	41.1
1,000 to 9,999 lb	47.0	6.2	38.0	4.3	30.1	4.2	30.9
10,000 to 49,999 lb	26.1	6.1	26.5	7.1	28.0	15.6	25.9
50,000 to 99,999 lb	46.6	.8	44.5	5.6	36.1	1.8	S
100,000 lb or more	36.0	4.8	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-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	7.3	—	7.5	—	11.1	—	31.2
01	Live animals and live fish	S	S	S	S	S	S	6.3
02	Cereal grains	S	S	S	S	S	S	S
03	Other agricultural products	36.2	.3	S	S	S	S	S
04	Animal feed and products of animal origin, n.e.c.	38.7	.8	39.5	1.2	29.7	.5	S
05	Meat, fish, seafood, and their preparations	37.4	1.4	38.5	.7	31.2	1.0	18.1
06	Milled grain products and preparations, and bakery products	30.2	.4	35.7	.3	40.5	1.3	S
07	Other prepared foodstuffs and fats and oils	13.2	.5	15.6	.5	16.5	.5	28.9
08	Alcoholic beverages	21.1	.2	22.1	—	25.2	—	12.3
09	Tobacco products	33.6	—	34.4	—	38.8	—	11.8
10	Monumental or building stone	—	—	—	—	—	—	—
11	Natural sands	S	S	S	S	41.9	—	22.1
12	Gravel and crushed stone	S	S	28.4	2.2	21.9	.3	36.9
13	Nonmetallic minerals n.e.c.	23.9	—	39.2	.4	26.5	.5	19.5
14	Metallic ores and concentrates	S	S	S	S	S	S	31.7
15	Coal	S	S	S	S	S	S	29.8
17	Gasoline and aviation turbine fuel	27.8	1.4	28.9	3.5	44.3	3.4	15.2
18	Fuel oils	25.8	.4	28.4	1.1	47.9	1.3	22.6
19	Coal and petroleum products, n.e.c.	18.6	.2	43.2	1.7	25.4	.6	40.9
20	Basic chemicals	22.9	.6	20.6	.4	22.2	.7	29.3
21	Pharmaceutical products	23.4	.4	43.4	—	S	S	37.5
22	Fertilizers	34.0	.2	31.9	.6	S	S	S
23	Chemical products and preparations, n.e.c.	40.4	1.1	26.6	.4	S	S	25.7
24	Plastics and rubber	20.3	1.1	30.3	.5	40.8	1.5	19.2
25	Logs and other wood in the rough	36.3	.4	43.7	4.6	S	S	S
26	Wood products	7.7	.5	23.4	3.5	25.2	4.0	16.2
27	Pulp, newsprint, paper, and paperboard	17.3	.6	20.4	.6	14.3	1.9	25.7
28	Paper or paperboard articles	26.9	.2	34.1	—	37.5	.1	S
29	Printed products	21.0	.5	25.6	.1	40.5	.3	S
30	Textiles, leather, and articles of textiles or leather	47.0	2.9	37.0	.3	42.5	1.1	6.8
31	Nonmetallic mineral products	16.6	.4	44.9	6.2	21.5	.9	39.6
32	Base metal in primary or semifinished forms and in finished basic shapes	19.0	.6	18.4	.2	19.1	.4	15.2
33	Articles of base metal	16.9	.4	18.8	.1	26.4	.2	21.6
34	Machinery	13.7	1.0	13.7	—	20.0	.3	18.2
35	Electronic and other electrical equipment and components and office equipment	12.8	.9	17.1	.1	11.4	.4	23.4
36	Motorized and other vehicles (including parts)	24.7	.8	25.8	.1	22.3	.3	33.5
37	Transportation equipment, n.e.c.	S	S	S	S	S	S	23.5
38	Precision instruments and apparatus	48.5	.2	S	S	34.6	—	42.0
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	21.4	1.0	27.3	.2	22.9	.4	9.0
40	Miscellaneous manufactured products	8.5	.3	19.3	.2	21.6	.6	17.1
41	Waste and scrap	27.8	—	42.3	.3	34.2	.2	S
43	Mixed freight	42.9	3.1	14.0	.3	16.5	.2	15.8
--	Commodity unknown	S	S	44.4	.2	33.4	.1	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-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	7.3	—	7.5	—	11.1	—	31.2
Single modes	7.2	.7	7.8	1.2	8.2	3.1	14.5
Truck	8.2	2.3	12.4	5.6	3.6	6.0	15.1
For-hire truck	12.0	3.4	11.7	3.9	6.3	4.5	7.4
Private truck	13.0	2.9	18.6	5.6	9.2	2.2	31.8
Rail	14.0	.9	23.1	2.0	23.8	4.4	5.3
Water	35.3	.9	36.3	3.8	38.9	4.8	S
Shallow draft	26.2	.2	S	S	S	S	S
Great Lakes	—	—	—	—	—	—	—
Deep draft	49.3	.9	S	S	S	S	25.9
Air (includes truck and air)	16.9	.1	S	S	S	S	3.9
Pipeline	40.8	.7	39.3	2.0	S	S	S
Multiple modes	11.6	.3	37.0	.2	19.0	.6	7.3
Parcel, U.S. Postal Service or courier	16.4	.3	15.7	—	12.8	—	7.6
Truck and rail	16.5	.1	42.2	.2	20.7	.5	32.9
Truck and water	S	S	S	S	45.0	.1	S
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	24.2	.7	41.9	1.3	S	S	S
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	S	S	S	S	S	S	6.3
Single modes	S	S	S	S	S	S	6.3
Truck	S	S	S	S	S	S	6.3
For-hire truck	S	S	S	S	S	S	21.8
Private truck	S	S	S	S	32.2	19.5	48.7
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	S	S	S	S	S	S	S
Single modes	S	S	S	S	S	S	S
Truck	S	S	S	S	S	S	S
For-hire truck	S	S	S	S	S	S	S
Private truck	S	S	S	S	S	S	S
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
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

