

Georgia

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EC97TCF-GA

1997 Economic Census

Transportation

1997 Commodity Flow Survey



U.S. Department of Transportation
BUREAU OF TRANSPORTATION STATISTICS

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



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Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

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

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

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

BASIS OF REPORTING

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

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

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

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

HISTORICAL INFORMATION

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

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

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

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

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

SOURCES FOR MORE INFORMATION

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

1997 Commodity Flow Survey

GENERAL

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

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

INDUSTRY COVERAGE

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

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

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

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

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

SHIPMENT COVERAGE

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

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

MILEAGE CALCULATIONS

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

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

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

Mileage Data for Pipeline Shipments

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

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

DISCLOSURE RULES

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

EXPLANATION OF TERMS

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

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

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

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

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

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

Mode Definitions

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

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

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

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

Private truck
For-hire truck
Rail
Shallow draft vessel
Deep draft vessel
Pipeline

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

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

Other Definitions and Terms

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

Standard Classification of Transported Goods

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

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

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

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

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

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

ABBREVIATIONS AND SYMBOLS

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

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

OTHER TRANSPORTATION DATA

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

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

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

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

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

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

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

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

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

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

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

Mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
All modes	224 442	100.0	373 554	100.0	62 126	100.0	416
Single modes	194 087	86.5	365 143	97.7	57 497	92.5	261
Truck ¹	177 949	79.3	331 609	88.8	42 384	68.2	221
For-hire truck	103 913	46.3	135 738	36.3	29 733	47.9	482
Private truck	72 699	32.4	193 899	51.9	12 462	20.1	71
Rail	11 649	5.2	26 680	7.1	14 920	24.0	543
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	4 403	2.0	81	—	96	.2	1 022
Pipeline ²	86	—	6 773	1.8	S	S	S
Multiple modes	24 137	10.8	3 386	.9	2 878	4.6	614
Parcel, U.S. Postal Service or courier	22 552	10.0	902	.2	485	.8	614
Truck and rail	1 569	.7	2 477	.7	2 381	3.8	1 057
Truck and water	S	S	S	S	S	S	2 405
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	6 218	2.8	5 025	1.3	1 752	2.8	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	224 442	210 113	6.8	373 554	262 169	42.5	62 126	51 324	21.0	416	413	.7
Single modes	194 087	186 129	4.3	365 143	245 195	48.9	57 497	49 233	16.8	261	247	5.7
Truck ¹	177 949	177 898	—	331 609	217 187	52.7	42 384	35 070	20.9	221	209	5.4
For-hire truck	103 913	98 544	5.4	135 738	78 742	72.4	29 733	22 701	31.0	482	519	-7.1
Private truck	72 699	77 616	-6.3	193 899	137 823	40.7	12 462	12 294	1.4	71	74	-4.6
Rail	11 649	6 471	80.0	26 680	27 901	-4.4	14 920	14 079	6.0	543	603	-10.0
Water	—	S	S	—	S	S	—	S	S	—	1 570	-100.0
Shallow draft	—	S	S	—	S	S	—	S	S	—	300	-100.0
Great Lakes	—	—	—	—	—	—	—	—	—	—	—	—
Deep draft	—	33	-100.0	—	S	S	—	S	S	—	1 636	-100.0
Air (includes truck and air)	4 403	1 712	157.2	81	44	83.1	96	50	94.8	1 022	1 252	-18.3
Pipeline ²	86	—	S	6 773	—	S	S	S	S	S	S	S
Multiple modes	24 137	19 616	23.0	3 386	1 416	139.1	2 878	1 196	140.5	614	652	-5.9
Parcel, U.S. Postal Service or courier	22 552	14 341	57.3	902	621	45.2	485	336	44.3	614	650	-5.6
Truck and rail	1 569	5 184	-69.7	2 477	777	218.9	2 381	835	185.1	1 057	1 091	-3.1
Truck and water	S	77	S	S	S	S	S	S	S	2 405	2 142	12.3
Rail and water	—	—	—	—	—	—	—	—	—	—	—	—
Other multiple modes	—	S	S	—	S	S	—	S	S	—	4 820	-100.0
Other and unknown modes	6 218	4 369	42.3	5 025	15 558	-67.7	1 752	894	95.8	S	198	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	86.5	88.6	97.7	93.5	92.5	95.9
Truck ¹	79.3	84.7	88.8	82.8	68.2	68.3
For-hire truck	46.3	46.9	36.3	30.0	47.9	44.2
Private truck	32.4	36.9	51.9	52.6	20.1	24.0
Rail	5.2	3.1	7.1	10.6	24.0	27.4
Water	—	S	—	S	—	S
Shallow draft	—	S	—	S	—	S
Great Lakes	—	—	—	—	—	—
Deep draft	—	—	—	S	—	S
Air (includes truck and air)	2.0	.8	—	—	.2	.1
Pipeline ²	—	—	1.8	—	S	S
Multiple modes	10.8	9.3	.9	.5	4.6	2.3
Parcel, U.S. Postal Service or courier	10.0	6.8	.2	.2	.8	.7
Truck and rail .....	.7	2.5	.7	.3	3.8	1.6
Truck and water	S	—	S	S	S	S
Rail and water	—	—	—	—	—	—
Other multiple modes	—	S	—	S	—	S
Other and unknown modes	2.8	2.1	1.3	5.9	2.8	1.7

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

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

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

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

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

Table 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	62 126	100.0	406
Truck	42 503	68.4	214
Rail	17 189	27.7	606
Shallow draft	S	S	701
Great Lakes	—	—	—
Deep draft	S	S	2 905
Air	91	.1	942
Parcel, U.S. Postal Service or courier	485	.8	614
Pipeline	S	S	S
Other and unknown modes	1 752	2.8	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	224 442	100.0	373 554	100.0	62 126	100.0
Less than 50 miles	58 651	26.1	228 082	61.1	3 984	6.4
50 to 99 miles	14 982	6.7	39 620	10.6	3 549	5.7
100 to 249 miles	41 844	18.6	50 940	13.6	10 714	17.2
250 to 499 miles	40 213	17.9	25 453	6.8	11 378	18.3
500 to 749 miles	40 308	18.0	16 408	4.4	12 770	20.6
750 to 999 miles	12 788	5.7	6 212	1.7	6 776	10.9
1,000 to 1,499 miles	3 515	1.6	3 657	1.0	5 272	8.5
1,500 to 1,999 miles	7 660	3.4	1 680	.4	3 590	5.8
2,000 miles or more	4 481	2.0	1 502	.4	4 094	6.6
Single modes	194 087	100.0	365 143	100.0	57 497	100.0
Less than 50 miles	53 985	27.8	225 899	61.9	3 941	6.9
50 to 99 miles	13 616	7.0	39 016	10.7	3 447	6.0
100 to 249 miles	37 436	19.3	49 097	13.4	10 273	17.9
250 to 499 miles	33 424	17.2	24 243	6.6	10 870	18.9
500 to 749 miles	33 130	17.1	15 298	4.2	11 938	20.8
750 to 999 miles	10 080	5.2	5 834	1.6	6 343	11.0
1,000 to 1,499 miles	3 077	1.6	3 161	.9	4 628	8.0
1,500 to 1,999 miles	5 982	3.1	1 466	.4	3 051	5.3
2,000 miles or more	3 357	1.7	1 130	.3	3 005	5.2
Truck¹	177 949	100.0	331 609	100.0	42 384	100.0
Less than 50 miles	53 509	30.1	214 401	64.7	3 729	8.8
50 to 99 miles	13 404	7.5	37 687	11.4	3 278	7.7
100 to 249 miles	35 079	19.7	40 678	12.3	8 233	19.4
250 to 499 miles	30 507	17.1	20 118	6.1	8 484	20.0
500 to 749 miles	26 472	14.9	11 826	3.6	8 781	20.7
750 to 999 miles	8 354	4.7	3 805	1.1	3 867	9.1
1,000 to 1,499 miles	2 604	1.5	1 080	.3	1 484	3.5
1,500 to 1,999 miles	5 430	3.1	1 198	.4	2 470	5.8
2,000 miles or more	2 590	1.5	816	.2	2 058	4.9
For-hire truck	103 913	100.0	135 738	100.0	29 733	100.0
Less than 50 miles	15 902	15.3	60 765	44.8	1 284	4.3
50 to 99 miles	6 031	5.8	20 264	14.9	1 728	5.8
100 to 249 miles	20 776	20.0	24 371	18.0	4 975	16.7
250 to 499 miles	22 942	22.1	14 792	10.9	6 247	21.0
500 to 749 miles	22 059	21.2	9 771	7.2	7 321	24.6
750 to 999 miles	7 344	7.1	3 256	2.4	3 313	11.1
1,000 to 1,499 miles	2 212	2.1	976	.7	1 346	4.5
1,500 to 1,999 miles	4 475	4.3	871	.6	1 816	6.1
2,000 miles or more	2 174	2.1	670	.5	1 702	5.7
Private truck	72 699	100.0	193 899	100.0	12 462	100.0
Less than 50 miles	37 359	51.4	152 173	78.5	2 404	19.3
50 to 99 miles	7 303	10.0	17 183	8.9	1 529	12.3
100 to 249 miles	13 874	19.1	16 183	8.3	3 233	25.9
250 to 499 miles	7 328	10.1	5 255	2.7	2 206	17.7
500 to 749 miles	4 218	5.8	2 001	1.0	1 419	11.4
750 to 999 miles	928	1.3	540	.3	545	4.4
1,000 to 1,499 miles	357	.5	94	—	126	1.0
1,500 to 1,999 miles	924	1.3	S	S	S	S
2,000 miles or more	S	S	145	—	355	2.8
Rail	11 649	100.0	26 680	100.0	14 920	100.0
Less than 50 miles	390	3.3	4 724	17.7	116	.8
50 to 99 miles	160	1.4	1 327	5.0	169	1.1
100 to 249 miles	1 393	12.0	8 412	31.5	2 038	13.7
250 to 499 miles	2 453	21.1	4 117	15.4	2 382	16.0
500 to 749 miles	5 468	46.9	3 442	12.9	3 129	21.0
750 to 999 miles	1 077	9.2	2 021	7.6	2 468	16.5
1,000 to 1,499 miles	365	3.1	2 077	7.8	3 139	21.0
1,500 to 1,999 miles	107	.9	252	.9	554	3.7
2,000 miles or more	235	2.0	306	1.1	927	6.2
Water	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—

See footnotes at end of table.

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

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

Mode of transportation and distance shipped (based on Great Circle Distance)	Value		Tons		Ton-miles	
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent
Single modes—Con.						
Great Lakes	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Air (includes truck and air)	4 403	100.0	81	100.0	96	100.0
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	7	9.0	S	S
250 to 499 miles	464	10.5	8	9.4	5	4.7
500 to 749 miles	1 190	27.0	29	36.6	28	29.3
750 to 999 miles	649	14.7	8	10.5	9	9.4
1,000 to 1,499 miles	108	2.4	S	S	S	S
1,500 to 1,999 miles	445	10.1	S	S	27	27.8
2,000 miles or more	532	12.1	7	9.3	20	20.9
Pipeline²	86	100.0	6 773	100.0	S	S
Less than 50 miles	86	100.0	6 773	100.0	S	S
50 to 99 miles	—	—	—	—	S	S
100 to 249 miles	—	—	—	—	S	S
250 to 499 miles	—	—	—	—	S	S
500 to 749 miles	—	—	—	—	S	S
750 to 999 miles	—	—	—	—	S	S
1,000 to 1,499 miles	—	—	—	—	S	S
1,500 to 1,999 miles	—	—	—	—	S	S
2,000 miles or more	—	—	—	—	S	S
Multiple modes	24 137	100.0	3 386	100.0	2 878	100.0
Less than 50 miles	2 081	8.6	114	3.4	5	.2
50 to 99 miles	1 122	4.6	S	S	S	S
100 to 249 miles	3 883	16.1	1 039	30.7	277	9.6
250 to 499 miles	5 404	22.4	430	12.7	204	7.1
500 to 749 miles	6 328	26.2	405	12.0	326	11.3
750 to 999 miles	2 404	10.0	265	7.8	315	10.9
1,000 to 1,499 miles	413	1.7	S	S	S	S
1,500 to 1,999 miles	1 475	6.1	190	5.6	486	16.9
2,000 miles or more	1 028	4.3	S	S	S	S
Parcel, U.S. Postal Service or courier	22 552	100.0	902	100.0	485	100.0
Less than 50 miles	2 066	9.2	103	11.4	3	.7
50 to 99 miles	1 092	4.8	79	8.7	8	1.6
100 to 249 miles	3 783	16.8	187	20.7	40	8.3
250 to 499 miles	5 186	23.0	222	24.6	95	19.7
500 to 749 miles	5 957	26.4	178	19.7	132	27.2
750 to 999 miles	2 353	10.4	68	7.5	69	14.1
1,000 to 1,499 miles	359	1.6	16	1.8	23	4.7
1,500 to 1,999 miles	1 030	4.6	28	3.1	60	12.3
2,000 miles or more	725	3.2	21	2.4	55	11.3
Truck and rail	1 569	100.0	2 477	100.0	2 381	100.0
Less than 50 miles	15	.9	S	S	S	S
50 to 99 miles	30	1.9	S	S	S	S
100 to 249 miles	95	6.1	848	34.2	S	S
250 to 499 miles	218	13.9	S	S	S	S
500 to 749 miles	370	23.6	226	9.1	193	8.1
750 to 999 miles	51	3.2	198	8.0	246	10.3
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	293	18.6	S	S	S	S
Truck and water	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	S	S	S	S	S	S
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	6 218	100.0	5 025	100.0	1 752	100.0
Less than 50 miles	2 586	41.6	2 069	41.2	37	2.1
50 to 99 miles	244	3.9	S	S	S	S
100 to 249 miles	524	8.4	804	16.0	164	9.4
250 to 499 miles	1 385	22.3	781	15.5	303	17.3
500 to 749 miles	850	13.7	S	S	S	S
750 to 999 miles	304	4.9	113	2.2	117	6.7
1,000 to 1,499 miles	26	.4	S	S	S	S
1,500 to 1,999 miles	203	3.3	24	.5	53	3.0
2,000 miles or more	97	1.6	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	224 442	100.0	373 554	100.0	62 126	100.0	416
Less than 50 lb	20 741	9.2	601	.2	250	.4	503
50 to 99 lb	7 213	3.2	459	.1	156	.3	338
100 to 499 lb	19 540	8.7	2 923	.8	785	1.3	272
500 to 749 lb	6 160	2.7	1 174	.3	381	.6	320
750 to 999 lb	4 447	2.0	1 066	.3	321	.5	301
1,000 to 9,999 lb	46 057	20.5	18 367	4.9	4 722	7.6	267
10,000 to 49,999 lb	98 699	44.0	190 041	50.9	30 286	48.7	170
50,000 to 99,999 lb	14 237	6.3	112 402	30.1	7 491	12.1	66
100,000 lb or more	7 349	3.3	46 521	12.5	17 734	28.5	522
Single modes	194 087	100.0	365 143	100.0	57 497	100.0	261
Less than 50 lb	6 707	3.5	225	—	57	.1	319
50 to 99 lb	3 038	1.6	260	—	61	.1	229
100 to 499 lb	14 648	7.5	2 326	.6	605	1.1	245
500 to 749 lb	5 739	3.0	1 122	.3	367	.6	323
750 to 999 lb	4 074	2.1	1 042	.3	307	.5	295
1,000 to 9,999 lb	43 664	22.5	17 767	4.9	4 446	7.7	263
10,000 to 49,999 lb	95 245	49.1	187 361	51.3	28 460	49.5	161
50,000 to 99,999 lb	14 087	7.3	111 359	30.5	7 107	12.4	64
100,000 lb or more	6 886	3.5	43 681	12.0	16 085	28.0	501
Truck¹	177 949	100.0	331 609	100.0	42 384	100.0	221
Less than 50 lb	4 435	2.5	213	—	45	.1	223
50 to 99 lb	2 523	1.4	256	—	58	.1	219
100 to 499 lb	13 681	7.7	2 312	.7	589	1.4	238
500 to 749 lb	5 528	3.1	1 114	.3	355	.8	315
750 to 999 lb	4 058	2.3	1 041	.3	306	.7	294
1,000 to 9,999 lb	43 262	24.3	17 731	5.3	4 400	10.4	259
10,000 to 49,999 lb	90 379	50.8	186 665	56.3	27 840	65.7	159
50,000 to 99,999 lb	12 083	6.8	110 642	33.4	6 609	15.6	61
100,000 lb or more	2 001	1.1	11 635	3.5	2 181	5.1	191
For-hire truck	103 913	100.0	135 738	100.0	29 733	100.0	482
Less than 50 lb	1 753	1.7	63	—	35	.1	510
50 to 99 lb	1 003	1.0	78	—	44	.1	581
100 to 499 lb	7 320	7.0	786	.6	475	1.6	582
500 to 749 lb	3 666	3.5	482	.4	293	1.0	597
750 to 999 lb	2 616	2.5	411	.3	236	.8	579
1,000 to 9,999 lb	23 950	23.0	6 398	4.7	3 146	10.6	542
10,000 to 49,999 lb	56 117	54.0	85 669	63.1	20 372	68.5	257
50,000 to 99,999 lb	6 529	6.3	37 754	27.8	3 706	12.5	98
100,000 lb or more	959	.9	4 096	3.0	1 426	4.8	388
Private truck	72 699	100.0	193 899	100.0	12 462	100.0	71
Less than 50 lb	2 515	3.5	148	—	10	—	54
50 to 99 lb	1 475	2.0	178	—	13	.1	71
100 to 499 lb	6 180	8.5	1 511	.8	109	.9	69
500 to 749 lb	1 725	2.4	621	.3	57	.5	91
750 to 999 lb	1 423	2.0	628	.3	67	.5	106
1,000 to 9,999 lb	18 989	26.1	11 273	5.8	1 213	9.7	110
10,000 to 49,999 lb	34 052	46.8	100 669	51.9	7 404	59.4	79
50,000 to 99,999 lb	5 370	7.4	72 338	37.3	2 873	23.1	41
100,000 lb or more	970	1.3	6 532	3.4	715	5.7	S
Rail	11 649	100.0	26 680	100.0	14 920	100.0	543
Less than 50 lb	S	S	S	S	S	S	S
50 to 99 lb	S	S	S	S	S	S	680
100 to 499 lb	S	S	S	S	S	S	922
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	S	S	S	S	S	S	881
1,000 to 9,999 lb	S	S	4	—	3	—	1 147
10,000 to 49,999 lb	4 826	41.4	682	2.6	611	4.1	917
50,000 to 99,999 lb	S	S	717	2.7	498	3.3	704
100,000 lb or more	4 799	41.2	25 276	94.7	13 809	92.6	584
Water	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—

