

Oklahoma

1997

Issued December 1999

EC97TCF-OK

1997 Economic Census

Transportation

1997 Commodity Flow Survey



U.S. Department of Transportation
BUREAU OF TRANSPORTATION STATISTICS

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



ACKNOWLEDGMENTS

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

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

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

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

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

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

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

Oklahoma 1997

EC97TCF-OK

Issued December 1999

1997 Economic Census *Transportation* 1997 Commodity Flow Survey



**U.S. Department of
Transportation**
Rodney E. Slater,
Secretary
Mortimer L. Downey,
Deputy Secretary

**BUREAU OF TRANSPORTATION
STATISTICS**
Dr. Ashish Sen,
Director
Rick Kowalewski,
Deputy Director
Rolf R. Schmitt,
Associate Director for
Transportation Studies



U.S. Department of Commerce
William M. Daley,
Secretary
Robert L. Mallett,
Deputy Secretary

**Economics
and Statistics
Administration**
Robert J. Shapiro,
Under Secretary for
Economic Affairs

U.S. CENSUS BUREAU
Kenneth Prewitt,
Director



**Economics
and Statistics
Administration**

Robert J. Shapiro,
Under Secretary
for Economic Affairs



U.S. CENSUS BUREAU

Kenneth Prewitt,
Director

William G. Barron,
Deputy Director

Paula J. Schneider,
Principal Associate Director
for Programs

Frederick T. Knickerbocker,
Associate Director
for Economic Programs

Thomas L. Mesenbourg,
Assistant Director
for Economic Programs

Carole A. Ambler,
Chief, Service Sector
Statistics Division



**BUREAU OF TRANSPORTATION
STATISTICS**

Dr. Ashish Sen,
Director

Rick Kowalewski,
Deputy Director

Rolf R. Schmitt,
Associate Director for
Transportation Studies

CONTENTS

Introduction to the Economic Census	1
1997 Commodity Flow Survey	3

TABLES

1a. Shipment Characteristics by Mode of Transportation for State of Origin: 1997	9
1b. Shipment Characteristics by Mode of Transportation for State of Origin: 1997 and 1993	9
1c. Shipment Characteristics by Mode of Transportation for State of Origin: Percent of Total for 1997 and 1993	10
2. Shipment Characteristics by Total Modal Activity for State of Origin: 1997	10
3. Shipment Characteristics by Mode of Transportation and Distance Shipped for State of Origin: 1997	11
4. Shipment Characteristics by Mode of Transportation and Shipment Size for State of Origin: 1997	14
5. Shipment Characteristics by Two-Digit Commodity for State of Origin: 1997	17
6. Shipment Characteristics by Two-Digit Commodity and Mode of Transportation for State of Origin: 1997	18
7. Shipment Characteristics by State of Destination for State of Origin: 1997	33
8. Inbound Shipment Characteristics by State of Origin for State of Destination: 1997	34

APPENDIXES

A. Comparability With the 1993 Commodity Flow Survey	A-1
B. Reliability of the Estimates	B-1
C. Sample Design, Data Collection, and Estimation	C-1
D. Standard Classification of Transported Goods Code Information	D-1
E. Sample Report Forms and Instructions	E-1

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	57 609	100.0	121 404	100.0	23 869	100.0	310
Single modes	50 654	87.9	118 379	97.5	22 888	95.9	193
Truck ¹	43 088	74.8	99 423	81.9	13 580	56.9	146
For-hire truck	24 513	42.6	37 729	31.1	9 548	40.0	385
Private truck	18 222	31.6	60 225	49.6	3 827	16.0	71
Rail	4 240	7.4	11 863	9.8	7 255	30.4	646
Water	285	.5	1 915	1.6	1 839	7.7	959
Shallow draft	285	.5	1 915	1.6	1 839	7.7	959
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	1 782	3.1	110	—	123	.5	1 312
Pipeline ²	1 259	2.2	5 068	4.2	S	S	S
Multiple modes	4 640	8.1	468	.4	373	1.6	696
Parcel, U.S. Postal Service or courier	4 469	7.8	185	.2	144	.6	696
Truck and rail	162	.3	219	.2	182	.8	969
Truck and water	S	S	S	S	S	S	936
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	2 315	4.0	2 557	2.1	608	2.5	95