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	36.2	—	S	S	S	S	S
Single modes	39.1	5.1	S	S	S	S	S
Truck	36.5	12.9	40.1	19.1	S	S	S
For-hire truck	41.4	6.2	45.5	8.8	34.6	12.1	28.4
Private truck	38.9	13.4	35.8	18.0	S	S	S
Rail	S	S	S	S	S	S	28.5
Water	S	S	S	S	S	S	25.8
Shallow draft	S	S	S	S	S	S	25.8
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	29.1
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	29.1
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	36.4
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	38.7	—	39.5	—	29.7	—	S
Single modes	38.6	.2	39.4	.2	29.7	.2	S
Truck	46.4	9.2	47.1	8.5	39.9	9.0	S
For-hire truck	S	S	S	S	S	S	S
Private truck	49.9	9.2	S	S	45.7	8.6	S
Rail	S	S	S	S	38.9	6.1	49.3
Water	S	S	S	S	S	S	31.3
Shallow draft	S	S	S	S	S	S	31.3
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	S
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	37.4	—	38.5	—	31.2	—	18.1
Single modes	39.3	3.7	40.4	3.1	32.0	1.9	17.8
Truck	39.5	3.6	40.7	3.0	32.9	3.3	18.0
For-hire truck	43.3	7.5	43.7	8.1	34.7	7.9	13.0
Private truck	38.1	8.2	40.3	8.7	39.6	8.7	14.3
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	27.9
Shallow draft	S	S	S	S	S	S	27.9
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	31.6
Pipeline	S	S	S	S	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	44.5

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 06, MILLED GRAIN PRODUCTS AND PREPARATIONS, AND BAKERY PRODUCTS							
Total	30.2	—	35.7	—	40.5	—	S
Single modes	29.2	1.8	35.7	1.9	41.5	3.4	S
Truck	28.7	5.3	34.4	9.6	40.8	12.1	S
For-hire truck	43.8	12.7	44.1	11.5	44.0	12.4	23.6
Private truck	S	S	44.4	19.4	S	S	25.2
Rail	42.1	3.9	42.2	7.9	42.9	9.4	26.3
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
Multiple modes	S	S	S	S	S	S	27.9
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	27.9
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 07, OTHER PREPARED FOODSTUFFS AND FATS AND OILS							
Total	13.2	—	15.6	—	16.5	—	28.9
Single modes	13.2	.5	15.8	.7	16.6	.8	26.7
Truck	15.4	5.0	17.7	6.0	14.8	8.1	26.6
For-hire truck	19.9	5.7	14.8	7.0	21.9	7.9	15.6
Private truck	21.1	9.7	30.3	9.7	24.2	9.1	26.1
Rail	39.6	5.0	39.8	6.3	35.8	8.5	S
Water	S	S	S	S	S	S	S
Shallow draft	S	S	S	S	S	S	S
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	48.6
SCTG 08, ALCOHOLIC BEVERAGES							
Total	21.1	—	22.1	—	25.2	—	12.3
Single modes	20.7	1.2	21.7	1.5	24.7	1.1	12.4
Truck	20.7	1.2	21.7	1.5	24.7	1.1	12.4
For-hire truck	44.0	11.0	44.0	5.3	47.1	11.8	25.9
Private truck	22.7	11.4	24.1	5.8	27.1	12.2	9.1
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	28.8

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 09, TOBACCO PRODUCTS							
Total	33.6	—	34.4	—	38.8	—	11.8
Single modes	34.1	1.5	33.8	1.3	38.7	.2	11.9
Truck	34.0	1.5	33.8	1.3	38.7	.2	12.0
For-hire truck	—	—	—	—	—	—	—
Private truck	34.0	1.5	33.8	1.3	38.7	.2	12.0
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	29.8
Shallow draft	S	S	S	S	S	S	29.8
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.6
SCTG 10, MONUMENTAL OR BUILDING STONE							
Total	—	—	—	—	—	—	—
Single modes	—	—	—	—	—	—	—
Truck	—	—	—	—	—	—	—
For-hire truck	—	—	—	—	—	—	—
Private truck	—	—	—	—	—	—	—
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 11, NATURAL SANDS							
Total	S	S	S	S	41.9	—	22.1
Single modes	S	S	S	S	42.7	3.6	22.2
Truck	S	S	S	S	42.7	3.6	22.2
For-hire truck	44.3	7.8	44.2	8.1	46.7	7.9	26.1
Private truck	S	S	S	S	47.5	7.4	23.8
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	30.5

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 12, GRAVEL AND CRUSHED STONE							
Total	S	S	28.4	—	21.9	—	36.9
Single modes	S	S	28.5	.5	22.0	.3	37.1
Truck	S	S	28.6	.6	22.0	.3	37.1
For-hire truck	45.1	12.2	42.4	10.8	40.3	10.7	19.7
Private truck	S	S	32.7	10.1	24.7	10.2	35.5
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
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 13, NONMETALLIC MINERALS N.E.C.							
Total	23.9	—	39.2	—	26.5	—	19.5
Single modes	23.8	1.2	39.5	2.0	27.7	3.4	20.0
Truck	32.0	7.7	S	S	27.5	6.0	20.6
For-hire truck	34.3	9.7	40.6	11.1	36.1	7.8	11.3
Private truck	S	S	S	S	S	S	26.1
Rail	24.1	6.6	25.6	5.7	33.5	6.5	14.8
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	27.9
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	S	S	S	S	S	S	29.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	29.1
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	S	S	S	S	S	S	31.7
Single modes	S	S	S	S	S	S	31.7
Truck	S	S	S	S	S	S	31.7
For-hire truck	S	S	S	S	S	S	31.6
Private truck	S	S	S	S	S	S	—
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	—	—	—	—	—	—	—