See footnotes at end of table.

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

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

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
Single modes—Con.							
Great Lakes	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Air (includes truck and air)	4 403	100.0	81	100.0	96	100.0	1 022
Less than 50 lb	2 263	51.4	11	13.0	11	11.8	1 017
50 to 99 lb	515	11.7	3	4.2	3	3.4	969
100 to 499 lb	968	22.0	14	17.7	16	16.6	1 049
500 to 749 lb	S	S	S	S	S	S	1 536
750 to 999 lb	S	S	1	1.0	S	S	955
1,000 to 9,999 lb	391	8.9	32	40.3	44	45.2	1 387
10,000 to 49,999 lb	S	S	11	14.2	S	S	819
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Pipeline²	86	100.0	6 773	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	—	.3	3	—	S	S	S
50,000 to 99,999 lb	—	—	—	—	S	S	S
100,000 lb or more	85	99.7	6 770	100.0	S	S	S
Multiple modes	24 137	100.0	3 386	100.0	2 878	100.0	614
Less than 50 lb	13 394	55.5	349	10.3	192	6.7	623
50 to 99 lb	4 011	16.6	180	5.3	94	3.3	519
100 to 499 lb	4 435	18.4	321	9.5	174	6.0	556
500 to 749 lb	312	1.3	S	S	7	.3	234
750 to 999 lb	263	1.1	10	.3	9	.3	886
1,000 to 9,999 lb	S	S	22	.6	25	.9	895
10,000 to 49,999 lb	1 368	5.7	568	16.8	824	28.7	1 443
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	S	S	S	S	S	S	973
Parcel, U.S. Postal Service or courier	22 552	100.0	902	100.0	485	100.0	614
Less than 50 lb	13 393	59.4	349	38.7	192	39.6	623
50 to 99 lb	4 010	17.8	180	20.0	94	19.4	519
100 to 499 lb	4 434	19.7	321	35.6	174	35.8	556
500 to 749 lb	310	1.4	S	S	7	1.5	234
750 to 999 lb	262	1.2	10	1.2	9	1.9	888
1,000 to 9,999 lb	S	S	S	S	S	S	744
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	1 569	100.0	2 477	100.0	2 381	100.0	1 057
Less than 50 lb	S	S	S	S	S	S	108
50 to 99 lb	S	S	S	S	S	S	80
100 to 499 lb	S	S	S	S	S	S	S
500 to 749 lb	S	S	S	S	S	S	111
750 to 999 lb	S	S	S	S	S	S	429
1,000 to 9,999 lb	22	1.4	9	.4	7	.3	S
10,000 to 49,999 lb	1 363	86.9	562	22.7	822	34.5	1 452
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	S	S	S	S	S	S	973
Truck and water	S	S	S	S	S	S	2 405
Less than 50 lb	S	S	S	S	S	S	964
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	S	S	S	S	S	S	S
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	7 590
10,000 to 49,999 lb	S	S	S	S	S	S	407
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—

See footnotes at end of table.

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

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

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
Multiple modes—Con.							
Rail and water	—	—	—	—	—	—	—
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	6 218	100.0	5 025	100.0	1 752	100.0	S
Less than 50 lb	641	10.3	26	.5	1	—	S
50 to 99 lb	164	2.6	19	.4	1	—	53
100 to 499 lb	457	7.3	S	S	6	.3	23
500 to 749 lb	109	1.7	22	.4	S	S	289
750 to 999 lb	111	1.8	14	.3	4	.2	S
1,000 to 9,999 lb	2 218	35.7	578	11.5	S	S	365
10,000 to 49,999 lb	2 086	33.6	2 112	42.0	1 001	57.2	553
50,000 to 99,999 lb	128	2.1	917	18.3	S	S	360
100,000 lb or more	304	4.9	S	S	135	7.7	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	224 442	100.0	373 554	100.0	62 126	100.0	416
01	Live animals and live fish	S	S	S	S	S	S	75
02	Cereal grains	S	S	S	S	S	S	S
03	Other agricultural products	2 766	1.2	2 641	.7	940	1.5	S
04	Animal feed and products of animal origin, n.e.c.	2 693	1.2	10 230	2.7	912	1.5	44
05	Meat, fish, seafood, and their preparations	5 733	2.6	3 009	.8	1 155	1.9	S
06	Milled grain products and preparations, and bakery products	3 000	1.3	1 894	.5	907	1.5	247
07	Other prepared foodstuffs and fats and oils	9 226	4.1	12 036	3.2	2 389	3.8	129
08	Alcoholic beverages	1 923	.9	1 219	.3	30	—	32
09	Tobacco products	250	.1	11	—	2	—	200
10	Monumental or building stone	106	—	333	—	84	.1	399
11	Natural sands	40	—	4 353	1.2	136	.2	28
12	Gravel and crushed stone	678	.3	110 433	29.6	2 364	3.8	18
13	Nonmetallic minerals n.e.c.	1 633	.7	22 310	6.0	9 378	15.1	347
14	Metallic ores and concentrates	94	—	S	S	S	S	201
15	Coal	S	S	S	S	S	S	279
17	Gasoline and aviation turbine fuel	8 048	3.6	38 144	10.2	3 172	5.1	78
18	Fuel oils	2 552	1.1	12 821	3.4	1 332	2.1	88
19	Coal and petroleum products, n.e.c.	471	.2	3 624	1.0	375	.6	S
20	Basic chemicals	2 162	1.0	3 396	.9	801	1.3	184
21	Pharmaceutical products	4 377	2.0	275	—	101	.2	609
22	Fertilizers	438	.2	2 984	.8	760	1.2	71
23	Chemical products and preparations, n.e.c.	9 851	4.4	7 385	2.0	2 885	4.6	375
24	Plastics and rubber	9 658	4.3	3 750	1.0	1 775	2.9	400
25	Logs and other wood in the rough	698	.3	S	S	1 273	2.0	46
26	Wood products	5 216	2.3	23 130	6.2	3 741	6.0	188
27	Pulp, newsprint, paper, and paperboard	5 739	2.6	9 680	2.6	5 323	8.6	318
28	Paper or paperboard articles	5 526	2.5	5 075	1.4	2 192	3.5	314
29	Printed products	4 292	1.9	S	S	380	.6	746
30	Textiles, leather, and articles of textiles or leather	27 366	12.2	7 646	2.0	4 039	6.5	697
31	Nonmetallic mineral products	3 302	1.5	24 691	6.6	2 789	4.5	153
32	Base metal in primary or semifinished forms and in finished basic shapes	6 883	3.1	7 731	2.1	1 998	3.2	221
33	Articles of base metal	5 773	2.6	2 156	.6	1 134	1.8	438
34	Machinery	11 102	4.9	1 246	.3	802	1.3	342
35	Electronic and other electrical equipment and components and office equipment	17 958	8.0	1 562	.4	1 222	2.0	448
36	Motorized and other vehicles (including parts)	25 066	11.2	3 161	.8	1 469	2.4	515
37	Transportation equipment, n.e.c.	6 902	3.1	461	.1	326	.5	1 153
38	Precision instruments and apparatus	5 978	2.7	215	—	S	S	491
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	3 293	1.5	868	.2	422	.7	512
40	Miscellaneous manufactured products	10 594	4.7	6 226	1.7	2 542	4.1	502
41	Waste and scrap	1 081	.5	5 492	1.5	1 748	2.8	191
43	Mixed freight	10 879	4.8	4 093	1.1	581	.9	219
--	Commodity unknown	750	.3	702	.2	109	.2	294

— 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	224 442	100.0	373 554	100.0	62 126	100.0	416
Single modes	194 087	86.5	365 143	97.7	57 497	92.5	261
Truck ¹	177 949	79.3	331 609	88.8	42 384	68.2	221
For-hire truck	103 913	46.3	135 738	36.3	29 733	47.9	482
Private truck	72 699	32.4	193 899	51.9	12 462	20.1	71
Rail	11 649	5.2	26 680	7.1	14 920	24.0	543
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	4 403	2.0	81	—	96	2	1 022
Pipeline ²	86	—	6 773	1.8	S	S	S
Multiple modes	24 137	10.8	3 386	.9	2 878	4.6	614
Parcel, U.S. Postal Service or courier	22 552	10.0	902	.2	485	.8	614
Truck and rail	1 569	.7	2 477	.7	2 381	3.8	1 057
Truck and water	S	S	S	S	S	S	2 405
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	6 218	2.8	5 025	1.3	1 752	2.8	S
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	S	S	S	S	S	S	75
Single modes	S	S	S	S	S	S	75
Truck ¹	S	S	S	S	S	S	75
For-hire truck	S	S	S	S	S	S	202
Private truck	S	S	S	S	S	S	70
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	22
Truck ¹	S	S	S	S	S	S	22
For-hire truck	S	S	S	S	S	S	102
Private truck	S	S	S	S	S	S	18
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	395
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	395
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	26

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	2 766	100.0	2 641	100.0	940	100.0	S
Single modes	2 727	98.6	2 544	96.3	807	85.9	S
Truck ¹	2 474	89.5	2 284	86.5	599	63.8	S
For-hire truck	1 162	42.0	1 160	43.9	384	40.9	286
Private truck	1 311	47.4	1 119	42.4	S	S	S
Rail	253	9.1	260	9.8	208	22.1	802
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	1 341
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	898
Truck and rail	S	S	S	S	S	S	1 969
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	27	1.0	32	1.2	5	.6	S
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	2 693	100.0	10 230	100.0	912	100.0	44
Single modes	2 602	96.6	9 863	96.4	896	98.3	45
Truck ¹	2 586	96.0	9 763	95.4	882	96.7	45
For-hire truck	975	36.2	2 555	25.0	552	60.5	189
Private truck	1 588	59.0	7 090	69.3	324	35.5	27
Rail	S	S	100	1.0	15	1.6	170
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	235
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	232
Truck and rail	S	S	S	S	S	S	247
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	14
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	5 733	100.0	3 009	100.0	1 155	100.0	S
Single modes	5 449	95.1	2 830	94.0	1 106	95.8	S
Truck ¹	5 430	94.7	2 810	93.4	1 089	94.3	S
For-hire truck	2 467	43.0	1 542	51.2	788	68.2	583
Private truck	2 963	51.7	1 269	42.2	301	26.0	57
Rail	S	S	S	S	S	S	909
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	2 567
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	1 352
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 615
Truck and rail	S	S	S	S	S	S	1 164
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	42	3.7	233

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	3 000	100.0	1 894	100.0	907	100.0	247
Single modes	2 951	98.3	1 866	98.5	882	97.2	240
Truck ¹	2 951	98.3	1 866	98.5	882	97.2	240
For-hire truck	1 675	55.8	1 004	53.0	576	63.5	613
Private truck	1 233	41.1	839	44.3	295	32.5	212
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	619
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	608
Truck and rail	S	S	S	S	S	S	724
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	329
SCTG 07, OTHER PREPARED FOODSTUFFS AND FATS AND OILS							
Total	9 226	100.0	12 036	100.0	2 389	100.0	129
Single modes	8 956	97.1	11 815	98.2	2 311	96.8	76
Truck ¹	8 651	93.8	11 204	93.1	2 066	86.5	75
For-hire truck	3 770	40.9	3 497	29.1	1 039	43.5	228
Private truck	4 849	52.6	7 703	64.0	S	S	57
Rail	305	3.3	612	5.1	246	10.3	392
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	779
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	617
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	618
Truck and rail	S	S	S	S	S	S	S
Truck and water	S	S	S	S	S	S	201
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	122	1.3	136	1.1	39	1.6	S
SCTG 08, ALCOHOLIC BEVERAGES							
Total	1 923	100.0	1 219	100.0	30	100.0	32
Single modes	1 915	99.6	1 219	100.0	30	99.9	32
Truck ¹	1 915	99.6	1 219	100.0	30	99.9	32
For-hire truck	S	S	S	S	S	S	S
Private truck	1 800	93.6	1 092	89.6	29	96.7	32
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	99
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	95
Truck and water	S	S	S	S	S	S	176
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	67