— 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	57 609	48 702	18.3	121 404	119 595	1.5	23 869	28 518	-16.3	310	228	36.4
Single modes	50 654	39 155	29.4	118 379	103 187	14.7	22 888	22 748	.6	193	138	39.1
Truck ¹	43 088	33 214	29.7	99 423	76 110	30.6	13 580	11 378	19.4	146	109	33.7
For-hire truck	24 513	18 376	33.4	37 729	33 912	11.3	9 548	7 817	22.1	385	400	-3.8
Private truck	18 222	14 773	23.3	60 225	42 148	42.9	3 827	3 549	7.8	71	55	29.4
Rail	4 240	2 114	100.5	11 863	13 880	-14.5	7 255	7 938	-8.6	646	603	7.1
Water	285	193	47.5	1 915	1 746	9.7	1 839	1 773	3.7	959	1 634	-41.3
Shallow draft	285	193	47.7	1 915	1 746	9.7	1 839	1 773	3.7	959	1 010	-5.1
Great Lakes	—	—	—	—	—	—	—	—	—	—	—	—
Deep draft	—	S	S	—	S	S	—	S	S	—	8 173	-100.0
Air (includes truck and air)	1 782	1 778	.2	110	15	653.8	123	20	509.3	1 312	1 231	6.6
Pipeline ²	1 259	1 855	-32.1	5 068	11 437	-55.7	S	S	S	S	S	S
Multiple modes	4 640	6 089	-23.8	468	S	S	373	1 125	-66.9	696	492	41.3
Parcel, U.S. Postal Service or courier	4 469	2 779	60.8	185	118	56.2	144	61	137.5	696	477	45.9
Truck and rail	162	3 285	-95.1	219	S	S	182	975	-81.4	969	999	-3.1
Truck and water	S	S	S	S	S	S	S	S	S	936	4 991	-81.2
Rail and water	—	S	S	—	S	S	—	S	S	—	1 028	-100.0
Other multiple modes	—	—	—	—	—	—	—	—	—	—	—	—
Other and unknown modes	2 315	3 458	-33.0	2 557	S	S	608	S	S	95	99	-4.3

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

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

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

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

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

Table 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	87.9	80.4	97.5	86.3	95.9	79.8
Truck ¹	74.8	68.2	81.9	63.6	56.9	39.9
For-hire truck	42.6	37.7	31.1	28.4	40.0	27.4
Private truck	31.6	30.3	49.6	35.2	16.0	12.4
Rail	7.4	4.3	9.8	11.6	30.4	27.8
Water .....	.5	.4	1.6	1.5	7.7	6.2
Shallow draft .....	.5	.4	1.6	1.5	7.7	6.2
Great Lakes	—	—	—	—	—	—
Deep draft	—	S	—	S	—	S
Air (includes truck and air)	3.1	3.7	—	—	.5	—
Pipeline ²	2.2	3.8	4.2	9.6	S	S
Multiple modes	8.1	12.5	.4	S	1.6	3.9
Parcel, U.S. Postal Service or courier	7.8	5.7	.2	.1	.6	.2
Truck and rail .....	.3	6.7	.2	S	.8	3.4
Truck and water	S	S	S	S	S	S
Rail and water	—	S	—	S	—	S
Other multiple modes	—	—	—	—	—	—
Other and unknown modes	4.0	7.1	2.1	S	2.5	S

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

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

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

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

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

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

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

Mode of transportation ¹	Ton-miles		Average miles per shipment
	Number (millions)	Percent	
Total	23 869	100.0	304
Truck	13 611	57.0	144
Rail	7 420	31.1	663
Shallow draft	1 880	7.9	830
Great Lakes	—	—	—
Deep draft	S	S	7 246
Air	110	.5	1 215
Parcel, U.S. Postal Service or courier	144	.6	696
Pipeline	S	S	S
Other and unknown modes	608	2.5	95