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	29.8
Single modes	S	S	S	S	S	S	29.8
Truck	S	S	S	S	S	S	30.4
For-hire truck	—	—	—	—	—	—	—
Private truck	S	S	S	S	S	S	30.4
Rail	—	—	—	—	—	—	—
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
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	27.8	—	28.9	—	44.3	—	15.2
Single modes	27.8	—	28.9	—	44.3	—	15.2
Truck	18.8	15.0	20.0	16.4	S	S	16.5
For-hire truck	19.3	5.7	20.5	7.1	40.8	7.3	38.8
Private truck	22.6	12.2	24.5	12.6	41.0	18.2	15.9
Rail	S	S	S	S	S	S	31.6
Water	S	S	S	S	S	S	27.3
Shallow draft	S	S	S	S	S	S	37.2
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	28.5
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	43.4	8.7	43.7	9.6	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
SCTG 18, FUEL OILS							
Total	25.8	—	28.4	—	47.9	—	22.6
Single modes	25.8	—	28.4	—	48.0	—	22.9
Truck	14.3	10.7	15.8	12.5	S	S	23.5
For-hire truck	27.8	6.9	28.8	8.0	23.4	11.9	36.4
Private truck	19.9	7.5	23.3	7.7	23.4	11.6	28.6
Rail	—	—	—	—	—	—	—
Water	38.9	8.2	39.4	9.7	S	S	S
Shallow draft	S	S	S	S	S	S	25.8
Great Lakes	—	—	—	—	—	—	—
Deep draft	43.6	7.9	43.8	9.3	S	S	29.0
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	S	S	S	S	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.6