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	250	100.0	11	100.0	2	100.0	200
Single modes	222	88.7	11	94.0	1	61.6	53
Truck ¹	222	88.7	11	94.0	1	61.6	53
For-hire truck	S	S	S	S	S	S	674
Private truck	206	82.3	10	89.5	1	39.5	46
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	959
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	959
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 10, MONUMENTAL OR BUILDING STONE							
Total	106	100.0	333	100.0	84	100.0	399
Single modes	105	99.5	329	98.7	82	97.7	392
Truck ¹	105	99.5	329	98.7	82	97.7	392
For-hire truck	43	40.9	140	42.0	51	59.9	550
Private truck	62	58.4	188	56.4	32	37.7	194
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	—	—	S	S	422
Parcel, U.S. Postal Service or courier	S	S	—	—	S	S	422
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 11, NATURAL SANDS							
Total	40	100.0	4 353	100.0	136	100.0	28
Single modes	40	99.5	4 350	99.9	136	99.9	28
Truck ¹	40	99.5	4 350	99.9	136	99.9	28
For-hire truck	20	50.5	1 994	45.8	101	74.6	48
Private truck	S	S	S	S	S	S	15
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	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 12, GRAVEL AND CRUSHED STONE							
Total	678	100.0	110 433	100.0	2 364	100.0	18
Single modes	676	99.8	110 304	99.9	2 363	99.9	18
Truck ¹	650	95.9	105 061	95.1	1 686	71.3	16
For-hire truck	191	28.2	29 707	26.9	727	30.8	24
Private truck	S	S	S	S	947	40.0	S
Rail	27	3.9	5 243	4.7	677	28.6	132
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	39
SCTG 13, NONMETALLIC MINERALS N.E.C.							
Total	1 633	100.0	22 310	100.0	9 378	100.0	347
Single modes	1 514	92.7	21 130	94.7	8 106	86.4	321
Truck ¹	793	48.6	7 592	34.0	1 872	20.0	197
For-hire truck	697	42.7	4 883	21.9	1 584	16.9	272
Private truck	96	5.9	2 708	12.1	288	3.1	S
Rail	635	38.9	6 760	30.3	6 133	65.4	909
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 012
Pipeline ²	86	5.2	6 773	30.4	S	S	S
Multiple modes	S	S	S	S	S	S	991
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	190
Truck and rail	S	S	S	S	S	S	1 059
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	13	—	S	S	214
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	94	100.0	S	S	S	S	201
Single modes	93	99.6	S	S	S	S	210
Truck ¹	75	80.5	153	69.4	S	S	175
For-hire truck	S	S	S	S	S	S	674
Private truck	51	54.5	41	18.7	11	7.0	S
Rail	S	S	S	S	S	S	1 092
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	2 195
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	15

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 15, COAL							
Total	S	S	S	S	S	S	279
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	S	S	S	S	S	S	279
Parcel, U.S. Postal Service or courier	-	-	-	-	-	-	-
Truck and rail	S	S	S	S	S	S	279
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	-	-	-	-	-	-	-
SCTG 17, GASOLINE AND AVIATION TURBINE FUEL							
Total	8 048	100.0	38 144	100.0	3 172	100.0	78
Single modes	8 032	99.8	38 093	99.9	3 168	99.9	78
Truck ¹	8 032	99.8	38 093	99.9	3 168	99.9	78
For-hire truck	S	S	S	S	S	S	83
Private truck	2 814	35.0	11 591	30.4	838	26.4	68
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	214
Parcel, U.S. Postal Service or courier	-	-	-	-	-	-	-
Truck and rail	S	S	S	S	S	S	214
Truck and water	-	-	-	-	-	-	-
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	S	S	S	S	S	S	13
SCTG 18, FUEL OILS							
Total	2 552	100.0	12 821	100.0	1 332	100.0	88
Single modes	2 543	99.6	12 777	99.7	1 331	99.9	91
Truck ¹	2 543	99.6	12 777	99.7	1 331	99.9	91
For-hire truck	S	S	S	S	S	S	110
Private truck	1 030	40.4	5 054	39.4	563	42.3	75
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	14

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 19, COAL AND PETROLEUM PRODUCTS, N.E.C.							
Total	471	100.0	3 624	100.0	375	100.0	S
Single modes	457	97.0	3 590	99.1	373	99.6	112
Truck ¹	430	91.2	3 466	95.6	308	82.3	111
For-hire truck	111	23.6	262	7.2	40	10.6	540
Private truck	313	66.3	2 968	81.9	260	69.4	58
Rail	27	5.8	124	3.4	65	17.3	531
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	511
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	5	1.0	1	—	S	S	588
Parcel, U.S. Postal Service or courier	5	1.0	1	—	S	S	588
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 20, BASIC CHEMICALS							
Total	2 162	100.0	3 396	100.0	801	100.0	184
Single modes	2 079	96.2	3 362	99.0	791	98.7	100
Truck ¹	1 902	88.0	2 916	85.9	624	77.9	98
For-hire truck	1 205	55.8	2 060	60.7	522	65.1	343
Private truck	687	31.8	820	24.1	95	11.9	S
Rail	168	7.8	443	13.0	164	20.5	436
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 089
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	72	3.3	10	.3	9	1.2	492
Parcel, U.S. Postal Service or courier	63	2.9	S	S	S	S	492
Truck and rail	S	S	S	S	6	8	2 352
Truck and water	S	S	S	S	S	S	167
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	11	.5	S	S	1	—	17
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	4 377	100.0	275	100.0	101	100.0	609
Single modes	3 114	71.1	257	93.5	93	91.8	322
Truck ¹	2 968	67.8	257	93.5	92	91.7	306
For-hire truck	2 390	54.6	212	77.2	81	80.1	378
Private truck	545	12.5	40	14.4	8	8.1	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	—	—	—	.1	749
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 246	28.5	17	6.3	8	8.2	741
Parcel, U.S. Postal Service or courier	1 246	28.5	17	6.3	8	8.2	741
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 22, FERTILIZERS							
Total	438	100.0	2 984	100.0	760	100.0	71
Single modes	428	97.7	2 936	98.4	758	99.8	84
Truck ¹	322	73.4	2 136	71.6	305	40.1	67
For-hire truck	136	31.0	903	30.2	119	15.7	120
Private truck	186	42.4	1 233	41.3	186	24.5	54
Rail	107	24.3	801	26.8	454	59.7	550
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	9 851	100.0	7 385	100.0	2 885	100.0	375
Single modes	8 755	88.9	7 080	95.9	2 762	95.7	426
Truck ¹	8 532	86.6	6 874	93.1	2 532	87.8	423
For-hire truck	6 915	70.2	5 268	71.3	2 253	78.1	509
Private truck	1 524	15.5	1 586	21.5	271	9.4	96
Rail	208	2.1	205	2.8	229	7.9	1 595
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	16	.2	1	—	1	—	1 030
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	82	1.1	112	3.9	454
Parcel, U.S. Postal Service or courier	S	S	38	.5	17	.6	453
Truck and rail	S	S	S	S	S	S	2 156
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	12	.4	S
SCTG 24, PLASTICS AND RUBBER							
Total	9 658	100.0	3 750	100.0	1 775	100.0	400
Single modes	8 429	87.3	3 600	96.0	1 636	92.2	276
Truck ¹	8 276	85.7	3 460	92.3	1 519	85.6	257
For-hire truck	5 447	56.4	2 190	58.4	1 291	72.7	670
Private truck	2 822	29.2	1 268	33.8	228	12.8	60
Rail	114	1.2	138	3.7	116	6.5	857
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	39	.4	S	S	2	.1	1 276
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	775	8.0	82	2.2	S	S	619
Parcel, U.S. Postal Service or courier	673	7.0	39	1.0	25	1.4	618
Truck and rail	S	S	S	S	S	S	1 901
Truck and water	S	S	S	S	S	S	7 680
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	67	1.8	S	S	S

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 25, LOGS AND OTHER WOOD IN THE ROUGH							
Total	698	100.0	S	S	1 273	100.0	46
Single modes	691	98.9	S	S	1 265	99.3	45
Truck ¹	672	96.2	S	S	1 114	87.5	43
For-hire truck	244	35.0	6 582	26.9	438	34.4	S
Private truck	419	60.0	S	S	655	51.4	34
Rail	S	S	S	S	S	S	306
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	1 016
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 037
Truck and rail	S	S	S	S	S	S	—
Truck and water	S	S	S	S	S	S	347
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	68
SCTG 26, WOOD PRODUCTS							
Total	5 216	100.0	23 130	100.0	3 741	100.0	188
Single modes	5 098	97.7	22 828	98.7	3 681	98.4	160
Truck ¹	4 618	88.5	20 762	89.8	2 646	70.7	145
For-hire truck	2 082	39.9	6 316	27.3	1 406	37.6	231
Private truck	2 514	48.2	S	S	S	S	120
Rail	477	9.1	2 066	8.9	1 036	27.7	528
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 535
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	46	.9	S	S	S	S	408
Parcel, U.S. Postal Service or courier	35	.7	2	—	1	—	410
Truck and rail	S	S	S	S	S	S	219
Truck and water	S	S	S	S	S	S	944
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	72	1.4	281	1.2	S	S	S
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	5 739	100.0	9 680	100.0	5 323	100.0	318
Single modes	5 605	97.7	9 588	99.1	5 254	98.7	333
Truck ¹	3 793	66.1	5 310	54.9	2 383	44.8	299
For-hire truck	3 162	55.1	4 676	48.3	2 279	42.8	508
Private truck	629	11.0	633	6.5	105	2.0	88
Rail	1 803	31.4	4 278	44.2	2 870	53.9	683
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	863
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	84	1.5	63	.7	62	1.2	257
Parcel, U.S. Postal Service or courier	29	.5	S	S	1	—	243
Truck and rail	55	1.0	56	.6	61	1.1	1 279
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	49	.9	29	.3	7	.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 28, PAPER OR PAPERBOARD ARTICLES							
Total	5 526	100.0	5 075	100.0	2 192	100.0	314
Single modes	5 307	96.0	4 973	98.0	2 140	97.6	174
Truck ¹	5 149	93.2	4 457	87.8	1 689	77.0	170
For-hire truck	4 062	73.5	3 371	66.4	1 503	68.6	323
Private truck	1 074	19.4	1 076	21.2	182	8.3	60
Rail	158	2.9	516	10.2	451	20.6	847
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	591
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	141	2.5	43	.8	32	1.5	650
Parcel, U.S. Postal Service or courier	99	1.8	14	.3	5	.2	649
Truck and rail	42	.8	29	.6	27	1.2	868
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	78	1.4	59	1.2	S	S	S
SCTG 29, PRINTED PRODUCTS							
Total	4 292	100.0	S	S	380	100.0	746
Single modes	3 081	71.8	S	S	296	77.9	156
Truck ¹	2 844	66.3	S	S	270	71.1	100
For-hire truck	1 280	29.8	491	26.3	212	55.8	S
Private truck	1 564	36.4	S	S	58	15.3	57
Rail	S	S	S	S	S	S	839
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	170	4.0	13	.7	16	4.3	1 177
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 099	25.6	81	4.4	S	S	829
Parcel, U.S. Postal Service or courier	1 022	23.8	68	3.7	S	S	829
Truck and rail	S	S	S	S	S	S	466
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	112	2.6	S	S	S	S	S
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	27 366	100.0	7 646	100.0	4 039	100.0	697
Single modes	24 831	90.7	7 314	95.7	3 617	89.6	770
Truck ¹	24 786	90.6	7 303	95.5	3 607	89.3	760
For-hire truck	12 901	47.1	3 243	42.4	2 630	65.1	900
Private truck	11 702	42.8	4 034	52.8	957	23.7	299
Rail	S	S	S	S	S	S	669
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	36	.1	3	—	3	—	1 412
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 812	6.6	S	S	S	S	771
Parcel, U.S. Postal Service or courier	1 455	5.3	67	.9	48	1.2	769
Truck and rail	S	S	S	S	S	S	2 701
Truck and water	S	S	S	S	S	S	1 933
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	723	2.6	160	2.1	91	2.2	S

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 31, NONMETALLIC MINERAL PRODUCTS							
Total	3 302	100.0	24 691	100.0	2 789	100.0	153
Single modes	3 209	97.2	23 951	97.0	2 415	86.6	93
Truck ¹	3 190	96.6	23 638	95.7	2 221	79.7	93
For-hire truck	1 490	45.1	5 711	23.1	1 586	56.9	366
Private truck	1 691	51.2	17 888	72.4	628	22.5	36
Rail	19	.6	313	1.3	193	6.9	616
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	44	1.3	S	S	S	S	861
Parcel, U.S. Postal Service or courier	25	.8	3	—	2	—	877
Truck and rail	S	S	S	S	S	S	291
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	49	1.5	S	S	S	S	252
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	6 883	100.0	7 731	100.0	1 998	100.0	221
Single modes	6 660	96.8	7 104	91.9	1 542	77.2	124
Truck ¹	6 281	91.3	5 722	74.0	1 258	62.9	122
For-hire truck	3 703	53.8	2 755	35.6	900	45.1	426
Private truck	2 559	37.2	2 961	38.3	351	17.5	56
Rail	376	5.5	S	S	S	S	S
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 168
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	769
Parcel, U.S. Postal Service or courier	108	1.6	4	—	2	.1	769
Truck and rail	S	S	S	S	S	S	918
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	108	1.6	S	S	S	S	379
SCTG 33, ARTICLES OF BASE METAL							
Total	5 773	100.0	2 156	100.0	1 134	100.0	438
Single modes	4 131	71.5	1 949	90.4	854	75.3	335
Truck ¹	3 954	68.5	1 896	87.9	755	66.6	290
For-hire truck	2 505	43.4	1 147	53.2	597	52.7	709
Private truck	1 448	25.1	749	34.7	158	13.9	49
Rail	S	S	S	S	S	S	1 743
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 043
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 427	24.7	53	2.4	23	2.1	499
Parcel, U.S. Postal Service or courier	1 427	24.7	53	2.4	23	2.1	499
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 34, MACHINERY							
Total	11 102	100.0	1 246	100.0	802	100.0	342
Single modes	8 047	72.5	1 083	86.9	674	84.1	217
Truck ¹	7 820	70.4	1 064	85.4	660	82.3	184
For-hire truck	6 615	59.6	868	69.6	627	78.2	357
Private truck	1 192	10.7	196	15.7	32	3.9	50
Rail	S	S	S	S	S	S	463
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	3	.2	3	.4	963
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	2 680	24.1	132	10.6	113	14.1	426
Parcel, U.S. Postal Service or courier	2 400	21.6	98	7.9	40	5.0	425
Truck and rail	272	2.5	33	2.7	68	8.5	2 096
Truck and water	S	S	S	S	S	S	7 561
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	376	3.4	31	2.5	14	1.8	S
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	17 958	100.0	1 562	100.0	1 222	100.0	448
Single modes	10 941	60.9	1 392	89.1	1 132	92.6	294
Truck ¹	9 795	54.5	1 352	86.5	1 082	88.6	198
For-hire truck	5 804	32.3	777	49.7	578	47.3	585
Private truck	3 827	21.3	S	S	S	S	S
Rail	S	S	S	S	S	S	1 313
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	1 022	5.7	12	.8	S	S	943
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	6 174	34.4	133	8.5	75	6.2	545
Parcel, U.S. Postal Service or courier	6 156	34.3	129	8.3	68	5.6	545
Truck and rail	S	S	S	S	S	S	1 613
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	843	4.7	37	2.4	15	1.2	S
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	25 066	100.0	3 161	100.0	1 469	100.0	515
Single modes	21 761	86.8	2 799	88.6	1 305	88.8	306
Truck ¹	15 532	62.0	2 314	73.2	874	59.5	206
For-hire truck	12 412	49.5	1 839	58.2	620	42.2	501
Private truck	2 756	11.0	463	14.7	252	17.2	S
Rail	5 921	23.6	471	14.9	414	28.2	926
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	954
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 875	7.5	108	3.4	67	4.6	639
Parcel, U.S. Postal Service or courier	1 802	7.2	90	2.8	50	3.4	639
Truck and rail	S	S	S	S	S	S	967
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	1 430	5.7	253	8.0	97	6.6	293