— 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	57 609	100.0	121 404	100.0	23 869	100.0
Less than 50 miles	13 709	23.8	65 315	53.8	1 100	4.6
50 to 99 miles	4 021	7.0	17 844	14.7	1 649	6.9
100 to 249 miles	9 023	15.7	16 773	13.8	3 250	13.6
250 to 499 miles	9 380	16.3	9 586	7.9	4 840	20.3
500 to 749 miles	6 673	11.6	5 822	4.8	4 907	20.6
750 to 999 miles	5 181	9.0	3 077	2.5	3 482	14.6
1,000 to 1,499 miles	8 808	15.3	2 795	2.3	4 227	17.7
1,500 to 1,999 miles	722	1.3	154	.1	332	1.4
2,000 miles or more	91	.2	39	—	82	.3
Single modes	50 654	100.0	118 379	100.0	22 888	100.0
Less than 50 miles	12 294	24.3	64 073	54.1	1 059	4.6
50 to 99 miles	3 481	6.9	17 364	14.7	1 600	7.0
100 to 249 miles	7 908	15.6	16 216	13.7	3 133	13.7
250 to 499 miles	8 511	16.8	9 366	7.9	4 715	20.6
500 to 749 miles	5 742	11.3	5 699	4.8	4 808	21.0
750 to 999 miles	4 608	9.1	3 000	2.5	3 398	14.8
1,000 to 1,499 miles	7 410	14.6	2 479	2.1	3 786	16.5
1,500 to 1,999 miles	623	1.2	145	.1	313	1.4
2,000 miles or more	77	.2	38	—	77	.3
Truck¹	43 088	100.0	99 423	100.0	13 580	100.0
Less than 50 miles	11 248	26.1	57 792	58.1	1 023	7.5
50 to 99 miles	3 426	8.0	16 743	16.8	1 501	11.1
100 to 249 miles	7 029	16.3	13 252	13.3	2 439	18.0
250 to 499 miles	7 447	17.3	5 845	5.9	2 551	18.8
500 to 749 miles	4 540	10.5	2 381	2.4	1 764	13.0
750 to 999 miles	3 249	7.5	1 766	1.8	1 914	14.1
1,000 to 1,499 miles	5 931	13.8	1 563	1.6	2 231	16.4
1,500 to 1,999 miles	149	.3	46	—	92	.7
2,000 miles or more	71	.2	35	—	65	.5
For-hire truck	24 513	100.0	37 729	100.0	9 548	100.0
Less than 50 miles	2 599	10.6	15 596	41.3	371	3.9
50 to 99 miles	1 313	5.4	5 482	14.5	485	5.1
100 to 249 miles	3 367	13.7	6 832	18.1	1 249	13.1
250 to 499 miles	5 441	22.2	4 706	12.5	2 068	21.7
500 to 749 miles	3 758	15.3	2 057	5.5	1 524	16.0
750 to 999 miles	2 931	12.0	1 612	4.3	1 749	18.3
1,000 to 1,499 miles	4 896	20.0	1 370	3.6	1 959	20.5
1,500 to 1,999 miles	137	.6	39	.1	79	.8
2,000 miles or more	71	.3	35	—	65	.7
Private truck	18 222	100.0	60 225	100.0	3 827	100.0
Less than 50 miles	8 615	47.3	41 369	68.7	640	16.7
50 to 99 miles	2 089	11.5	11 156	18.5	1 005	26.3
100 to 249 miles	3 511	19.3	6 006	10.0	1 094	28.6
250 to 499 miles	1 938	10.6	1 080	1.8	461	12.0
500 to 749 miles	758	4.2	280	.5	204	5.3
750 to 999 miles	298	1.6	149	.2	159	4.1
1,000 to 1,499 miles	1 002	5.5	180	.3	252	6.6
1,500 to 1,999 miles	11	—	S	S	S	S
2,000 miles or more	—	—	—	—	—	—
Rail	4 240	100.0	11 863	100.0	7 255	100.0
Less than 50 miles	132	3.1	1 664	14.0	S	S
50 to 99 miles	47	1.1	621	5.2	98	1.4