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 19, COAL AND PETROLEUM PRODUCTS, N.E.C.							
Total	18.6	—	43.2	—	25.4	—	40.9
Single modes	17.9	3.1	22.8	11.2	25.6	1.9	38.6
Truck	24.0	9.8	26.0	12.9	19.6	12.0	43.9
For-hire truck	22.7	12.1	26.9	8.7	24.4	12.7	24.4
Private truck	40.5	6.9	32.0	9.3	31.1	3.6	16.9
Rail	40.1	3.0	32.2	2.6	33.5	5.9	11.8
Water	42.2	8.8	43.7	8.3	46.5	11.3	29.9
Shallow draft	S	S	S	S	S	S	31.6
Great Lakes	—	—	—	—	—	—	—
Deep draft	42.4	8.8	43.8	8.3	42.0	10.5	26.2
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	28.8
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
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	39.7
SCTG 20, BASIC CHEMICALS							
Total	22.9	—	20.6	—	22.2	—	29.3
Single modes	22.8	1.9	20.8	.7	21.9	1.8	29.5
Truck	27.1	8.5	27.1	8.6	26.1	7.7	30.6
For-hire truck	30.6	9.2	29.6	6.1	35.9	6.1	14.6
Private truck	30.5	6.1	S	S	47.4	7.3	33.4
Rail	23.7	8.8	23.9	8.9	25.2	8.0	11.8
Water	S	S	S	S	S	S	33.1
Shallow draft	S	S	S	S	S	S	31.6
Great Lakes	—	—	—	—	—	—	—
Deep draft	S	S	S	S	S	S	31.6
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	S	S	S	S	S	S	S
Multiple modes	S	S	S	S	S	S	27.9
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	28.8
Truck and rail	S	S	S	S	S	S	28.5
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	47.8	.1	S	S	S
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	23.4	—	43.4	—	S	S	37.5
Single modes	36.9	12.7	40.1	14.3	S	S	16.4
Truck	37.0	12.5	39.9	14.2	49.2	14.5	17.3
For-hire truck	47.7	6.3	46.6	18.6	S	S	21.8
Private truck	42.6	10.2	S	S	S	S	17.1
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	27.9
Shallow draft	S	S	S	S	S	S	27.9
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	28.3
Pipeline	—	—	—	—	S	S	S
Multiple modes	40.3	10.7	28.6	11.8	45.9	18.2	43.3
Parcel, U.S. Postal Service or courier	40.4	10.8	33.4	11.9	30.4	18.4	42.2
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 22, FERTILIZERS							
Total	34.0	—	31.9	—	S	S	S
Single modes	35.8	14.1	37.0	13.0	S	S	42.3
Truck	29.6	15.4	27.5	15.3	34.8	17.1	S
For-hire truck	33.1	4.1	33.6	4.0	33.7	4.8	46.0
Private truck	31.2	13.2	28.0	13.1	37.1	13.2	46.5
Rail	41.6	3.3	38.2	3.8	49.6	15.3	22.8
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	S	S	S	S	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	40.4	—	26.6	—	S	S	25.7
Single modes	41.3	3.0	27.4	1.2	S	S	23.0
Truck	41.7	3.3	29.3	2.8	S	S	25.1
For-hire truck	S	S	S	S	S	S	13.8
Private truck	30.1	6.9	14.0	9.2	13.1	9.4	26.2
Rail	48.4	.4	42.9	1.8	S	S	28.5
Water	S	S	49.4	—	49.4	—	25.8
Shallow draft	S	S	49.4	—	49.4	—	25.8
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	28.9
Pipeline	S	S	S	S	S	S	S
Multiple modes	33.7	.8	S	S	S	S	34.9
Parcel, U.S. Postal Service or courier	36.2	.9	28.7	—	45.3	—	35.2
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	42.9	2.2	34.0	1.2	S	S	32.0
SCTG 24, PLASTICS AND RUBBER							
Total	20.3	—	30.3	—	40.8	—	19.2
Single modes	20.7	.8	31.1	1.5	41.6	1.4	20.4
Truck	15.9	4.3	22.2	6.3	27.4	8.1	19.2
For-hire truck	22.8	3.6	28.6	3.0	30.4	4.9	8.4
Private truck	26.4	6.9	32.3	7.1	25.9	6.7	26.7
Rail	46.2	4.4	S	S	S	S	17.4
Water	S	S	S	S	S	S	29.8
Shallow draft	S	S	S	S	S	S	29.8
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	41.2	—	36.8	—	S	S	21.9
Pipeline	—	—	—	—	S	S	S
Multiple modes	29.7	.3	39.7	.1	46.6	.3	17.4
Parcel, U.S. Postal Service or courier	29.8	.3	32.6	—	46.0	.1	17.7
Truck and rail	S	S	S	S	S	S	28.9
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	37.5	.7	46.3	1.5	47.3	1.4	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 25, LOGS AND OTHER WOOD IN THE ROUGH							
Total	36.3	—	43.7	—	S	S	S
Single modes	36.2	2.9	43.1	.9	S	S	S
Truck	27.7	6.9	33.1	8.3	S	S	S
For-hire truck	34.4	8.9	47.3	10.1	30.2	14.6	S
Private truck	27.9	7.7	27.6	12.8	29.6	10.4	22.0
Rail	S	S	S	S	S	S	28.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	45.3
SCTG 26, WOOD PRODUCTS							
Total	7.7	—	23.4	—	25.2	—	16.2
Single modes	6.8	1.8	23.6	1.3	25.1	1.2	17.5
Truck	6.1	3.7	20.8	7.2	8.6	6.3	18.1
For-hire truck	11.9	3.5	9.6	5.8	13.7	5.3	7.6
Private truck	12.1	4.7	36.7	7.3	23.9	4.5	28.3
Rail	11.1	1.6	13.9	2.7	13.5	4.9	8.8
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
Multiple modes	S	S	S	S	S	S	26.7
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	30.0
Truck and rail	S	S	S	S	S	S	28.9
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	43.8	1.3	S	S	27.0
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	17.3	—	20.4	—	14.3	—	25.7
Single modes	19.6	5.6	19.6	6.1	15.2	3.7	28.9
Truck	24.5	5.2	33.2	5.6	19.2	5.5	26.6
For-hire truck	23.0	3.4	33.0	4.0	18.2	5.3	16.8
Private truck	41.3	2.7	36.8	1.8	46.7	.6	S
Rail	20.1	7.9	18.5	8.9	19.4	8.3	7.5
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)	S	S	S	S	S	S	31.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	41.7	2.7	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	47.5
Truck and rail	42.2	.4	S	S	S	S	S
Truck and water	S	S	S	S	S	S	29.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 28, PAPER OR PAPERBOARD ARTICLES							
Total	26.9	—	34.1	—	37.5	—	S
Single modes	30.5	9.7	34.6	7.1	41.0	9.3	S
Truck	30.6	9.6	34.6	7.1	41.1	9.7	S
For-hire truck	48.4	12.6	47.1	12.9	44.7	13.3	15.3
Private truck	41.1	12.1	44.9	13.4	45.3	10.3	S
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	25.8
Shallow draft	S	S	S	S	S	S	25.8
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	29.7
Pipeline	—	—	—	—	S	S	S
Multiple modes	33.0	3.1	47.6	.6	S	S	23.4
Parcel, U.S. Postal Service or courier	38.5	3.1	37.7	.6	S	S	25.5
Truck and rail	S	S	S	S	S	S	29.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 29, PRINTED PRODUCTS							
Total	21.0	—	25.6	—	40.5	—	S
Single modes	24.2	5.4	25.1	5.0	43.6	8.2	S
Truck	24.1	5.4	25.1	5.0	44.0	8.3	S
For-hire truck	35.4	8.1	38.9	10.1	46.4	9.0	43.0
Private truck	35.1	9.5	37.1	12.8	45.9	7.6	S
Rail	S	S	S	S	S	S	31.6
Water	S	S	S	S	S	S	29.8
Shallow draft	S	S	S	S	S	S	29.8
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	23.5
Pipeline	—	—	—	—	S	S	S