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 37, TRANSPORTATION EQUIPMENT, N.E.C.							
Total	6 902	100.0	461	100.0	326	100.0	1 153
Single modes	6 025	87.3	454	98.5	318	97.5	1 193
Truck ¹	3 563	51.6	67	14.6	50	15.3	633
For-hire truck	S	S	31	6.7	35	10.6	673
Private truck	S	S	37	7.9	15	4.7	332
Rail	540	7.8	383	83.0	263	80.5	699
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	4	.8	S	S	1 285
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	6	1.3	S	S	1 073
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	1 073
Truck and rail	S	S	S	S	S	S	1 212
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	30	.4	S	S	S	S	453
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	5 978	100.0	215	100.0	S	S	491
Single modes	3 848	64.4	170	79.0	S	S	474
Truck ¹	3 560	59.5	167	77.8	S	S	286
For-hire truck	3 011	50.4	153	71.2	S	S	S
Private truck	S	S	S	S	S	S	72
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	288	4.8	3	1.2	S	S	970
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 852	31.0	S	S	S	S	585
Parcel, U.S. Postal Service or courier	1 852	31.0	S	S	S	S	585
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	3 293	100.0	868	100.0	422	100.0	512
Single modes	3 048	92.5	835	96.2	381	90.3	430
Truck ¹	3 039	92.3	834	96.1	380	89.9	412
For-hire truck	2 109	64.0	610	70.2	334	79.0	551
Private truck	849	25.8	211	24.3	41	9.6	137
Rail	S	S	S	S	S	S	3 160
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	7	.2	1	—	1	.2	1 379
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	12	2.8	698
Parcel, U.S. Postal Service or courier	S	S	S	S	9	2.0	698
Truck and rail	S	S	S	S	S	S	2 693
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 40, MISCELLANEOUS MANUFACTURED PRODUCTS							
Total	10 594	100.0	6 226	100.0	2 542	100.0	502
Single modes	8 459	79.8	5 652	90.8	2 284	89.9	329
Truck ¹	8 351	78.8	5 235	84.1	1 970	77.5	320
For-hire truck	5 617	53.0	2 853	45.8	1 426	56.1	630
Private truck	2 683	25.3	2 347	37.7	535	21.1	92
Rail	S	S	S	S	S	S	686
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	87	.8	3	—	4	.1	1 083
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	1 922	18.1	158	2.5	121	4.7	598
Parcel, U.S. Postal Service or courier	1 769	16.7	S	S	43	1.7	598
Truck and rail	S	S	72	1.2	77	3.0	1 095
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	214	2.0	S	S	S	S	S
SCTG 41, WASTE AND SCRAP							
Total	1 081	100.0	5 492	100.0	1 748	100.0	191
Single modes	1 049	97.1	5 128	93.4	1 650	94.4	188
Truck ¹	S	S	3 652	66.5	1 250	71.5	179
For-hire truck	365	33.7	2 357	42.9	964	55.2	377
Private truck	S	S	1 295	23.6	S	S	S
Rail	148	13.7	1 476	26.9	400	22.9	342
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	251
SCTG 43, MIXED FREIGHT							
Total	10 879	100.0	4 093	100.0	581	100.0	219
Single modes	10 293	94.6	3 953	96.6	539	92.9	121
Truck ¹	10 289	94.6	3 949	96.5	538	92.7	123
For-hire truck	323	3.0	260	6.3	116	19.9	311
Private truck	9 952	91.5	3 682	90.0	422	72.6	117
Rail	S	S	S	S	S	S	44
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	442
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	296
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	296
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	750	100.0	702	100.0	109	100.0	294
Single modes	638	85.0	409	58.3	68	62.9	238
Truck ¹	637	84.9	409	58.3	68	62.9	229
For-hire truck	213	28.4	S	S	41	37.4	509
Private truck	423	56.3	208	29.7	28	25.6	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 834
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	90	12.0	S	S	S	S	475
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	476
Truck and rail	S	S	S	S	S	S	202
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

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

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

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

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

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

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

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

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

State of destination	Value		Tons		Ton-miles	
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent
Total	224 442	100.0	373 554	100.0	62 126	100.0
NEW ENGLAND STATES						
Connecticut	766	.3	225	—	235	.4
Maine	520	.2	1 599	.4	2 316	3.7
Massachusetts	2 087	.9	609	.2	702	1.1
New Hampshire	445	.2	182	—	215	.3
Rhode Island	121	—	S	S	S	S
Vermont	55	—	43	—	49	—
MIDDLE ATLANTIC STATES						
New Jersey	3 712	1.7	1 079	.3	939	1.5
New York	4 013	1.8	1 603	.4	1 696	2.7
Pennsylvania	5 135	2.3	2 267	.6	1 802	2.9
EAST NORTH CENTRAL STATES						
Illinois	4 045	1.8	2 007	.5	1 567	2.5
Indiana	2 845	1.3	1 148	.3	782	1.3
Michigan	3 845	1.7	2 062	.6	1 780	2.9
Ohio	5 131	2.3	2 715	.7	1 903	3.1
Wisconsin	1 386	.6	1 381	.4	1 581	2.5
WEST NORTH CENTRAL STATES						
Iowa	658	.3	256	—	268	.4
Kansas	608	.3	440	.1	482	.8
Minnesota	1 230	.5	1 042	.3	1 468	2.4
Missouri	3 993	1.8	1 034	.3	835	1.3
Nebraska	233	.1	89	—	101	.2
North Dakota	278	.1	201	—	377	.6
South Dakota	97	—	35	—	48	—
SOUTH ATLANTIC STATES						
Delaware	315	.1	109	—	79	.1
District of Columbia	73	—	24	—	15	—
Florida	19 824	8.8	12 678	3.4	4 523	7.3
Georgia	86 061	38.3	283 949	76.0	11 445	18.4
Maryland	2 139	1.0	934	.3	673	1.1
North Carolina	9 605	4.3	7 173	1.9	2 362	3.8
South Carolina	11 203	5.0	11 799	3.2	2 288	3.7
Virginia	3 280	1.5	3 249	.9	1 687	2.7
West Virginia	582	.3	672	.2	344	.6
EAST SOUTH CENTRAL STATES						
Alabama	9 020	4.0	11 085	3.0	2 483	4.0
Kentucky	2 570	1.1	2 134	.6	890	1.4
Mississippi	2 470	1.1	2 158	.6	931	1.5
Tennessee	9 540	4.3	8 033	2.2	2 190	3.5
WEST SOUTH CENTRAL STATES						
Arkansas	2 110	.9	1 006	.3	704	1.1
Louisiana	2 520	1.1	1 646	.4	1 049	1.7
Oklahoma	775	.3	188	—	173	.3
Texas	8 022	3.6	3 248	.9	3 151	5.1
MOUNTAIN STATES						
Arizona	1 111	.5	311	—	577	.9
Colorado	743	.3	316	—	474	.8
Idaho	185	—	98	—	232	.4
Montana	93	—	39	—	87	.1
Nevada	371	.2	S	S	S	S
New Mexico	196	—	25	—	36	—
Utah	590	.3	113	—	216	.3
Wyoming	20	—	S	S	S	S
PACIFIC STATES						
Alaska	39	—	2	—	5	—
California	8 375	3.7	1 727	.5	4 259	6.9
Hawaii	S	S	S	S	S	S
Oregon	499	.2	159	—	454	.7
Washington	823	.4	405	.1	1 168	1.9

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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	242 954	100.0	433 317	100.0	93 695	100.0
NEW ENGLAND STATES						
Connecticut	2 524	1.0	551	.1	607	.6
Maine	443	.2	402	—	553	.6
Massachusetts	2 435	1.0	231	—	256	.3
New Hampshire	382	.2	46	—	54	—
Rhode Island	365	.2	40	—	43	—
Vermont	148	—	39	—	44	—
MIDDLE ATLANTIC STATES						
New Jersey	6 581	2.7	970	.2	835	.9
New York	4 483	1.8	1 196	.3	1 139	1.2
Pennsylvania	6 268	2.6	1 765	.4	1 373	1.5
EAST NORTH CENTRAL STATES						
Illinois	7 807	3.2	6 390	1.5	4 720	5.0
Indiana	4 319	1.8	2 970	.7	1 900	2.0
Michigan	6 596	2.7	1 721	.4	1 455	1.6
Ohio	7 662	3.2	4 635	1.1	2 994	3.2
Wisconsin	3 826	1.6	1 430	.3	1 407	1.5
WEST NORTH CENTRAL STATES						
Iowa	1 848	.8	1 134	.3	1 115	1.2
Kansas	1 321	.5	403	—	415	.4
Minnesota	2 056	.8	731	.2	897	1.0
Missouri	3 439	1.4	2 066	.5	1 534	1.6
Nebraska	1 009	.4	S	S	S	S
North Dakota	46	—	S	S	S	S
South Dakota	S	S	65	—	104	.1
SOUTH ATLANTIC STATES						
Delaware	992	.4	276	—	203	.2
District of Columbia	S	S	S	S	S	S
Florida	9 375	3.9	S	S	4 390	4.7
Georgia	86 061	35.4	283 949	65.5	11 445	12.2
Maryland	901	.4	309	—	218	.2
North Carolina	11 980	4.9	5 394	1.2	1 753	1.9
South Carolina	10 653	4.4	8 206	1.9	1 524	1.6
Virginia	4 234	1.7	S	S	S	S
West Virginia	788	.3	5 130	1.2	3 090	3.3
EAST SOUTH CENTRAL STATES						
Alabama	8 751	3.6	10 061	2.3	2 447	2.6
Kentucky	3 881	1.6	18 851	4.4	9 277	9.9
Mississippi	2 535	1.0	2 009	.5	898	1.0
Tennessee	9 871	4.1	8 480	2.0	1 792	1.9
WEST SOUTH CENTRAL STATES						
Arkansas	1 510	.6	1 237	.3	799	.9
Louisiana	2 190	.9	5 465	1.3	3 007	3.2
Oklahoma	783	.3	422	.1	410	.4
Texas	8 590	3.5	11 368	2.6	8 445	9.0
MOUNTAIN STATES						
Arizona	670	.3	S	S	S	S
Colorado	1 140	.5	149	—	221	.2
Idaho	286	.1	180	—	395	.4
Montana	48	—	49	—	115	.1
Nevada	197	.1	36	—	82	—
New Mexico	86	—	S	S	S	S
Utah	599	.2	138	—	283	.3
Wyoming	119	—	S	S	S	S
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	10 893	4.5	1 089	.3	2 718	2.9
Hawaii	S	S	S	S	S	S
Oregon	828	.3	338	—	1 090	1.2
Washington	1 189	.5	387	—	1 111	1.2

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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	2.7	—	12.1	—	6.2	—	6.3
Single modes	3.1	.7	12.4	.6	7.1	2.0	3.7
Truck	3.5	1.0	13.7	1.4	7.6	1.4	4.9
For-hire truck	5.7	1.8	18.1	4.0	10.2	2.1	6.0
Private truck	5.3	1.5	22.2	4.7	8.6	1.6	8.9
Rail	19.1	1.0	9.2	.9	8.7	1.7	8.2
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	26.8	.5	18.0	—	18.3	—	3.3
Pipeline	28.9	—	34.2	.6	S	S	S
Multiple modes	6.4	.7	30.9	.5	37.6	1.9	8.2
Parcel, U.S. Postal Service or courier	6.7	.7	19.5	—	10.4	.1	8.2
Truck and rail	20.2	.1	40.5	.5	45.7	1.9	9.8
Truck and water	S	S	S	S	S	S	42.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	9.2	.3	16.5	.3	31.8	1.1	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-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	2.7	5.6	6.7	12.1	8.6	21.1	6.2	6.4	10.8	6.3	5.7	8.5
Single modes	3.1	6.2	7.2	12.4	9.1	22.9	7.1	6.6	11.3	3.7	7.4	8.7
Truck	3.5	6.2	7.1	13.7	10.1	26.0	7.6	9.7	14.9	4.9	4.5	7.0
For-hire truck	5.7	6.2	8.9	18.1	7.7	33.9	10.2	3.6	14.2	6.0	3.6	6.5
Private truck	5.3	14.1	14.1	22.2	17.2	39.5	8.6	25.1	26.9	8.9	6.0	10.2
Rail	19.1	12.1	40.7	9.2	18.5	19.8	8.7	9.0	13.3	8.2	6.1	9.2
Water	—	S	S	—	S	S	—	S	S	—	37.6	—
Shallow draft	—	S	S	—	S	S	—	S	S	—	29.9	—
Great Lakes	—	—	—	—	—	—	—	—	—	—	—	—
Deep draft	—	37.7	—	—	S	S	—	S	S	—	36.3	—
Air (includes truck and air)	26.8	17.7	82.7	18.0	11.5	39.1	18.3	16.5	48.0	3.3	3.8	4.1
Pipeline	28.9	—	S	34.2	—	S	S	S	S	S	S	S
Multiple modes	6.4	11.6	16.3	30.9	16.9	84.3	37.6	21.4	104.0	8.2	4.5	8.8
Parcel, U.S. Postal Service or courier	6.7	6.3	14.5	19.5	7.2	30.2	10.4	6.2	17.4	8.2	4.6	8.8
Truck and rail	20.2	47.9	15.7	40.5	32.3	165.0	45.7	31.2	157.7	9.8	19.2	20.9
Truck and water	S	43.2	S	S	S	S	S	S	S	42.8	43.8	68.8
Rail and water	—	—	—	—	—	—	—	—	—	—	—	—
Other multiple modes	—	S	S	—	S	S	—	S	S	—	31.6	—
Other and unknown modes	9.2	13.6	23.4	16.5	26.6	10.1	31.8	8.8	64.7	S	16.4	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-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	1.0	.6	1.5	2.0	.5
Truck	1.0	.9	1.4	2.3	1.4	2.5
For-hire truck	1.8	3.1	4.0	3.0	2.1	2.2
Private truck	1.5	3.4	4.7	3.8	1.6	3.8
Rail	1.0	.4	.9	1.7	1.7	2.3
Water	—	S	—	S	—	S
Shallow draft	—	S	—	S	—	S
Great Lakes	—	—	—	—	—	—
Deep draft	—	—	—	S	—	S
Air (includes truck and air) .....	.5	.1	—	—	—	—
Pipeline	—	—	.6	—	S	S
Multiple modes .....	.7	1.0	.5	.1	1.9	.5
Parcel, U.S. Postal Service or courier .....	.7	.7	—	—	.1	—
Truck and rail .....	.1	1.1	.5	.1	1.9	.5
Truck and water	S	—	S	S	S	S
Rail and water	—	—	—	—	—	—
Other multiple modes	—	S	—	S	—	S
Other and unknown modes .....	.3	.3	.3	1.5	1.1	.2