100 to 249 miles	294	6.9	2 494	21.0	605	8.3
250 to 499 miles	742	17.5	3 107	26.2	1 761	24.3
500 to 749 miles	835	19.7	1 742	14.7	1 527	21.0
750 to 999 miles	780	18.4	1 228	10.4	1 477	20.4
1,000 to 1,499 miles	1 032	24.3	911	7.7	1 548	21.3
1,500 to 1,999 miles	378	8.9	97	.8	218	3.0
2,000 miles or more	—	—	—	—	—	—
Water	285	100.0	1 915	100.0	1 839	100.0
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	218	76.7	1 505	78.6	1 440	78.3
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Shallow draft	285	100.0	1 915	100.0	1 839	100.0
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	218	76.7	1 505	78.6	1 440	78.3
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)	1 782	100.0	110	100.0	123	100.0
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	7	.4	—	.2	—	—
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	256	14.3	4	4.0	S	S
500 to 749 miles	149	8.4	S	S	S	S
750 to 999 miles	S	S	6	5.4	7	5.7
1,000 to 1,499 miles	448	25.1	5	4.9	8	6.6
1,500 to 1,999 miles	95	5.3	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Pipeline²	1 259	100.0	5 068	100.0	S	S
Less than 50 miles	915	72.7	S	S	S	S
50 to 99 miles	—	—	—	—	S	S
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	—	—	—	—	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	S	S
1,000 to 1,499 miles	—	—	—	—	S	S
1,500 to 1,999 miles	—	—	—	—	S	S
2,000 miles or more	—	—	—	—	S	S
Multiple modes	4 640	100.0	468	100.0	373	100.0
Less than 50 miles	377	8.1	14	3.1	—	—
50 to 99 miles	257	5.5	9	2.0	1	.2
100 to 249 miles	855	18.4	S	S	S	S
250 to 499 miles	615	13.3	S	S	S	S
500 to 749 miles	747	16.1	49	10.5	41	11.0
750 to 999 miles	506	10.9	38	8.1	43	11.5
1,000 to 1,499 miles	1 179	25.4	83	17.8	136	36.5
1,500 to 1,999 miles	90	1.9	8	1.7	17	4.5
2,000 miles or more	13	.3	1	.2	S	S
Parcel, U.S. Postal Service or courier	4 469	100.0	185	100.0	144	100.0
Less than 50 miles	377	8.4	14	7.8	—	.2
50 to 99 miles	257	5.7	9	5.1	1	.6
100 to 249 miles	853	19.1	28	15.2	6	4.0
250 to 499 miles	598	13.4	27	14.5	12	8.6
500 to 749 miles	712	15.9	31	16.9	24	16.6
750 to 999 miles	484	10.8	26	14.0	27	18.6
1,000 to 1,499 miles	1 093	24.4	43	23.6	63	43.6
1,500 to 1,999 miles	84	1.9	5	2.6	10	6.6
2,000 miles or more	11	.3	1	.3	2	1.0
Truck and rail	162	100.0	219	100.0	182	100.0
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	10	6.1	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	22	13.9	12	5.6	16	8.7
1,000 to 1,499 miles	86	53.2	40	18.2	73	40.2
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	S	S	S	S	S	S