Multiple modes	23.3	4.4	38.4	2.8	41.7	7.1	11.4
Parcel, U.S. Postal Service or courier	21.3	5.5	24.4	2.3	32.7	9.8	11.9
Truck and rail	44.3	3.2	44.1	3.7	43.4	12.6	25.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	42.6	2.3	48.3	2.8	39.1	4.4	S
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	47.0	—	37.0	—	42.5	—	6.8
Single modes	48.3	1.6	37.9	1.4	44.9	2.8	7.7
Truck	48.5	1.7	38.1	1.4	45.3	2.8	7.8
For-hire truck	S	S	46.1	6.9	S	S	4.3
Private truck	24.0	6.6	20.6	6.3	21.5	5.6	29.8
Rail	S	S	S	S	S	S	29.8
Water	S	S	S	S	S	S	25.8
Shallow draft	S	S	S	S	S	S	25.8
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	40.9	.1	S	S	S	S	12.9
Pipeline	—	—	—	—	S	S	S
Multiple modes	39.3	1.4	27.1	1.4	32.9	2.9	14.2
Parcel, U.S. Postal Service or courier	S	S	S	S	44.0	.3	14.3
Truck and rail	40.5	1.1	34.7	1.4	43.3	2.9	23.7
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 31, NONMETALLIC MINERAL PRODUCTS							
Total	16.6	—	44.9	—	21.5	—	39.6
Single modes	16.7	.6	44.9	—	21.5	—	43.6
Truck	17.1	1.8	46.1	2.8	21.8	5.5	44.9
For-hire truck	23.7	6.6	40.9	6.1	21.2	5.9	16.3
Private truck	19.5	6.3	49.6	7.7	25.5	5.6	13.5
Rail	31.5	1.8	38.5	2.8	33.7	5.5	31.9
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	46.5	.6	45.9	—	48.1	—	40.6
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	25.3
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	S	S	S	S	S	S	29.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	19.0	—	18.4	—	19.1	—	15.2
Single modes	17.9	1.8	18.7	1.0	18.6	2.2	16.1
Truck	17.6	2.2	16.4	3.9	16.4	3.9	16.3
For-hire truck	21.1	6.0	16.3	6.1	17.1	5.1	13.1
Private truck	19.0	6.2	25.0	6.8	22.9	4.4	20.6
Rail	S	S	S	S	S	S	30.9
Water	S	S	S	S	S	S	29.8
Shallow draft	S	S	S	S	S	S	29.8
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	31.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	43.6	.1	48.9	—	S	S	28.8
Parcel, U.S. Postal Service or courier	43.6	.1	48.9	—	S	S	28.8
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 33, ARTICLES OF BASE METAL							
Total	16.9	—	18.8	—	26.4	—	21.6
Single modes	17.8	4.2	18.4	3.4	25.9	4.6	28.8
Truck	17.8	4.2	18.4	3.4	25.9	4.6	28.8
For-hire truck	19.8	4.5	22.5	6.4	27.4	6.8	12.8
Private truck	16.5	4.5	14.8	5.6	23.8	4.4	47.0
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	27.9
Shallow draft	S	S	S	S	S	S	27.9
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	25.4
Pipeline	—	—	—	—	S	S	S
Multiple modes	23.9	1.2	S	S	S	S	22.1
Parcel, U.S. Postal Service or courier	23.9	1.2	31.5	.1	23.1	.1	22.1
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	49.6	4.2	46.2	3.4	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 34, MACHINERY							
Total	13.7	—	13.7	—	20.0	—	18.2
Single modes	13.6	1.7	13.9	1.1	20.4	1.2	32.4
Truck	14.0	3.5	14.0	1.1	20.5	1.1	34.6
For-hire truck	16.5	4.6	18.1	6.2	21.4	5.5	23.7
Private truck	20.3	4.7	27.2	6.2	39.6	6.0	29.8
Rail	S	S	S	S	S	S	30.5
Water	S	S	S	S	S	S	27.9
Shallow draft	S	S	S	S	S	S	27.9
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	46.8	2.7	S	S	S	S	22.1
Pipeline	—	—	—	—	S	S	S
Multiple modes	25.3	1.1	20.8	.3	41.2	.8	15.4
Parcel, U.S. Postal Service or courier	25.7	1.1	22.1	.3	26.0	.4	15.5
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	30.2	1.0	38.5	.9	S	S	S
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	12.8	—	17.1	—	11.4	—	23.4
Single modes	11.4	1.7	16.9	.6	12.2	1.5	38.3
Truck	11.2	2.0	16.9	.6	12.2	1.5	42.4
For-hire truck	11.3	5.1	19.8	5.4	15.0	4.9	13.4
Private truck	35.6	3.8	32.0	4.7	40.0	3.3	36.7
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	25.8
Shallow draft	S	S	S	S	S	S	25.8
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	49.4	.9	26.3	—	29.1	—	12.5
Pipeline	—	—	—	—	S	S	S
Multiple modes	31.2	1.4	34.5	.3	36.2	1.0	9.7
Parcel, U.S. Postal Service or courier	31.5	1.3	31.7	.2	22.4	.1	9.7
Truck and rail	41.5	.1	41.8	.2	41.9	.9	25.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	48.3	.6	41.8	.4	47.8	.8	26.5
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	24.7	—	25.8	—	22.3	—	33.5
Single modes	26.5	3.7	27.3	5.8	21.8	2.8	44.0
Truck	26.4	3.6	27.4	5.9	21.7	3.0	43.2
For-hire truck	22.5	6.4	38.8	9.7	23.2	7.5	9.7
Private truck	35.2	6.3	43.6	10.6	S	S	31.2
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	17.7
Pipeline	—	—	—	—	S	S	S
Multiple modes	41.5	1.1	S	S	S	S	24.5
Parcel, U.S. Postal Service or courier	49.9	.8	29.2	.4	43.1	.2	24.8
Truck and rail	S	S	S	S	S	S	24.1
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	46.7	5.6	S	S	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 37, TRANSPORTATION EQUIPMENT, N.E.C.							
Total	S	S	S	S	S	S	23.5
Single modes	S	S	S	S	S	S	26.6
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	33.7
Rail	-	-	-	-	-	-	-
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	S	S	S	S	S	S	26.8
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	26.8
Truck and rail	-	-	-	-	-	-	-
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	28.3
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	48.5	-	S	S	34.6	-	42.0
Single modes	S	S	S	S	36.2	16.1	S
Truck	S	S	S	S	36.6	17.7	S
For-hire truck	42.2	10.1	S	S	36.4	19.8	20.9
Private truck	S	S	S	S	S	S	25.3
Rail	-	-	-	-	-	-	-
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)	S	S	S	S	S	S	23.5
Pipeline	-	-	-	-	S	S	S
Multiple modes	49.1	14.9	21.4	14.0	25.0	16.3	18.9
Parcel, U.S. Postal Service or courier	49.1	14.9	21.4	14.0	25.0	16.3	18.9
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 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	21.4	-	27.3	-	22.9	-	9.0
Single modes	21.6	.7	27.4	.6	23.3	1.5	9.4
Truck	21.6	.7	27.4	.7	23.3	1.6	9.4
For-hire truck	31.5	7.3	36.2	8.2	32.0	8.5	4.0
Private truck	34.7	7.7	42.7	8.5	39.5	8.9	18.3
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	31.6
Pipeline	-	-	-	-	S	S	S
Multiple modes	34.9	.6	42.6	.6	S	S	12.3
Parcel, U.S. Postal Service or courier	40.0	.1	41.9	-	41.5	.1	12.1
Truck and rail	S	S	S	S	S	S	29.9
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	40.4	.2	47.6	.2	48.5	.2	21.7