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

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

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

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

Mode of transportation	Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	
Total	6.2	—	6.3
Truck	7.6	1.3	5.0
Rail	7.5	1.6	7.6
Shallow draft	S	S	30.9
Great Lakes	—	—	—
Deep draft	S	S	37.0
Air	18.4	—	3.7
Parcel, U.S. Postal Service or courier	10.4	.1	8.2
Pipeline	S	S	S
Other and unknown modes	31.8	1.1	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-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	2.7	—	12.1	—	6.2	—
Less than 50 miles	4.0	.8	18.7	3.7	10.2	.8
50 to 99 miles	11.7	.6	25.1	1.8	23.4	.9
100 to 249 miles	5.8	.8	13.3	1.6	12.8	1.2
250 to 499 miles	5.5	1.0	5.5	.8	5.6	.6
500 to 749 miles	4.3	.8	3.4	.5	3.1	.9
750 to 999 miles	5.6	.4	4.9	.2	5.0	.8
1,000 to 1,499 miles	12.4	.2	15.5	.2	15.8	1.2
1,500 to 1,999 miles	23.5	.7	19.1	—	19.4	.7
2,000 miles or more	11.6	.3	13.0	—	13.7	1.0
Single modes	3.1	—	12.4	—	7.1	—
Less than 50 miles	4.1	.9	18.9	3.7	10.3	.9
50 to 99 miles	13.3	.7	25.6	1.8	24.5	1.0
100 to 249 miles	6.5	.9	13.6	1.6	13.3	1.2
250 to 499 miles	5.7	1.1	5.4	.8	5.5	.7
500 to 749 miles	6.0	1.0	4.0	.5	3.7	1.0
750 to 999 miles	4.0	.2	5.5	.2	5.6	.9
1,000 to 1,499 miles	14.5	.2	20.2	.2	20.2	1.4
1,500 to 1,999 miles	29.3	.8	17.4	—	17.0	.5
2,000 miles or more	13.5	.3	10.6	—	11.1	.5
Truck	3.5	—	13.7	—	7.6	—
Less than 50 miles	4.0	.9	20.3	3.8	11.3	1.3
50 to 99 miles	13.5	.8	26.6	2.1	25.8	1.4
100 to 249 miles	6.0	.8	16.0	1.6	15.6	1.3
250 to 499 miles	6.1	1.1	5.4	.9	5.1	1.0
500 to 749 miles	6.5	.8	5.3	.5	5.1	1.2
750 to 999 miles	4.6	.3	5.3	.2	5.3	.6
1,000 to 1,499 miles	15.2	.2	29.4	.1	30.5	1.0
1,500 to 1,999 miles	31.1	.8	22.0	—	21.6	.7
2,000 miles or more	19.7	.3	9.9	—	10.0	.5
For-hire truck	5.7	—	18.1	—	10.2	—
Less than 50 miles	13.6	1.8	20.8	3.7	14.9	.7
50 to 99 miles	30.3	1.1	47.0	2.7	45.1	1.3
100 to 249 miles	7.5	.9	22.6	1.4	20.7	1.3
250 to 499 miles	5.1	1.1	6.9	1.4	6.9	1.1
500 to 749 miles	8.9	1.5	6.5	1.0	6.6	1.6
750 to 999 miles	5.7	.6	4.1	.3	4.2	.6
1,000 to 1,499 miles	16.3	.2	32.5	.3	33.7	1.3
1,500 to 1,999 miles	33.5	1.5	15.0	—	15.0	.5
2,000 miles or more	20.0	.5	9.8	—	9.9	.7
Private truck	5.3	—	22.2	—	8.6	—
Less than 50 miles	5.2	2.5	29.2	4.0	17.3	3.6
50 to 99 miles	12.4	.7	33.2	2.8	33.9	2.6
100 to 249 miles	16.8	2.0	12.2	1.8	12.7	2.7
250 to 499 miles	16.0	1.6	16.8	.7	15.7	2.3
500 to 749 miles	21.9	1.3	22.5	.3	21.2	1.6
750 to 999 miles	12.2	.2	21.9	.1	21.0	1.2
1,000 to 1,499 miles	30.8	.1	19.2	—	19.5	.2
1,500 to 1,999 miles	40.8	.5	S	S	S	S
2,000 miles or more	S	S	41.1	—	39.4	1.3
Rail	19.1	—	9.2	—	8.7	—
Less than 50 miles	20.6	1.4	21.0	2.9	20.3	.1
50 to 99 miles	26.9	.8	13.8	.7	18.0	.2
100 to 249 miles	18.0	1.9	12.8	2.5	12.8	1.6
250 to 499 miles	18.9	3.9	13.6	1.5	13.5	1.4
500 to 749 miles	30.6	6.9	7.2	1.0	7.3	1.7
750 to 999 miles	18.9	1.1	12.8	1.5	12.1	2.5
1,000 to 1,499 miles	19.1	1.2	20.0	1.2	19.8	2.8
1,500 to 1,999 miles	34.3	.5	30.3	.3	27.6	.8
2,000 miles or more	32.4	1.0	22.4	.3	22.4	1.3
Water	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—

See footnotes at end of table.

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

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

Mode of transportation and distance shipped (based on Great Circle Distance)	Value		Tons		Ton-miles	
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage
Single modes—Con.						
Great Lakes	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Air (includes truck and air)	26.8	—	18.0	—	18.3	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	42.5	2.8	S	S
250 to 499 miles	28.2	3.9	28.2	4.7	22.9	3.0
500 to 749 miles	22.4	4.4	28.0	4.6	28.8	4.8
750 to 999 miles	33.8	2.0	22.2	4.0	20.9	3.8
1,000 to 1,499 miles	38.9	1.5	S	S	S	S
1,500 to 1,999 miles	26.8	4.4	S	S	47.8	7.8
2,000 miles or more	41.1	3.2	26.9	2.5	28.9	5.3
Pipeline	28.9	—	34.2	—	S	S
Less than 50 miles	28.9	—	34.2	—	S	S
50 to 99 miles	—	—	—	—	S	S
100 to 249 miles	—	—	—	—	S	S
250 to 499 miles	—	—	—	—	S	S
500 to 749 miles	—	—	—	—	S	S
750 to 999 miles	—	—	—	—	S	S
1,000 to 1,499 miles	—	—	—	—	S	S
1,500 to 1,999 miles	—	—	—	—	S	S
2,000 miles or more	—	—	—	—	S	S
Multiple modes	6.4	—	30.9	—	37.6	—
Less than 50 miles	18.3	1.0	29.6	.8	38.3	—
50 to 99 miles	19.5	.7	S	S	S	S
100 to 249 miles	9.7	1.0	37.3	7.1	43.8	3.2
250 to 499 miles	7.7	1.1	32.2	2.3	33.3	1.9
500 to 749 miles	10.5	2.1	16.4	4.1	16.7	3.9
750 to 999 miles	18.4	1.4	33.8	3.2	34.9	3.7
1,000 to 1,499 miles	8.8	.2	S	S	S	S
1,500 to 1,999 miles	24.9	1.3	44.1	2.3	45.5	5.9
2,000 miles or more	15.6	.7	S	S	S	S
Parcel, U.S. Postal Service or courier	6.7	—	19.5	—	10.4	—
Less than 50 miles	18.5	1.1	33.2	1.7	35.7	.2
50 to 99 miles	19.8	.7	45.5	1.5	45.8	.5
100 to 249 miles	9.6	1.1	29.3	1.4	30.1	1.4
250 to 499 miles	8.5	1.2	23.6	1.2	21.2	2.3
500 to 749 miles	11.6	2.5	7.8	2.4	7.9	1.9
750 to 999 miles	18.8	1.5	9.5	1.3	9.3	1.7
1,000 to 1,499 miles	7.3	.2	19.2	.3	18.7	.7
1,500 to 1,999 miles	11.6	.6	24.9	1.0	25.3	2.0
2,000 miles or more	19.4	.7	33.1	.9	32.1	2.3
Truck and rail	20.2	—	40.5	—	45.7	—
Less than 50 miles	39.1	.4	S	S	S	S
50 to 99 miles	38.3	1.4	S	S	S	S
100 to 249 miles	37.3	2.5	45.7	10.0	S	S
250 to 499 miles	23.4	2.8	S	S	S	S
500 to 749 miles	17.4	3.8	27.7	6.7	26.9	4.6
750 to 999 miles	30.9	3.1	43.4	5.0	43.1	4.9
1,000 to 1,499 miles	S	S	S	S	S	S
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	29.3	3.9	S	S	S	S
Truck and water	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	S	S	S	S	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	S	S	S	S	S	S
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	9.2	—	16.5	—	31.8	—
Less than 50 miles	14.6	4.3	30.4	6.7	23.7	1.3
50 to 99 miles	20.5	1.1	S	S	S	S
100 to 249 miles	15.8	2.3	30.9	3.2	31.8	4.2
250 to 499 miles	24.7	4.4	29.7	5.1	27.8	7.0
500 to 749 miles	20.5	2.8	S	S	S	S
750 to 999 miles	31.1	1.2	29.0	.9	29.5	2.1
1,000 to 1,499 miles	36.7	.3	S	S	S	S
1,500 to 1,999 miles	47.3	1.6	28.8	.3	29.0	1.6
2,000 miles or more	36.2	.8	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	2.7	—	12.1	—	6.2	—	6.3
Less than 50 lb	7.6	.7	9.0	—	7.3	—	7.1
50 to 99 lb	10.5	.3	13.0	—	9.5	—	7.1
100 to 499 lb	5.5	.4	15.8	.2	5.8	.1	12.5
500 to 749 lb	8.7	.2	11.8	—	12.9	—	5.5
750 to 999 lb	9.9	.2	11.2	—	7.7	—	8.3
1,000 to 9,999 lb	7.0	1.1	7.2	.6	5.6	.5	5.1
10,000 to 49,999 lb	4.4	1.8	9.0	3.2	6.0	1.3	9.5
50,000 to 99,999 lb	21.2	1.2	28.3	4.2	19.5	1.5	15.6
100,000 lb or more	3.9	.1	8.3	1.8	7.2	1.7	6.9
Single modes	3.1	—	12.4	—	7.1	—	3.7
Less than 50 lb	12.3	.4	10.6	—	11.1	—	9.1
50 to 99 lb	15.3	.2	12.8	—	10.0	—	11.7
100 to 499 lb	6.6	.5	12.7	.2	6.5	.1	8.2
500 to 749 lb	8.5	.2	12.0	—	13.0	—	6.0
750 to 999 lb	9.6	.2	11.3	—	7.1	—	8.7
1,000 to 9,999 lb	6.5	1.2	7.6	.7	6.0	.5	5.0
10,000 to 49,999 lb	4.6	1.9	9.0	3.3	5.7	1.5	10.5
50,000 to 99,999 lb	21.6	1.4	28.4	4.3	20.8	1.5	16.3
100,000 lb or more	4.0	.2	9.8	1.8	8.5	1.4	5.6
Truck	3.5	—	13.7	—	7.6	—	4.9
Less than 50 lb	10.4	.3	11.5	—	14.7	—	7.7
50 to 99 lb	11.3	.1	12.9	—	10.4	—	11.8
100 to 499 lb	6.4	.5	12.8	.2	6.5	.1	8.1
500 to 749 lb	8.4	.2	11.8	—	11.4	.1	6.1
750 to 999 lb	9.6	.2	11.3	—	7.1	—	8.8
1,000 to 9,999 lb	6.6	1.1	7.6	.8	6.1	.7	5.0
10,000 to 49,999 lb	4.3	1.6	9.1	3.8	5.8	1.4	10.3
50,000 to 99,999 lb	23.5	1.3	28.5	4.4	21.3	1.8	16.9
100,000 lb or more	15.4	.2	26.1	1.1	23.8	1.1	29.5
For-hire truck	5.7	—	18.1	—	10.2	—	6.0
Less than 50 lb	18.1	.3	21.5	—	18.2	—	11.1
50 to 99 lb	20.0	.2	25.3	—	12.4	—	11.9
100 to 499 lb	8.2	.6	12.5	.1	6.6	.2	6.2
500 to 749 lb	8.9	.3	12.5	—	12.0	.2	6.9
750 to 999 lb	10.9	.3	13.7	—	7.8	.1	9.1
1,000 to 9,999 lb	5.3	.7	11.5	.4	8.0	.7	4.0
10,000 to 49,999 lb	4.8	1.0	14.9	3.6	8.1	1.7	10.3
50,000 to 99,999 lb	37.8	1.5	37.3	3.7	35.3	2.0	9.3
100,000 lb or more	14.3	.2	20.7	.8	29.6	1.5	17.8
Private truck	5.3	—	22.2	—	8.6	—	8.9
Less than 50 lb	11.1	.3	10.1	—	15.5	—	12.8
50 to 99 lb	15.5	.2	10.6	—	13.8	—	17.7
100 to 499 lb	7.7	.8	13.7	.3	10.3	.2	11.7
500 to 749 lb	10.1	.2	11.8	.1	13.3	.1	11.0
750 to 999 lb	9.2	.2	11.3	—	12.7	.1	8.7
1,000 to 9,999 lb	11.1	2.2	8.1	1.4	8.7	1.5	7.3
10,000 to 49,999 lb	10.9	3.2	13.3	5.7	10.8	3.6	10.8
50,000 to 99,999 lb	16.2	1.5	43.6	6.4	22.3	3.5	31.7
100,000 lb or more	23.4	.4	38.4	1.4	37.1	2.0	S
Rail	19.1	—	9.2	—	8.7	—	8.2
Less than 50 lb	S	S	S	S	S	S	S
50 to 99 lb	S	S	S	S	S	S	31.6
100 to 499 lb	S	S	S	S	S	S	31.6
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	S	S	S	S	S	S	31.6
1,000 to 9,999 lb	S	S	49.9	—	43.1	—	33.2
10,000 to 49,999 lb	45.5	11.3	23.6	.5	19.8	.9	19.3
50,000 to 99,999 lb	S	S	31.3	.7	34.2	.9	8.7
100,000 lb or more	6.9	11.8	9.0	.8	8.9	1.1	4.6
Water	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—

See footnote at end of table.

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

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

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
Single modes—Con.							
Great Lakes	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Air (includes truck and air)	26.8	—	18.0	—	18.3	—	3.3
Less than 50 lb	31.9	6.2	27.6	2.0	29.1	1.7	3.3
50 to 99 lb	40.0	2.2	16.0	1.0	21.3	1.0	6.0
100 to 499 lb	35.4	5.5	24.5	5.5	23.1	6.2	11.7
500 to 749 lb	S	S	S	S	S	S	11.4
750 to 999 lb	S	S	45.8	.3	S	S	28.0
1,000 to 9,999 lb	23.3	3.7	27.2	7.7	27.4	8.2	13.5
10,000 to 49,999 lb	S	S	47.6	5.9	S	S	25.8
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Pipeline	28.9	—	34.2	—	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	42.1	14.9	42.1	14.9	S	S	S
50,000 to 99,999 lb	—	—	—	—	S	S	S
100,000 lb or more	29.1	14.9	34.3	14.9	S	S	S
Multiple modes	6.4	—	30.9	—	37.6	—	8.2
Less than 50 lb	8.4	2.1	11.5	2.2	7.5	2.2	8.2
50 to 99 lb	14.1	1.6	21.1	1.6	12.4	1.2	10.3
100 to 499 lb	11.7	1.9	31.1	4.0	27.8	3.4	14.3
500 to 749 lb	33.4	.4	S	S	26.3	.1	42.6
750 to 999 lb	40.7	.5	37.6	.3	45.4	.3	16.2
1,000 to 9,999 lb	S	S	38.1	.9	36.5	1.1	37.0
10,000 to 49,999 lb	24.7	1.3	19.2	5.0	35.3	7.8	10.8
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	S	S	S	S	S	S	29.8
Parcel, U.S. Postal Service or courier	6.7	—	19.5	—	10.4	—	8.2
Less than 50 lb	8.4	2.0	11.5	3.5	7.5	3.9	8.2
50 to 99 lb	14.1	1.6	21.1	1.4	12.4	1.9	10.3
100 to 499 lb	11.7	2.2	31.2	3.9	27.8	5.4	14.4
500 to 749 lb	33.8	.4	S	S	26.4	.5	42.6
750 to 999 lb	40.7	.6	37.7	.6	45.5	1.0	16.1
1,000 to 9,999 lb	S	S	S	S	S	S	36.5
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	20.2	—	40.5	—	45.7	—	9.8
Less than 50 lb	S	S	S	S	S	S	31.6
50 to 99 lb	S	S	S	S	S	S	31.6
100 to 499 lb	S	S	S	S	S	S	S
500 to 749 lb	S	S	S	S	S	S	31.6
750 to 999 lb	S	S	S	S	S	S	31.6
1,000 to 9,999 lb	32.4	.7	47.0	.1	45.7	.3	S
10,000 to 49,999 lb	24.9	8.0	19.6	13.8	35.5	13.3	10.7
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	S	S	S	S	S	S	29.8
Truck and water	S	S	S	S	S	S	42.8
Less than 50 lb	S	S	S	S	S	S	30.9
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	S	S	S	S	S	S	S
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	27.9
10,000 to 49,999 lb	S	S	S	S	S	S	31.8
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—

See footnote at end of table.