See footnotes at end of table.

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

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

Mode of transportation and distance shipped (based on Great Circle Distance)	Value		Tons		Ton-miles	
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent
Multiple modes—Con.						
Rail and water	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Other and unknown modes	2 315	100.0	2 557	100.0	608	100.0
Less than 50 miles	1 038	44.8	1 227	48.0	40	6.6
50 to 99 miles	284	12.2	S	S	S	S
100 to 249 miles	259	11.2	458	17.9	89	14.6
250 to 499 miles	254	11.0	54	2.1	23	3.8
500 to 749 miles	183	7.9	74	2.9	58	9.5
750 to 999 miles	68	2.9	S	S	S	S
1,000 to 1,499 miles	219	9.5	232	9.1	S	S
1,500 to 1,999 miles	9	.4	S	S	S	S
2,000 miles or more	S	S	S	S	S	S

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

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

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

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

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

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

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

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
All modes	57 609	100.0	121 404	100.0	23 869	100.0	310
Less than 50 lb	6 110	10.6	223	.2	74	.3	364
50 to 99 lb	1 730	3.0	134	.1	42	.2	304
100 to 499 lb	5 160	9.0	738	.6	169	.7	235
500 to 749 lb	2 154	3.7	383	.3	84	.4	218
750 to 999 lb	1 157	2.0	304	.3	57	.2	189
1,000 to 9,999 lb	14 009	24.3	6 054	5.0	1 283	5.4	215
10,000 to 49,999 lb	18 191	31.6	64 385	53.0	9 703	40.7	152
50,000 to 99,999 lb	5 296	9.2	27 995	23.1	3 130	13.1	107
100,000 lb or more	3 801	6.6	21 187	17.5	9 327	39.1	527
Single modes	50 654	100.0	118 379	100.0	22 888	100.0	193
Less than 50 lb	2 689	5.3	79	—	15	—	217
50 to 99 lb	939	1.9	80	—	14	—	171
100 to 499 lb	4 187	8.3	647	.5	118	.5	174
500 to 749 lb	2 038	4.0	350	.3	71	.3	203
750 to 999 lb	1 096	2.2	292	.2	48	.2	164
1,000 to 9,999 lb	13 583	26.8	5 784	4.9	1 244	5.4	216
10,000 to 49,999 lb	17 249	34.1	63 209	53.4	9 215	40.3	145
50,000 to 99,999 lb	5 129	10.1	26 931	22.7	2 904	12.7	103
100,000 lb or more	3 746	7.4	21 007	17.7	9 259	40.5	530
Truck¹	43 088	100.0	99 423	100.0	13 580	100.0	146
Less than 50 lb	2 100	4.9	76	—	10	—	122
50 to 99 lb	711	1.6	77	—	9	—	116
100 to 499 lb	3 997	9.3	643	.6	113	.8	166
500 to 749 lb	1 938	4.5	349	.4	70	.5	201
750 to 999 lb	1 080	2.5	291	.3	47	.3	160
1,000 to 9,999 lb	12 632	29.3	5 755	5.8	1 211	8.9	213
10,000 to 49,999 lb	17 051	39.6	62 810	63.2	9 018	66.4	142
50,000 to 99,999 lb	2 796	6.5	26 459	26.6	2 446	18.0	90
100,000 lb or more	784	1.8	2 965	3.0	656	4.8	306
For-hire truck	24 513	100.0	37 729	100.0	9 548	100.0	385
Less than 50 lb	941	3.8	15	—	6	—	329
50 to 99 lb	263	1.1	12	—	4	—	311
100 to 499 lb	2 275	9.3	141	.4	79	.8	528
500 to 749 lb	1 103	4.5	77	.2	48	.5	621
750 to 999 lb	622	2.5	62	.2	33	.3	539
1,000 to 9,999 lb	6 634	27.1	1 530	4.1	735	7.7	516
10,000 to 49,999 lb	10 392	42.4	21 973	58.2	6 464	67.7	309
50,000 to 99,999 lb	1 670	6.8	12 643	33.5	1 724	18.1	132
100,000 lb or more	612	2.5	1 276	3.4	453	4.7	372
Private truck	18 222	100.0	60 225	100.0	3 827	100.0	71
Less than 50 lb	1 159	6.4	61	.1	5	.1	67
50 to 99 lb	447	2.5	65	.1	5	.1	79
100 to 499 lb	1 722	9.4	502	.8	33	.9	65
500 to 749 lb	835	4.6	272	.5	22	.6	80
750 to 999 lb	457	2.5	229	.4	13	.4	58
1,000 to 9,999 lb	5 946	32.6	4 219	7.0	471	12.3	105
10,000 to 49,999 lb	6 415	35.2	40 426	67.1	2 447	63.9	59
50,000 to 99,999 lb	1 075	5.9	13 500	22.4	665	17.4	50
100,000 lb or more	166	.9	951	1.6	166	4.3	187
Rail	4 240	100.0	11 863	100.0	7 255	100.0	646
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	S	S	S	S	S	S	1 681
100 to 499 lb	S	.1	—	—	S	S	1 370
500 to 749 lb	S	S	S	S	S	S	2 031
750 to 999 lb	S	S	S	S	S	S	1 751
1,000 to 9,999 lb	247	5.8	1	—	2	—	1 652
10,000 to 49,999 lb	148	3.5	91	.8	73	1.0	806
50,000 to 99,999 lb	2 331	55.0	471	4.0	456	6.3	1 023
100,000 lb or more	1 464	34.5	11 300	95.3	6 724	92.7	588
Water	285	100.0	1 915	100.0	1 839	100.0	959
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	285	100.0	1 915	100.0	1 839	100.0	959
Shallow draft	285	100.0	1 915	100.0	1 839	100.0	959
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	285	100.0	1 915	100.0	1 839	100.0	959