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 40, MISCELLANEOUS MANUFACTURED PRODUCTS							
Total	8.5	—	19.3	—	21.6	—	17.1
Single modes	9.7	3.4	20.0	2.2	22.4	4.3	39.9
Truck	10.0	3.5	20.3	2.5	23.2	5.4	40.5
For-hire truck	9.2	5.5	11.8	8.2	16.0	8.3	10.4
Private truck	17.6	4.2	29.0	4.7	37.5	4.9	S
Rail	46.4	.6	37.9	.7	39.8	2.4	24.7
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	32.9
Pipeline	—	—	—	—	S	S	S
Multiple modes	30.9	3.4	21.1	.9	24.1	1.3	8.8
Parcel, U.S. Postal Service or courier	31.7	3.4	22.4	.8	20.1	1.0	8.8
Truck and rail	38.1	.2	38.2	.2	48.6	.5	23.3
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	34.8	1.0	42.4	1.6	S	S	32.9
SCTG 41, WASTE AND SCRAP							
Total	27.8	—	42.3	—	34.2	—	S
Single modes	29.5	10.5	S	S	S	S	27.0
Truck	27.2	9.2	S	S	S	S	29.3
For-hire truck	35.4	7.7	S	S	43.2	7.2	22.8
Private truck	39.6	10.4	48.6	10.5	S	S	43.6
Rail	S	S	S	S	S	S	31.6
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)	S	S	S	S	S	S	31.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	26.3
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	29.8
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	S	S	S	S	S	S	29.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	35.7
SCTG 43, MIXED FREIGHT							
Total	42.9	—	14.0	—	16.5	—	15.8
Single modes	40.8	11.2	17.7	11.7	20.0	12.1	17.0
Truck	40.8	11.2	17.7	11.7	20.0	12.1	17.0
For-hire truck	34.9	12.3	34.8	13.0	35.6	12.1	23.7
Private truck	S	S	28.4	12.1	27.9	12.2	20.4
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	30.3
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