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

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

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
Multiple modes—Con.							
Rail and water	—	—	—	—	—	—	—
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	9.2	—	16.5	—	31.8	—	S
Less than 50 lb	21.3	1.8	23.8	.2	23.7	—	S
50 to 99 lb	27.6	.7	23.4	.1	32.2	—	46.5
100 to 499 lb	26.8	1.7	S	S	26.2	.3	48.5
500 to 749 lb	28.0	.9	19.2	.1	S	.6	45.5
750 to 999 lb	41.2	.7	26.9	.2	47.9	.2	S
1,000 to 9,999 lb	28.9	6.8	24.6	2.8	S	S	17.0
10,000 to 49,999 lb	14.3	4.6	17.6	7.3	31.1	6.9	21.6
50,000 to 99,999 lb	44.3	1.4	48.3	5.1	S	S	21.5
100,000 lb or more	41.6	2.3	S	S	37.3	5.2	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	2.7	—	12.1	—	6.2	—	6.3
01	Live animals and live fish	S	S	S	S	S	S	24.2
02	Cereal grains	S	S	S	S	S	S	S
03	Other agricultural products	17.4	.2	16.4	.2	15.5	.3	S
04	Animal feed and products of animal origin, n.e.c.	13.5	.2	16.0	.6	13.0	.2	27.9
05	Meat, fish, seafood, and their preparations	11.8	.3	11.3	.1	13.6	.3	S
06	Milled grain products and preparations, and bakery products	11.7	.2	10.3	.1	12.4	.2	23.4
07	Other prepared foodstuffs and fats and oils	9.5	.4	23.7	1.0	23.6	.9	26.7
08	Alcoholic beverages	8.5	—	14.0	—	13.3	—	8.0
09	Tobacco products	17.0	—	20.4	—	30.8	—	39.5
10	Monumental or building stone	18.4	—	25.9	—	19.3	—	11.8
11	Natural sands	49.7	—	48.4	.7	32.1	—	27.5
12	Gravel and crushed stone	37.5	.1	42.7	6.5	21.7	1.0	21.0
13	Nonmetallic minerals n.e.c.	9.7	—	15.6	1.3	16.0	2.4	17.8
14	Metallic ores and concentrates	32.2	—	S	S	S	S	38.5
15	Coal	S	S	S	S	S	S	31.6
17	Gasoline and aviation turbine fuel	40.6	1.3	48.5	3.3	46.8	1.5	7.8
18	Fuel oils	36.5	.4	38.9	.9	42.0	.6	13.4
19	Coal and petroleum products, n.e.c.	19.2	—	36.1	.5	23.1	.1	S
20	Basic chemicals	9.5	—	19.9	.2	10.9	.1	34.2
21	Pharmaceutical products	14.6	.3	28.5	—	38.2	—	16.2
22	Fertilizers	18.9	—	17.1	.2	26.6	.3	40.7
23	Chemical products and preparations, n.e.c.	12.8	.5	15.8	.4	13.2	.7	12.2
24	Plastics and rubber	10.7	.5	14.3	.2	17.7	.5	12.6
25	Logs and other wood in the rough	36.1	.1	S	S	35.1	.8	47.5
26	Wood products	7.0	.2	44.6	2.2	20.6	1.1	22.7
27	Pulp, newsprint, paper, and paperboard	13.0	.3	17.1	.5	19.7	1.6	17.1
28	Paper or paperboard articles	9.1	.3	6.7	.2	14.1	.5	10.7
29	Printed products	14.1	.3	S	S	15.0	.1	14.6
30	Textiles, leather, and articles of textiles or leather	9.4	1.1	12.0	.2	26.7	1.1	6.8
31	Nonmetallic mineral products	12.5	.2	30.3	2.1	16.3	.9	14.4
32	Base metal in primary or semifinished forms and in finished basic shapes	8.5	.3	18.4	.5	22.8	.8	13.3
33	Articles of base metal	11.9	.4	16.2	.1	28.6	.6	14.8
34	Machinery	15.0	.7	14.3	—	16.3	.2	15.8
35	Electronic and other electrical equipment and components and office equipment	8.8	.7	20.6	.1	32.3	.6	13.9
36	Motorized and other vehicles (including parts)	15.1	1.7	18.3	.2	20.9	.5	10.0
37	Transportation equipment, n.e.c.	40.8	1.2	17.4	—	20.4	.1	12.5
38	Precision instruments and apparatus	20.2	.6	24.7	—	S	S	17.7
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	20.6	.3	20.0	—	18.7	.1	11.6
40	Miscellaneous manufactured products	9.4	.4	18.3	.4	27.5	1.1	11.3
41	Waste and scrap	43.9	.2	34.2	.4	34.9	.7	26.4
43	Mixed freight	38.4	1.8	38.0	.5	29.7	.3	18.5
--	Commodity unknown	31.6	.1	43.2	—	45.5	—	26.9

— 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	2.7	—	12.1	—	6.2	—	6.3
Single modes	3.1	.7	12.4	.6	7.1	2.0	3.7
Truck	3.5	1.0	13.7	1.4	7.6	1.4	4.9
For-hire truck	5.7	1.8	18.1	4.0	10.2	2.1	6.0
Private truck	5.3	1.5	22.2	4.7	8.6	1.6	8.9
Rail	19.1	1.0	9.2	.9	8.7	1.7	8.2
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	26.8	.5	18.0	—	18.3	—	3.3
Pipeline	28.9	—	34.2	.6	S	S	S
Multiple modes	6.4	.7	30.9	.5	37.6	1.9	8.2
Parcel, U.S. Postal Service or courier	6.7	.7	19.5	—	10.4	.1	8.2
Truck and rail	20.2	.1	40.5	.5	45.7	1.9	9.8
Truck and water	S	S	S	S	S	S	42.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	9.2	.3	16.5	.3	31.8	1.1	S
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	S	S	S	S	S	S	24.2
Single modes	S	S	S	S	S	S	24.2
Truck	S	S	S	S	S	S	24.2
For-hire truck	S	S	S	S	S	S	29.8
Private truck	S	S	S	S	S	S	24.9
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 02, CEREAL GRAINS							
Total	S	S	S	S	S	S	S
Single modes	S	S	S	S	S	S	48.5
Truck	S	S	S	S	S	S	48.5
For-hire truck	S	S	S	S	S	S	31.6
Private truck	S	S	S	S	S	S	26.5
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
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	48.0

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 03, OTHER AGRICULTURAL PRODUCTS							
Total	17.4	—	16.4	—	15.5	—	S
Single modes	17.5	.5	16.3	1.2	16.2	6.4	S
Truck	20.1	5.7	19.8	6.0	25.2	10.1	S
For-hire truck	25.1	9.4	28.6	9.4	21.4	10.4	11.4
Private truck	32.5	9.1	36.6	8.6	S	S	S
Rail	41.4	5.5	38.5	5.8	42.5	9.3	13.3
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	23.8
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	27.5
Truck and rail	S	S	S	S	S	S	28.0
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	27.3	.4	34.0	.7	32.4	.5	S
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	13.5	—	16.0	—	13.0	—	27.9
Single modes	13.7	2.1	17.0	3.6	13.3	1.2	31.5
Truck	13.8	2.1	17.3	3.5	13.4	1.5	31.6
For-hire truck	19.2	6.1	25.1	5.6	17.8	5.6	19.9
Private truck	22.8	6.9	24.7	6.4	18.1	5.3	20.8
Rail	S	S	46.2	.7	35.5	1.2	26.8
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	25.9
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	30.2
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	24.0
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	11.8	—	11.3	—	13.6	—	S
Single modes	13.8	4.5	13.1	3.9	15.0	3.2	S
Truck	13.8	4.5	13.0	3.8	14.7	3.2	S
For-hire truck	16.5	6.2	16.1	6.8	16.5	6.2	8.4
Private truck	20.9	7.1	21.6	6.9	18.9	4.7	48.6
Rail	S	S	S	S	S	S	30.8
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	29.9
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	40.8	3.3	23.6

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 06, MILLED GRAIN PRODUCTS AND PREPARATIONS, AND BAKERY PRODUCTS							
Total	11.7	—	10.3	—	12.4	—	23.4
Single modes	11.7	.7	10.4	.7	12.6	1.5	24.5
Truck	11.7	.7	10.4	.7	12.6	1.5	24.5
For-hire truck	20.1	6.7	21.8	6.4	22.3	6.6	5.5
Private truck	18.0	6.3	16.2	5.9	19.1	5.7	28.4
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	27.5
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	28.7
Truck and rail	S	S	S	S	S	S	28.3
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	36.4
SCTG 07, OTHER PREPARED FOODSTUFFS AND FATS AND OILS							
Total	9.5	—	23.7	—	23.6	—	26.7
Single modes	9.8	1.1	23.6	.9	23.0	1.0	20.7
Truck	9.7	1.4	24.8	2.5	25.5	4.1	20.8
For-hire truck	14.3	3.8	21.8	6.5	14.0	6.6	28.4
Private truck	9.6	4.2	37.4	7.9	S	S	23.8
Rail	45.8	1.3	44.6	2.3	46.3	4.5	24.0
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	30.0
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	28.4
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	28.3
Truck and rail	S	S	S	S	S	S	S
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	23.7	.4	37.7	.9	48.1	1.0	S
SCTG 08, ALCOHOLIC BEVERAGES							
Total	8.5	—	14.0	—	13.3	—	8.0
Single modes	8.5	.4	14.0	—	13.3	.1	7.9
Truck	8.5	.4	14.0	—	13.3	.1	7.9
For-hire truck	S	S	S	S	S	S	S
Private truck	11.3	6.1	17.9	8.6	14.7	4.3	8.1
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	30.9
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.6

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 09, TOBACCO PRODUCTS							
Total	17.0	—	20.4	—	30.8	—	39.5
Single modes	21.0	8.5	22.8	6.4	28.1	12.4	15.6
Truck	21.0	8.5	22.8	6.4	28.1	12.4	15.6
For-hire truck	S	S	S	S	S	S	29.8
Private truck	24.0	10.6	24.5	7.8	26.3	17.8	14.7
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	27.9
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	27.9
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 10, MONUMENTAL OR BUILDING STONE							
Total	18.4	—	25.9	—	19.3	—	11.8
Single modes	18.5	.3	26.0	.8	19.7	1.7	10.8
Truck	18.5	.3	26.0	.8	19.7	1.7	10.8
For-hire truck	17.0	7.6	30.7	6.3	29.3	9.8	11.3
Private truck	26.7	7.6	28.5	6.9	21.8	9.7	38.7
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	42.1	—	S	S	27.1
Parcel, U.S. Postal Service or courier	S	S	42.1	—	S	S	27.1
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 11, NATURAL SANDS							
Total	49.7	—	48.4	—	32.1	—	27.5
Single modes	49.6	.1	48.4	—	32.1	—	27.6
Truck	49.6	.1	48.4	—	32.1	—	27.6
For-hire truck	38.3	9.5	38.3	9.8	31.8	9.3	22.6
Private truck	S	S	S	S	S	S	32.1
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	30.3

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 12, GRAVEL AND CRUSHED STONE							
Total	37.5	—	42.7	—	21.7	—	21.0
Single modes	37.6	.2	42.8	.2	21.7	.1	21.1
Truck	39.6	2.8	45.4	3.4	29.3	8.7	20.3
For-hire truck	38.9	8.5	42.1	9.3	36.8	8.7	19.2
Private truck	S	S	S	S	47.6	10.6	S
Rail	23.2	2.7	23.1	3.3	31.9	8.6	22.4
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.4
SCTG 13, NONMETALLIC MINERALS N.E.C.							
Total	9.7	—	15.6	—	16.0	—	17.8
Single modes	9.0	4.4	16.1	3.6	17.6	7.8	21.2
Truck	10.7	4.2	15.3	5.8	22.5	3.7	24.1
For-hire truck	10.6	3.6	19.1	4.0	23.8	3.2	20.4
Private truck	20.2	1.0	30.2	4.2	29.5	1.1	S
Rail	18.1	5.3	18.4	6.9	19.8	7.5	4.2
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	29.9
Pipeline	28.9	1.8	34.2	7.0	S	S	S
Multiple modes	S	S	S	S	S	S	18.3
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	50.0
Truck and rail	S	S	S	S	S	S	19.2
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	47.2	—	S	S	39.7
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	32.2	—	S	S	S	S	38.5
Single modes	32.2	.5	S	S	S	S	42.4
Truck	32.4	7.2	40.0	8.6	S	S	48.7
For-hire truck	S	S	S	S	S	S	25.6
Private truck	43.4	13.4	34.7	15.1	40.2	17.0	S
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	31.6
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	39.2

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 15, COAL							
Total	S	S	S	S	S	S	31.6
Single modes	-	-	-	-	-	-	-
Truck	-	-	-	-	-	-	-
For-hire truck	-	-	-	-	-	-	-
Private truck	-	-	-	-	-	-	-
Rail	-	-	-	-	-	-	-
Water	-	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline	-	-	-	-	S	S	S
Multiple modes	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	-	-	-	-	-	-	-
SCTG 17, GASOLINE AND AVIATION TURBINE FUEL							
Total	40.6	-	48.5	-	46.8	-	7.8
Single modes	40.7	.2	48.5	.1	46.8	.4	7.8
Truck	40.7	.2	48.5	.1	46.8	.4	7.8
For-hire truck	S	S	S	S	S	S	10.1
Private truck	12.4	8.1	12.9	9.3	20.2	7.6	16.3
Rail	-	-	-	-	-	-	-
Water	-	-	-	-	-	-	-
Shallow draft	-	-	-	-	-	-	-
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	-	-	-	-	-	-	-
Pipeline	-	-	-	-	S	S	S
Multiple modes	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	-	-	-	-	-	-	-
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	35.6
SCTG 18, FUEL OILS							
Total	36.5	-	38.9	-	42.0	-	13.4
Single modes	36.6	.3	39.0	.3	42.1	-	12.9
Truck	36.6	.3	39.0	.3	42.1	-	12.9
For-hire truck	S	S	S	S	S	S	11.7
Private truck	14.8	6.6	16.8	6.8	26.9	6.0	21.1
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	31.2