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)	1 782	100.0	110	100.0	123	100.0	1 312
Less than 50 lb	588	33.0	4	3.4	5	3.9	1 304
50 to 99 lb	S	S	S	S	S	S	1 457
100 to 499 lb	185	10.4	4	3.8	5	4.4	1 360
500 to 749 lb	59	3.3	1	.9	1	.7	874
750 to 999 lb	13	.7	S	S	S	S	1 768
1,000 to 9,999 lb	S	S	S	S	31	25.3	1 008
10,000 to 49,999 lb	S	S	S	S	S	S	1 049
50,000 to 99,999 lb	S	S	S	S	S	S	999
100,000 lb or more	—	—	—	—	—	—	—
Pipeline²	1 259	100.0	5 068	100.0	S	S	S
Less than 50 lb	S	S	S	S	S	S	S
50 to 99 lb	—	—	—	—	S	S	S
100 to 499 lb	—	—	—	—	S	S	S
500 to 749 lb	—	—	—	—	S	S	S
750 to 999 lb	—	—	—	—	S	S	S
1,000 to 9,999 lb	S	S	S	S	S	S	S
10,000 to 49,999 lb	S	S	S	S	S	S	S
50,000 to 99,999 lb	—	—	—	—	S	S	S
100,000 lb or more	1 214	96.4	4 828	95.2	S	S	S
Multiple modes	4 640	100.0	468	100.0	373	100.0	696
Less than 50 lb	2 895	62.4	74	15.7	55	14.7	683
50 to 99 lb	667	14.4	35	7.6	27	7.4	759
100 to 499 lb	827	17.8	57	12.2	48	12.8	843
500 to 749 lb	57	1.2	13	2.8	11	2.9	817
750 to 999 lb	19	.4	4	.9	S	S	977
1,000 to 9,999 lb	S	S	S	S	S	S	S
10,000 to 49,999 lb	160	3.4	147	31.4	160	43.1	1 220
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	S	S	S	S	S	S	679
Parcel, U.S. Postal Service or courier	4 469	100.0	185	100.0	144	100.0	696
Less than 50 lb	2 895	64.8	74	39.9	55	37.8	683
50 to 99 lb	667	14.9	35	19.2	27	19.0	759
100 to 499 lb	827	18.5	57	31.0	48	33.1	843
500 to 749 lb	57	1.3	13	7.1	11	7.4	817
750 to 999 lb	19	.4	4	2.2	S	S	977
1,000 to 9,999 lb	S	S	S	S	S	S	S
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	162	100.0	219	100.0	182	100.0	969
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	1 278
10,000 to 49,999 lb	158	97.5	146	66.9	157	86.7	1 198
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	936
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	110
10,000 to 49,999 lb	S	S	S	S	S	S	7 758
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	S	S	S	S	S	S	679

See footnotes at end of table.

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

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

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
Multiple modes—Con.							
Rail and water	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Other and unknown modes	2 315	100.0	2 557	100.0	608	100.0	95
Less than 50 lb	S	S	S	S	S	S	94
50 to 99 lb	124	5.4	S	S	S	S	S
100 to 499 lb	146	6.3	34	1.3	3	4	70
500 to 749 lb	60	2.6	20	.8	2	3.3	S
750 to 999 lb	S	S	S	S	S	S	665
1,000 to 9,999 lb	422	18.2	269	10.5	39	6.4	195
10,000 to 49,999 lb	783	33.8	1 029	40.3	328	53.9	436
50,000 to 99,999 lb	164	7.1	992	38.8	202	33.2	S
100,000 lb or more	S	S	S	S	S	S	174