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	S	S	44.4	—	33.4	—	S
Single modes	S	S	44.7	10.5	34.8	10.5	S
Truck	S	S	45.1	10.6	38.1	12.1	S
For-hire truck	S	S	S	S	S	S	20.8
Private truck	S	S	46.3	20.0	46.3	17.0	36.5
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	31.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	44.4
Parcel, U.S. Postal Service or courier	29.1	1.3	35.9	.1	33.3	—	46.0
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	42.4

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

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

Table B-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	7.3	—	7.5	—	11.1	—
NEW ENGLAND STATES						
Connecticut	22.4	—	20.4	—	20.5	—
Maine	30.7	—	S	S	S	S
Massachusetts	18.4	—	19.5	—	20.5	.2
New Hampshire	31.9	—	S	S	S	S
Rhode Island	42.3	—	27.0	—	30.1	—
Vermont	40.0	—	S	S	S	S
MIDDLE ATLANTIC STATES						
New Jersey	15.0	.2	16.3	—	17.6	.5
New York	14.9	.2	19.1	—	20.6	.4
Pennsylvania	7.5	.1	16.9	—	17.4	.5
EAST NORTH CENTRAL STATES						
Illinois	14.1	.4	14.7	.2	19.5	.5
Indiana	15.0	.2	11.5	—	11.6	.2
Michigan	15.7	.3	24.8	.1	26.0	.4
Ohio	14.3	.5	35.2	.4	36.5	1.0
Wisconsin	14.5	.1	S	S	S	S
WEST NORTH CENTRAL STATES						
Iowa	17.2	—	16.7	—	17.4	.1
Kansas	13.2	—	15.3	—	16.7	.1
Minnesota	44.3	.2	22.5	—	21.7	.2
Missouri	8.2	.2	11.6	—	10.9	.2
Nebraska	15.3	—	23.7	—	26.2	.1
North Dakota	42.3	—	24.2	—	25.6	—
South Dakota	46.2	—	49.5	—	S	S
SOUTH ATLANTIC STATES						
Delaware	35.5	.1	22.9	—	22.8	—
District of Columbia	43.8	—	S	S	S	S
Florida	24.5	.9	45.1	2.4	42.3	3.9
Georgia	26.2	.7	10.2	.2	10.3	.4
Maryland	28.1	—	18.8	—	18.4	.1
North Carolina	10.3	.2	16.2	—	16.6	.3
South Carolina	14.9	.1	16.3	—	17.5	.1
Virginia	19.1	.2	13.1	—	13.1	.2
West Virginia	29.0	.1	40.1	—	47.1	.2
EAST SOUTH CENTRAL STATES						
Alabama	16.1	1.0	40.2	4.0	S	S
Kentucky	14.3	.1	10.5	—	13.7	.2
Mississippi	7.1	1.6	13.2	4.6	13.8	1.8
Tennessee	8.0	.5	8.1	.3	8.7	.2
WEST SOUTH CENTRAL STATES						
Arkansas	21.7	.7	33.9	.5	21.3	.5
Louisiana	32.6	1.9	22.0	1.4	28.4	1.4
Oklahoma	21.6	.1	21.1	—	23.6	.1
Texas	16.5	.7	10.0	.3	10.7	.9
MOUNTAIN STATES						
Arizona	15.5	—	18.8	—	20.7	.1
Colorado	17.0	—	21.0	—	21.7	.1
Idaho	42.5	—	S	S	S	S
Montana	24.1	—	33.1	—	33.8	—
Nevada	26.3	—	29.0	—	27.4	—
New Mexico	28.6	—	29.9	—	32.3	—
Utah	20.3	—	20.1	—	20.2	.1
Wyoming	39.9	—	37.5	—	38.1	—
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	17.8	.4	14.0	.1	14.2	.9
Hawaii	S	S	S	S	S	S
Oregon	24.3	—	30.4	—	29.9	.3
Washington	34.7	.2	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-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	5.1	—	10.9	—	17.1	—
NEW ENGLAND STATES						
Connecticut	19.9	—	35.1	—	35.1	—
Maine	26.3	—	34.1	—	34.4	—
Massachusetts	20.5	.2	27.5	—	27.1	—
New Hampshire	S	S	S	S	S	S
Rhode Island	30.9	—	49.4	—	48.4	—
Vermont	39.6	—	38.6	—	39.0	—
MIDDLE ATLANTIC STATES						
New Jersey	22.7	.2	34.7	—	40.9	.4
New York	13.5	.1	23.5	—	22.3	.1
Pennsylvania	16.8	.2	19.0	—	19.2	.1
EAST NORTH CENTRAL STATES						
Illinois	11.9	.4	33.4	.7	34.7	2.1
Indiana	24.4	.4	33.8	.2	39.2	1.0
Michigan	15.2	.2	24.5	.1	24.2	.4
Ohio	19.7	.5	22.2	.1	22.6	.4
Wisconsin	21.2	.4	34.4	—	32.2	.4
WEST NORTH CENTRAL STATES						
Iowa	30.4	.2	38.3	—	43.4	.6
Kansas	40.4	.2	36.9	—	39.9	.2
Minnesota	22.8	.2	S	S	S	S
Missouri	25.7	.5	12.9	—	13.1	.1
Nebraska	44.3	.3	S	S	S	S
North Dakota	S	S	S	S	S	S
South Dakota	46.2	.1	S	S	S	S
SOUTH ATLANTIC STATES						
Delaware	31.8	—	S	S	S	S
District of Columbia	S	S	S	S	S	S
Florida	30.0	.4	22.1	—	28.6	.2
Georgia	13.8	.6	25.3	.3	24.8	.7
Maryland	28.0	—	S	S	49.6	—
North Carolina	8.6	.2	10.7	—	10.5	.2
South Carolina	15.6	.1	16.8	—	17.3	.2
Virginia	12.5	—	18.2	—	19.3	—
West Virginia	47.3	—	45.3	—	45.9	—
EAST SOUTH CENTRAL STATES						
Alabama	9.9	.5	27.6	1.9	13.0	1.1
Kentucky	18.8	.3	39.3	.5	43.7	1.1
Mississippi	7.1	2.2	13.2	4.1	13.8	2.5
Tennessee	8.7	.7	29.9	.9	19.7	.8
WEST SOUTH CENTRAL STATES						
Arkansas	27.8	.8	S	S	S	S
Louisiana	16.3	1.7	18.2	2.9	20.1	1.6
Oklahoma	12.3	.1	23.3	—	21.8	—
Texas	S	S	33.4	1.0	29.2	2.0
MOUNTAIN STATES						
Arizona	38.0	.1	S	S	S	S
Colorado	34.8	—	39.0	—	40.1	.5
Idaho	31.6	—	37.7	—	35.7	—
Montana	37.9	—	41.1	1.9	41.1	9.6
Nevada	28.1	—	S	S	S	S
New Mexico	31.7	.1	24.5	—	22.7	.4
Utah	S	S	S	S	S	S
Wyoming	S	S	S	S	S	S
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	32.4	.6	25.9	—	25.9	.8
Hawaii	S	S	S	S	S	S
Oregon	32.6	—	34.0	—	35.6	.2
Washington	S	S	41.2	—	45.4	—

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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.

Appendix C.

Sample Design, Data Collection, and Estimation

INTRODUCTION

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

SAMPLE DESIGN

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

First Stage

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

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

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

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

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

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

Second Stage

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

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

Third Stage

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

DATA COLLECTION

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

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

ESTIMATION

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

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

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

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

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

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

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

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

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

Appendix D.

Standard Classification of Transported Goods Code Information

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

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

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

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

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

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

Appendix E.