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 19, COAL AND PETROLEUM PRODUCTS, N.E.C.							
Total	19.2	—	36.1	—	23.1	—	S
Single modes	19.7	1.4	36.5	1.2	23.2	.3	23.8
Truck	21.7	5.6	37.7	3.4	30.4	10.1	23.0
For-hire truck	47.1	5.9	38.3	4.0	34.9	2.5	14.8
Private truck	22.7	8.8	35.9	6.5	35.0	11.2	23.1
Rail	31.3	5.5	36.8	2.9	34.5	10.1	24.3
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	30.8	.6	39.5	—	S	S	21.3
Parcel, U.S. Postal Service or courier	30.8	.6	39.5	—	S	S	21.3
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 20, BASIC CHEMICALS							
Total	9.5	—	19.9	—	10.9	—	34.2
Single modes	10.5	1.7	20.0	.5	11.3	.7	46.1
Truck	11.5	3.4	23.0	4.0	14.8	4.8	46.7
For-hire truck	16.7	5.2	32.2	6.1	18.2	5.6	12.0
Private truck	13.8	4.6	18.6	5.5	17.4	2.6	S
Rail	35.1	2.9	36.2	3.8	27.5	5.0	36.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	29.1
Pipeline	—	—	—	—	S	S	S
Multiple modes	39.5	1.7	39.2	.1	34.8	.7	19.3
Parcel, U.S. Postal Service or courier	44.4	1.7	S	S	S	S	19.9
Truck and rail	S	S	S	S	48.4	.6	27.2
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	46.2	.2	S	S	49.6	—	40.4
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	14.6	—	28.5	—	38.2	—	16.2
Single modes	19.6	6.9	30.2	7.0	40.5	6.8	10.5
Truck	20.9	7.9	30.2	7.1	40.5	6.9	10.1
For-hire truck	22.9	7.3	34.7	7.9	42.4	7.4	8.1
Private truck	29.4	3.6	33.6	7.4	37.9	6.0	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	41.4	.1	41.5	.1	25.9
Pipeline	—	—	—	—	S	S	S
Multiple modes	29.3	6.8	40.4	6.7	49.8	6.8	15.3
Parcel, U.S. Postal Service or courier	29.3	6.8	40.4	6.7	49.8	6.8	15.3
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	
SCTG 22, FERTILIZERS							
Total	18.9	—	17.1	—	26.6	—	40.7
Single modes	19.6	1.7	17.6	1.1	26.7	.2	31.7
Truck	18.1	5.4	16.6	5.7	17.6	8.9	32.8
For-hire truck	30.9	5.6	28.3	5.6	26.1	8.1	23.6
Private truck	20.3	7.3	19.5	6.2	20.1	5.4	46.9
Rail	39.1	5.1	35.4	5.6	35.2	9.0	13.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	12.8	—	15.8	—	13.2	—	12.2
Single modes	11.4	2.9	16.9	2.8	12.9	1.5	10.2
Truck	11.0	3.2	17.4	3.6	14.0	3.2	10.4
For-hire truck	13.3	3.3	16.2	4.5	12.9	2.6	5.7
Private truck	22.9	3.2	32.2	4.5	32.6	1.7	29.9
Rail	40.1	.6	29.1	1.2	39.1	3.3	16.4
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	41.1	—	40.4	—	38.6	—	18.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	44.4	.5	50.0	1.5	12.8
Parcel, U.S. Postal Service or courier	S	S	44.1	.2	38.2	.3	12.9
Truck and rail	S	S	S	S	S	S	28.2
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	34.9	.2	S
SCTG 24, PLASTICS AND RUBBER							
Total	10.7	—	14.3	—	17.7	—	12.6
Single modes	11.5	2.9	15.0	1.7	17.7	2.5	14.6
Truck	11.6	2.7	14.7	1.7	17.1	2.5	13.7
For-hire truck	12.3	3.4	18.5	3.6	18.8	2.2	10.5
Private truck	17.6	3.6	14.8	4.2	23.1	2.8	12.6
Rail	41.9	.6	41.1	1.5	42.7	2.6	26.1
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	42.5	.2	S	S	40.8	—	16.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	21.1	1.7	32.0	.6	S	S	7.9
Parcel, U.S. Postal Service or courier	20.0	1.5	20.3	.4	25.7	.7	7.9
Truck and rail	S	S	S	S	S	S	21.6
Truck and water	S	S	S	S	S	S	29.8
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	42.5	1.4	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 25, LOGS AND OTHER WOOD IN THE ROUGH							
Total	36.1	—	S	S	35.1	—	47.5
Single modes	36.7	1.6	S	S	35.5	2.0	34.2
Truck	36.6	2.9	S	S	34.4	4.8	33.4
For-hire truck	32.1	7.5	44.5	8.1	35.5	7.8	S
Private truck	45.8	7.6	S	S	38.4	7.1	30.9
Rail	S	S	S	S	S	S	37.7
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	48.1
SCTG 26, WOOD PRODUCTS							
Total	7.0	—	44.6	—	20.6	—	22.7
Single modes	7.3	.7	45.4	.8	21.0	.7	21.7
Truck	7.9	2.0	49.0	3.4	27.0	4.3	11.1
For-hire truck	6.6	3.3	10.8	8.9	7.1	5.1	12.5
Private truck	15.3	4.3	S	S	S	S	14.1
Rail	15.0	1.3	19.5	2.8	16.7	3.8	9.6
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	37.4	.4	S	S	S	S	27.7
Parcel, U.S. Postal Service or courier	46.9	.4	37.0	—	32.3	—	28.7
Truck and rail	S	S	S	S	S	S	30.3
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	43.4	.6	42.4	.9	S	S	S
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	13.0	—	17.1	—	19.7	—	17.1
Single modes	13.4	.9	17.2	.5	19.9	1.8	16.3
Truck	12.7	3.1	16.0	3.2	16.4	3.3	17.2
For-hire truck	13.5	2.5	17.0	2.0	16.8	2.8	12.8
Private truck	14.5	1.9	16.9	2.6	27.5	1.3	13.3
Rail	19.3	3.6	20.2	3.6	23.9	4.5	8.0
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	31.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	24.6	.7	32.4	.5	33.4	1.8	39.8
Parcel, U.S. Postal Service or courier	39.5	.2	S	S	42.3	—	39.5
Truck and rail	41.1	.8	36.1	.5	34.4	1.8	24.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	36.2	.4	42.8	.2	43.9	—	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 28, PAPER OR PAPERBOARD ARTICLES							
Total	9.1	—	6.7	—	14.1	—	10.7
Single modes	9.0	.9	6.9	.7	14.2	.8	11.6
Truck	9.7	1.2	4.8	3.3	11.0	6.6	12.3
For-hire truck	11.3	4.9	8.0	5.2	12.2	6.2	15.3
Private truck	23.8	4.3	21.2	4.1	21.8	2.2	24.2
Rail	42.0	1.5	40.9	3.5	42.5	6.8	31.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	30.3
Pipeline	—	—	—	—	S	S	S
Multiple modes	24.1	.6	28.1	.3	38.5	.7	13.4
Parcel, U.S. Postal Service or courier	37.3	.6	48.9	.2	33.6	.1	13.7
Truck and rail	46.5	.4	43.6	.3	48.6	.7	25.3
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	41.4	.7	46.6	.6	S	S	S
SCTG 29, PRINTED PRODUCTS							
Total	14.1	—	S	S	15.0	—	14.6
Single modes	18.4	5.6	S	S	16.9	6.9	37.0
Truck	20.3	5.9	S	S	17.9	6.8	34.5
For-hire truck	18.3	3.7	30.8	7.2	21.9	6.7	S
Private truck	25.1	5.0	S	S	40.2	5.4	40.3
Rail	S	S	S	S	S	S	38.1
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	33.5	1.3	30.8	.6	32.0	2.0	26.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	28.8	5.3	35.4	4.0	S	S	15.9
Parcel, U.S. Postal Service or courier	29.6	5.0	42.2	3.7	S	S	15.9
Truck and rail	S	S	S	S	S	S	28.7
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	28.5	.6	S	S	S	S	S
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	9.4	—	12.0	—	26.7	—	6.8
Single modes	9.4	1.2	11.6	1.3	22.9	2.3	3.5
Truck	9.4	1.2	11.7	1.3	23.0	2.3	3.7
For-hire truck	12.4	2.2	16.5	3.0	22.7	3.0	2.8
Private truck	10.3	2.8	11.2	3.3	25.0	2.1	14.1
Rail	S	S	S	S	S	S	41.8
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	34.2	—	28.3	—	32.0	—	12.4
Pipeline	—	—	—	—	S	S	S
Multiple modes	22.0	1.0	S	S	S	S	5.1
Parcel, U.S. Postal Service or courier	13.1	.6	14.1	—	13.9	.2	5.1
Truck and rail	S	S	S	S	S	S	22.9
Truck and water	S	S	S	S	S	S	43.3
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	28.1	.8	48.3	1.1	36.4	1.2	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	12.5	—	30.3	—	16.3	—	14.4
Single modes	12.4	.8	31.0	2.7	16.3	5.2	27.5
Truck	12.6	.9	31.3	2.9	17.4	6.0	27.7
For-hire truck	8.7	4.9	15.6	7.1	14.5	5.8	11.8
Private truck	21.0	4.9	38.5	8.8	37.9	6.1	23.4
Rail	35.2	.3	37.3	.8	40.9	2.7	19.2
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	36.2	.6	S	S	S	S	16.1
Parcel, U.S. Postal Service or courier	20.7	.2	36.9	—	32.0	—	16.1
Truck and rail	S	S	S	S	S	S	32.0
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	39.3	.5	S	S	S	S	36.0
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	8.5	—	18.4	—	22.8	—	13.3
Single modes	8.2	.9	17.7	3.8	17.3	8.6	16.2
Truck	9.2	2.6	7.7	7.5	8.4	9.5	16.5
For-hire truck	13.8	8.0	14.9	10.0	14.6	8.9	9.4
Private truck	26.0	7.7	23.1	8.4	25.9	7.3	19.4
Rail	39.0	2.0	S	S	S	S	S
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	29.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	19.0
Parcel, U.S. Postal Service or courier	47.7	.6	30.1	—	26.0	—	19.0
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	41.1	.6	S	S	S	S	31.5
SCTG 33, ARTICLES OF BASE METAL							
Total	11.9	—	16.2	—	28.6	—	14.8
Single modes	11.3	4.3	17.8	4.5	23.9	8.5	24.9
Truck	11.3	5.0	17.6	5.0	19.7	9.9	25.7
For-hire truck	13.0	3.7	20.0	3.6	19.6	8.5	13.3
Private truck	12.5	3.1	16.6	3.3	32.2	2.9	13.9
Rail	S	S	S	S	S	S	30.5
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	12.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	25.3	3.8	29.2	.8	21.1	.8	17.7
Parcel, U.S. Postal Service or courier	25.3	3.8	29.2	.8	21.1	.8	17.7
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 34, MACHINERY							
Total	15.0	—	14.3	—	16.3	—	15.8
Single modes	15.3	3.2	15.7	2.8	20.2	3.9	23.7
Truck	15.8	2.9	15.1	2.5	19.6	3.6	22.0
For-hire truck	17.0	2.7	16.5	3.1	20.7	4.2	27.4
Private truck	11.8	1.1	23.7	2.3	24.5	1.3	43.7
Rail	S	S	S	S	S	S	30.2
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	36.7	.1	33.9	.3	11.3
Pipeline	—	—	—	—	S	S	S
Multiple modes	18.8	3.0	24.9	2.4	19.3	4.0	17.1
Parcel, U.S. Postal Service or courier	21.9	2.9	36.3	2.2	23.7	1.6	17.1
Truck and rail	38.9	1.1	36.5	1.4	36.1	3.9	22.5
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	22.8	.7	19.0	.6	34.0	.6	S
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	8.8	—	20.6	—	32.3	—	13.9
Single modes	12.1	3.7	24.1	2.8	35.4	3.9	25.7
Truck	12.5	3.8	24.7	2.9	36.6	4.1	36.4
For-hire truck	8.0	2.9	12.5	7.1	21.4	9.0	6.0
Private truck	27.0	4.1	S	S	S	S	S
Rail	S	S	S	S	S	S	28.5
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	25.9	1.2	43.2	.3	S	S	8.3
Pipeline	—	—	—	—	S	S	S
Multiple modes	11.3	3.0	19.6	2.4	15.5	3.4	13.3
Parcel, U.S. Postal Service or courier	11.4	3.0	20.9	2.4	19.0	3.4	13.3
Truck and rail	S	S	S	S	S	S	28.7
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	18.8	1.0	24.7	.8	34.9	.7	S
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	15.1	—	18.3	—	20.9	—	10.0
Single modes	16.6	2.6	19.3	3.1	21.7	3.5	22.7
Truck	17.7	7.6	19.0	5.7	22.2	8.4	28.8
For-hire truck	19.5	5.9	23.2	5.4	25.7	7.6	8.1
Private truck	24.3	3.5	22.8	5.2	48.9	6.2	S
Rail	41.0	8.0	43.0	5.4	42.1	8.6	26.0
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	13.5
Pipeline	—	—	—	—	S	S	S
Multiple modes	13.7	1.9	20.6	1.2	23.7	1.0	5.9
Parcel, U.S. Postal Service or courier	12.6	1.7	17.5	.6	14.9	.5	5.9
Truck and rail	S	S	S	S	S	S	26.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	35.4	1.7	44.4	3.0	43.9	3.5	22.8

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 37, TRANSPORTATION EQUIPMENT, N.E.C.							
Total	40.8	—	17.4	—	20.4	—	12.5
Single modes	47.5	7.4	17.6	.9	21.0	2.5	13.9
Truck	48.9	9.5	19.1	14.5	26.1	13.0	19.8
For-hire truck	S	S	29.7	2.5	42.1	4.7	20.8
Private truck	S	S	40.8	13.3	42.7	9.8	26.2
Rail	25.1	6.7	22.2	15.3	24.0	14.9	18.8
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	49.0	.7	S	S	18.7
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	45.2	.9	S	S	17.6
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	22.5
Truck and rail	S	S	S	S	S	S	31.3
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	47.6	.5	S	S	S	S	30.9
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	20.2	—	24.7	—	S	S	17.7
Single modes	19.8	6.8	25.4	7.8	S	S	24.5
Truck	20.8	7.5	25.4	8.0	S	S	32.5
For-hire truck	22.4	7.5	28.8	9.3	S	S	S
Private truck	S	S	S	S	S	S	31.6
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	41.1	1.7	46.1	.4	S	S	34.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	37.7	6.5	S	S	S	S	14.0
Parcel, U.S. Postal Service or courier	37.7	6.5	S	S	S	S	14.0
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	20.6	—	20.0	—	18.7	—	11.6
Single modes	21.1	2.2	20.2	1.2	18.5	3.3	13.8
Truck	21.1	2.2	20.2	1.2	18.4	3.3	13.8
For-hire truck	31.1	7.3	29.2	7.7	22.5	5.7	8.7
Private truck	25.5	5.3	24.3	6.1	27.9	4.0	41.8
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	38.6	.1	33.7	—	34.3	—	8.1
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	39.5	.9	9.4
Parcel, U.S. Postal Service or courier	S	S	S	S	42.7	.9	9.5
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 40, MISCELLANEOUS MANUFACTURED PRODUCTS							
Total	9.4	—	18.3	—	27.5	—	11.3
Single modes	13.1	4.4	18.4	3.4	31.3	6.7	17.8
Truck	13.3	4.5	19.0	3.5	35.6	6.7	18.4
For-hire truck	17.2	5.7	26.0	7.5	36.6	8.4	9.8
Private truck	19.8	3.4	33.6	6.9	45.1	4.9	33.8
Rail	S	S	S	S	S	S	26.4
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	30.6	.3	33.5	—	35.0	—	8.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	15.8	4.2	42.8	1.3	36.2	3.7	13.4
Parcel, U.S. Postal Service or courier	15.2	3.7	S	S	37.5	1.0	13.4
Truck and rail	S	S	42.2	1.2	43.2	2.9	25.9
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	27.0	.6	S	S	S	S	S
SCTG 41, WASTE AND SCRAP							
Total	43.9	—	34.2	—	34.9	—	26.4
Single modes	44.2	1.2	31.8	2.2	32.8	1.9	27.4
Truck	S	S	34.5	10.5	36.2	9.9	30.6
For-hire truck	37.5	8.5	41.8	7.3	39.0	7.4	10.8
Private truck	S	S	46.1	9.2	S	S	S
Rail	49.8	5.6	36.1	10.3	28.8	10.2	34.6
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	29.6
SCTG 43, MIXED FREIGHT							
Total	38.4	—	38.0	—	29.7	—	18.5
Single modes	40.6	3.8	39.6	3.5	31.4	4.2	14.6
Truck	40.7	3.8	39.6	3.5	31.3	4.2	15.0
For-hire truck	39.7	3.2	39.2	5.3	38.5	8.8	25.1
Private truck	42.1	5.9	41.7	7.2	37.5	10.6	14.9
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	26.4
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	26.4
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
COMMODITY UNKNOWN							
Total	31.6	—	43.2	—	45.5	—	26.9
Single modes	36.0	4.4	38.8	13.3	34.6	10.5	34.5
Truck	36.0	4.4	38.8	13.3	34.6	10.1	36.7
For-hire truck	31.9	6.8	S	S	34.6	11.2	22.8
Private truck	45.4	7.9	28.9	16.8	45.8	13.8	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	30.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	49.4	4.5	S	S	S	S	16.6
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	16.6
Truck and rail	S	S	S	S	S	S	43.0
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