Sample Report Forms and Instructions

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

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

**1997 COMMODITY FLOW SURVEY
CENSUS OF TRANSPORTATION**

Reporting period:

Please return by:

RETURN TO
▼
BUREAU OF THE CENSUS
1201 East 10th Street
Jeffersonville IN 47132-0001

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

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

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

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

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

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

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

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

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

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

DO NOT PROCEED UNTIL YOU HAVE COMPLETED ITEM D.

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

1 Yes
2 No — *Enter correct name.* ↗

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

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

Month	Day	Year

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

Item E SAMPLING INSTRUCTIONS

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

FINDING YOUR SELECTION RATE

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

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

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

Please enter your selection rate. →

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

CONTINUE ON NEXT PAGE. ↗

Item F SHIPMENT CHARACTERISTICS

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

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

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

2 — Private truck
3 — For-hire truck

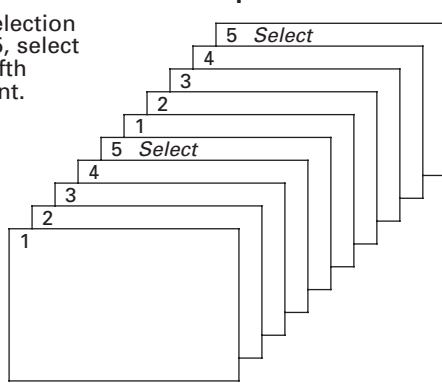
4 — Railroad
Continued →

SELECTING YOUR SAMPLE OF SHIPMENTS

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

In the following examples, each rectangle represents one shipment.

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



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



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


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

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

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

Item F SHIPMENT CHARACTERISTICS — Continued

Line No. (a)	Shipment ID Number (b)	Shipment date (c)		Shipment value (excluding shipping costs) in whole dollars (d)	Shipment weight in pounds (e)	Commodity code from SCTG Manual (f)	Commodity description (g)	If a hazardous material, enter the "UN" or "NA" number (h)
		Month	Day					
10								
11								
12								
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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
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									12
									13
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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

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

Yes

No

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

Yes

No

If yes to item G1 or item G2:

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

Yes

No

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

Total value in whole dollars

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

Yes

No

Item J CERTIFICATION

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

**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.

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

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

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

Please enter your selection rate. →

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

CONTINUE ON NEXT PAGE. ↗

Item F SHIPMENT CHARACTERISTICS

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

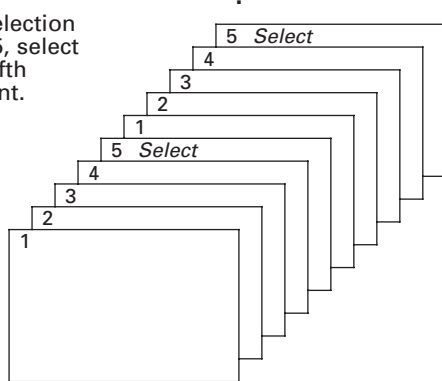
Mode of transport codes for columns (k) and (n) 1 — Parcel delivery, courier, or U.S. Postal Service 2 — Private truck 3 — For-hire truck 4 — Railroad Continued →

SELECTING YOUR SAMPLE OF SHIPMENTS

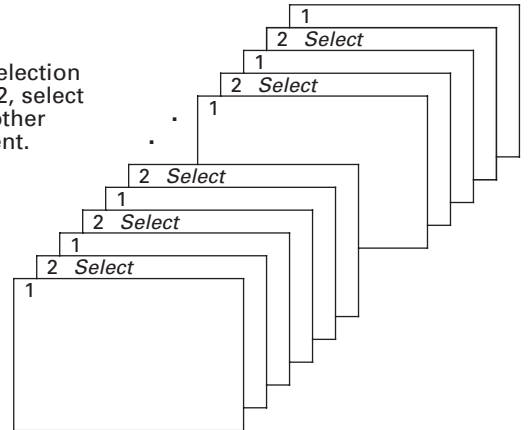
1. Use the file or combination of files that best reflects your full range of outbound shipping activities.
2. Begin with the first shipment. Count the shipments until you reach your selection rate. Select this shipment to report on in item F.
3. Continue counting with the next shipment. Count this shipment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

In the following examples, each rectangle represents one shipment.

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



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



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

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

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

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

Item F SHIPMENT CHARACTERISTICS — Continued

Line No. (a)	Shipment ID Number (b)	Shipment date (c)		Shipment value (excluding shipping costs) in whole dollars (d)	Shipment weight in pounds (e)	Commodity code from SCTG Manual (f)	Commodity description (g)	If a hazardous material, enter the "UN" or "NA" number (h)
		Month	Day					
10								
11								
12								
13								
14								
15								
16								
17								
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21								
22								
23								
24								
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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> Note: In column (j) enter the U.S. port, airport, or border crossing of exit.		Export mode (n)	Line No. (o)
	(j)					(m)			
(i)	City	State	ZIP Code	(k)	(l)	City	Country	(n)	(o)
									10
									11
									12
									13
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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 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:		
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:		
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 3 — For-hire truck	4 — Railroad Continued →
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PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE – Continued

Item F: Shipment Characteristics – Continued

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

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

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

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE – Continued

Item F: Shipment Characteristics – Continued

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

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

Items G – I

Please enter the information requested.

Item J: Certification

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

PART III – MODE DEFINITIONS

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

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

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

Railroad – Any common carrier or private railroad.

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

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

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

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

Other mode – Any mode not listed above.

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

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

PART IV -- STATE ABBREVIATION LIST

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

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