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

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

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

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

State of destination	Value		Tons		Ton-miles	
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage
Total	2.7	—	12.1	—	6.2	—
NEW ENGLAND STATES						
Connecticut	16.0	—	16.1	—	16.8	—
Maine	17.6	—	25.3	.2	25.6	.9
Massachusetts	8.4	—	8.9	—	9.6	.1
New Hampshire	31.5	—	28.9	—	29.8	.1
Rhode Island	20.1	—	S	S	S	S
Vermont	35.7	—	34.7	—	34.9	—
MIDDLE ATLANTIC STATES						
New Jersey	11.6	.2	6.8	—	6.7	—
New York	15.0	.3	8.1	—	8.5	.3
Pennsylvania	14.9	.3	17.3	.1	16.8	.6
EAST NORTH CENTRAL STATES						
Illinois	7.1	.1	19.7	—	18.6	.6
Indiana	22.2	.3	12.5	—	15.2	.2
Michigan	9.8	.2	11.1	.1	10.4	.3
Ohio	5.0	.2	7.3	—	7.3	.2
Wisconsin	6.5	—	15.4	—	16.3	.5
WEST NORTH CENTRAL STATES						
Iowa	13.8	—	21.0	—	24.1	—
Kansas	17.2	—	34.7	—	39.1	.3
Minnesota	17.2	.1	23.3	—	25.2	.4
Missouri	18.4	.3	11.7	—	12.4	.2
Nebraska	22.4	—	25.1	—	25.0	—
North Dakota	45.5	—	38.1	—	40.2	.3
South Dakota	23.9	—	25.8	—	26.8	—
SOUTH ATLANTIC STATES						
Delaware	19.3	—	37.8	—	36.9	—
District of Columbia	30.7	—	39.4	—	37.9	—
Florida	10.7	.9	5.6	.5	5.4	.6
Georgia	5.2	1.2	15.6	2.5	14.3	1.5
Maryland	15.3	.1	11.1	—	12.1	.1
North Carolina	5.2	.3	8.7	.2	7.9	.3
South Carolina	6.9	.3	8.9	.4	9.9	.4
Virginia	7.2	—	21.4	.1	20.7	.4
West Virginia	13.5	—	17.7	—	15.9	.1
EAST SOUTH CENTRAL STATES						
Alabama	6.2	.2	11.4	.5	12.0	.5
Kentucky	5.1	—	19.8	.1	16.0	.2
Mississippi	13.8	.2	25.3	.2	24.8	.4
Tennessee	10.9	.4	23.2	.4	19.8	.4
WEST SOUTH CENTRAL STATES						
Arkansas	25.5	.2	13.9	—	15.4	.2
Louisiana	4.7	—	28.2	.1	27.5	.4
Oklahoma	14.6	—	11.2	—	11.8	—
Texas	9.0	.3	10.9	.1	10.1	.4
MOUNTAIN STATES						
Arizona	18.6	.1	19.6	—	19.2	.2
Colorado	23.8	—	23.2	—	22.2	.1
Idaho	44.0	—	35.7	—	36.1	.1
Montana	25.1	—	31.0	—	32.6	—
Nevada	16.8	—	S	S	S	S
New Mexico	25.5	—	26.5	—	27.5	—
Utah	34.3	—	30.8	—	30.3	.1
Wyoming	40.6	—	S	S	S	S
PACIFIC STATES						
Alaska	20.5	—	27.4	—	27.4	—
California	21.6	.7	9.8	—	10.0	.5
Hawaii	S	S	S	S	S	S
Oregon	24.4	—	36.9	—	38.4	.2
Washington	23.1	—	41.8	—	42.5	.9

— 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	2.0	—	9.9	—	8.5	—
NEW ENGLAND STATES						
Connecticut	19.5	.2	22.1	—	24.4	.2
Maine	13.1	—	49.5	—	48.5	.3
Massachusetts	17.6	.2	16.5	—	16.5	—
New Hampshire	16.7	—	22.7	—	22.3	—
Rhode Island	25.3	—	32.5	—	33.2	—
Vermont	16.6	—	13.3	—	13.0	—
MIDDLE ATLANTIC STATES						
New Jersey	26.3	.7	13.6	—	13.3	.2
New York	10.5	.2	18.6	—	18.5	.2
Pennsylvania	25.4	.7	9.9	—	9.5	.2
EAST NORTH CENTRAL STATES						
Illinois	7.9	.3	12.2	.2	10.8	.4
Indiana	21.5	.4	20.8	.2	20.1	.4
Michigan	13.3	.4	12.5	—	14.4	.3
Ohio	3.8	.1	13.7	.1	14.3	.6
Wisconsin	11.7	.2	18.7	—	19.3	.3
WEST NORTH CENTRAL STATES						
Iowa	13.0	.1	16.3	—	16.1	.2
Kansas	35.1	.2	17.1	—	16.4	.1
Minnesota	13.1	.1	23.3	—	23.7	.3
Missouri	15.3	.2	16.4	.1	17.4	.4
Nebraska	14.8	—	S	S	S	S
North Dakota	41.1	—	S	S	S	S
South Dakota	S	S	26.0	—	30.6	—
SOUTH ATLANTIC STATES						
Delaware	30.5	.1	16.8	—	16.6	—
District of Columbia	S	S	S	S	S	S
Florida	19.2	.7	S	S	29.4	1.0
Georgia	5.2	1.5	15.6	4.2	14.3	2.2
Maryland	19.6	—	22.6	—	23.2	—
North Carolina	13.5	.6	18.2	.2	21.5	.3
South Carolina	11.7	.6	10.4	.2	10.0	.2
Virginia	9.4	.2	S	S	S	S
West Virginia	18.1	—	20.0	.3	21.5	.7
EAST SOUTH CENTRAL STATES						
Alabama	6.6	.2	7.7	.4	13.2	.5
Kentucky	14.2	.2	32.0	1.5	39.6	2.5
Mississippi	26.2	.3	10.2	—	10.3	.2
Tennessee	9.4	.4	14.0	.3	14.7	.3
WEST SOUTH CENTRAL STATES						
Arkansas	9.4	—	14.2	—	16.1	.2
Louisiana	16.6	.2	35.2	.5	30.9	.7
Oklahoma	14.7	—	20.3	—	19.7	—
Texas	8.3	.3	28.4	.9	25.3	2.0
MOUNTAIN STATES						
Arizona	20.1	—	S	S	S	S
Colorado	13.3	—	37.2	—	37.8	.1
Idaho	35.9	—	22.5	—	22.4	—
Montana	28.4	—	21.9	—	22.4	—
Nevada	41.0	—	30.4	—	28.3	—
New Mexico	31.0	—	S	S	S	S
Utah	27.8	—	16.9	—	16.8	—
Wyoming	31.5	—	S	S	S	S
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	25.1	1.0	12.5	—	13.8	.5
Hawaii	S	S	S	S	S	S
Oregon	34.4	.1	17.9	—	23.6	.2
Washington	11.5	—	13.2	—	13.2	.2

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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

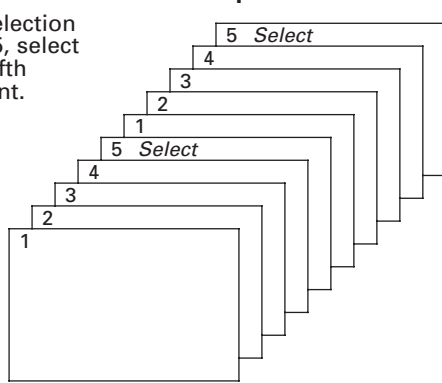
4 — Railroad
Continued →

SELECTING YOUR SAMPLE OF SHIPMENTS

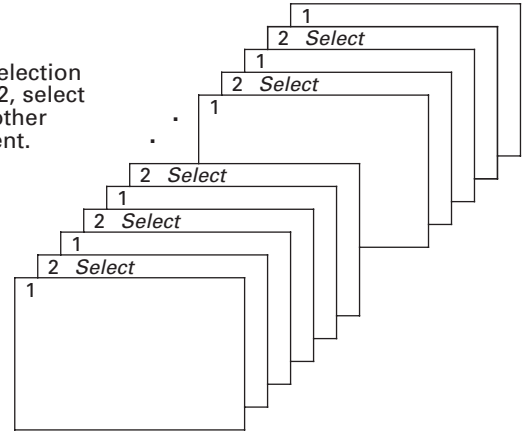
1. Use the file or combination of files that best reflects your full range of outbound shipping activities.
2. Begin with the first shipment. Count the shipments until you reach your selection rate. Select this shipment to report on in item F.
3. Continue counting with the next shipment. Count this shipment 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								
13								
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34								

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

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

2 — Private truck
3 — For-hire truck

4 — Railroad
Continued 

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


5 — Shallow draft vessel
6 — Deep draft vessel

7 — Pipeline
8 — Air

9 — Other mode
0 — Unknown

Item F SHIPMENT CHARACTERISTICS — Continued

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

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

Item G

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

Yes

No

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

Yes

No

If yes to item G1 or item G2:

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

Yes

No

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

Total value in whole dollars

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

Yes

No

Item J CERTIFICATION

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

**1997 COMMODITY FLOW SURVEY
CENSUS OF TRANSPORTATION**

Reporting period:

Please return by:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Month	Day	Year

DO NOT PROCEED UNTIL YOU HAVE COMPLETED ITEM D.

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

Item E SAMPLING INSTRUCTIONS

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

FINDING YOUR SELECTION RATE

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

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

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

Please enter your selection rate. →

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

CONTINUE ON NEXT PAGE. ↗

Item F SHIPMENT CHARACTERISTICS

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

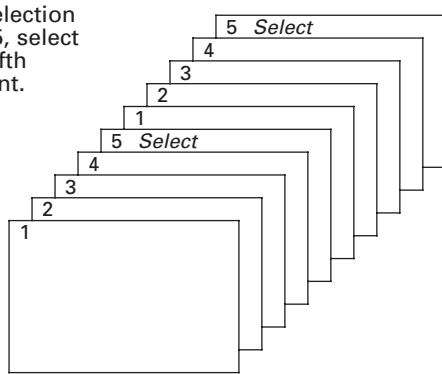
Mode of transport codes for columns (k) and (n) **1** — Parcel delivery, courier, or U.S. Postal Service **2** — Private truck **3** — For-hire truck **4** — Railroad *Continued* →

SELECTING YOUR SAMPLE OF SHIPMENTS

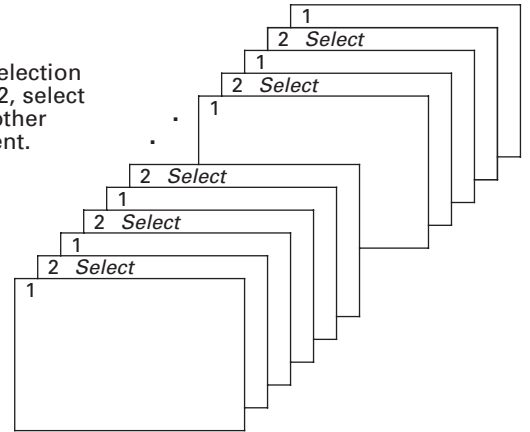
1. Use the file or combination of files that best reflects your full range of outbound shipping activities.
2. Begin with the first shipment. Count the shipments until you reach your selection rate. Select this shipment to report on in item F.
3. Continue counting with the next shipment. Count this shipment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

In the following examples, each rectangle represents one shipment.

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



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



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

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

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

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

Item F SHIPMENT CHARACTERISTICS — Continued

Line No. (a)	Shipment ID Number (b)	Shipment date (c)		Shipment value (excluding shipping costs) in whole dollars (d)	Shipment weight in pounds (e)	Commodity code from SCTG Manual (f)	Commodity description (g)	If a hazardous material, enter the "UN" or "NA" number (h)
		Month	Day					
10								
11								
12								
13								
14								
15								
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32								
33								
34								

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

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

2 — Private truck
3 — For-hire truck

4 — Railroad
Continued →

Containerized? (Y/N)	U.S. destination <i>(Complete for all shipments.)</i>			Mode(s) of transport to U.S. destination <i>Enter all that apply in order used. Use codes below.</i>	Export? (Y/N)	Foreign destination <i>(for export shipments only)</i> Note: In column (j) enter the U.S. port, airport, or border crossing of exit.		Export mode (n)	Line No. (o)
	(j)					(m)			
(i)	City	State	ZIP Code	(k)	(l)	City	Country	(n)	(o)
									10
									11
									12
									13
									14
									15
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									17
									18
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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 <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 (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.

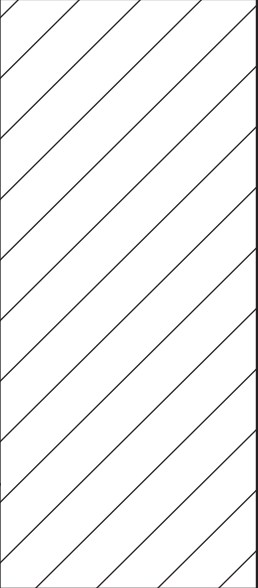
Type of shipping facility (a)	Did you use this type of off-site facility for outbound shipments during 1997? (b)	Distance to the off-site facility of this type that you used most in 1997 (Report in miles – estimates are acceptable) (c)	Mode of transport used to reach that facility (Enter a code from 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	4 — Railroad
	3 — For-hire truck		Continued →

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE – Continued

Item F: Shipment Characteristics – Continued

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

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

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

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE – Continued

Item F: Shipment Characteristics – Continued

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

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

Items G – I

Please enter the information requested.

Item J: Certification

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

PART III – MODE DEFINITIONS

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

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

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

Railroad– Any common carrier or private railroad.

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

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

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

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

Other mode – Any mode not listed above.

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

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

PART IV -- STATE ABBREVIATION LIST

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

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