— 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	57 609	100.0	121 404	100.0	23 869	100.0	310
01	Live animals and live fish	11	—	S	S	S	S	220
02	Cereal grains	593	1.0	4 739	3.9	1 973	8.3	S
03	Other agricultural products	223	.4	536	.4	S	S	S
04	Animal feed and products of animal origin, n.e.c.	787	1.4	2 509	2.1	323	1.4	S
05	Meat, fish, seafood, and their preparations	1 586	2.8	904	.7	252	1.1	194
06	Milled grain products and preparations, and bakery products	799	1.4	863	.7	485	2.0	206
07	Other prepared foodstuffs and fats and oils	1 146	2.0	920	.8	152	.6	S
08	Alcoholic beverages	782	1.4	543	.4	17	—	23
09	Tobacco products	77	.1	2	—	S	S	40
10	Monumental or building stone	S	S	S	S	S	S	S
11	Natural sands	131	.2	S	S	S	S	S
12	Gravel and crushed stone	96	.2	24 180	19.9	956	4.0	36
13	Nonmetallic minerals n.e.c.	83	.1	S	S	935	3.9	60
14	Metallic ores and concentrates	S	S	S	S	S	S	S
15	Coal	28	—	1 007	.8	120	.5	121
17	Gasoline and aviation turbine fuel	3 366	5.8	11 619	9.6	S	S	48
18	Fuel oils	835	1.5	3 598	3.0	S	S	43
19	Coal and petroleum products, n.e.c.	997	1.7	4 655	3.8	1 818	7.6	162
20	Basic chemicals	1 194	2.1	S	S	S	S	392
21	Pharmaceutical products	1 187	2.1	27	—	10	—	245
22	Fertilizers	746	1.3	4 957	4.1	2 566	10.8	141
23	Chemical products and preparations, n.e.c.	1 229	2.1	317	.3	199	.8	314
24	Plastics and rubber	2 775	4.8	1 119	.9	966	4.0	317
25	Logs and other wood in the rough	22	—	S	S	48	.2	S
26	Wood products	942	1.6	3 204	2.6	1 092	4.6	160
27	Pulp, newsprint, paper, and paperboard	741	1.3	1 271	1.0	972	4.1	140
28	Paper or paperboard articles	871	1.5	516	.4	258	1.1	131
29	Printed products	1 600	2.8	571	.5	180	.8	216
30	Textiles, leather, and articles of textiles or leather	989	1.7	130	.1	98	.4	723
31	Nonmetallic mineral products	2 015	3.5	14 613	12.0	3 252	13.6	258
32	Base metal in primary or semifinished forms and in finished basic shapes	1 665	2.9	1 626	1.3	424	1.8	184
33	Articles of base metal	3 936	6.8	2 171	1.8	872	3.7	360
34	Machinery	5 890	10.2	770	.6	459	1.9	494
35	Electronic and other electrical equipment and components and office equipment	6 961	12.1	233	.2	134	.6	416
36	Motorized and other vehicles (including parts)	4 284	7.4	659	.5	525	2.2	275
37	Transportation equipment, n.e.c.	1 243	2.2	S	S	43	.2	512
38	Precision instruments and apparatus	601	1.0	18	—	9	—	642
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	290	.5	46	—	23	—	249
40	Miscellaneous manufactured products	4 118	7.1	777	.6	451	1.9	495
41	Waste and scrap	174	.3	1 452	1.2	218	.9	135
43	Mixed freight	2 216	3.8	1 144	.9	236	1.0	168
--	Commodity unknown	360	.6	S	S	S	S	799

— 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	57 609	100.0	121 404	100.0	23 869	100.0	310
Single modes	50 654	87.9	118 379	97.5	22 888	95.9	193
Truck ¹	43 088	74.8	99 423	81.9	13 580	56.9	146
For-hire truck	24 513	42.6	37 729	31.1	9 548	40.0	385
Private truck	18 222	31.6	60 225	49.6	3 827	16.0	71
Rail	4 240	7.4	11 863	9.8	7 255	30.4	646
Water	285	.5	1 915	1.6	1 839	7.7	959
Shallow draft	285	.5	1 915	1.6	1 839	7.7	959
Great Lakes	-	-	-	-	-	-	-
Deep draft	-	-	-	-	-	-	-
Air (includes truck and air)	1 782	3.1	110	-	123	.5	1 312
Pipeline ²	1 259	2.2	5 068	4.2	S	S	S
Multiple modes	4 640	8.1	468	.4	373	1.6	696
Parcel, U.S. Postal Service or courier	4 469	7.8	185	.2	144	.6	696
Truck and rail	162	.3	219	.2	182	.8	969
Truck and water	S	S	S	S	S	S	936
Rail and water	-	-	-	-	-	-	-
Other multiple modes	-	-	-	-	-	-	-
Other and unknown modes	2 315	4.0	2 557	2.1	608	2.5	95
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	11	100.0	S	S	S	S	220
Single modes	10	91.5	S	S	S	S	255
Truck ¹	10	91.5	S	S	S	S	255
For-hire truck	-	-	-	-	-	-	-
Private truck	10	91.5	S	S	S	S	255
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	20
SCTG 02, CEREAL GRAINS							
Total	593	100.0	4 739	100.0	1 973	100.0	S
Single modes	593	100.0	4 738	100.0	1 973	100.0	S
Truck ¹	400	67.5	3 213	67.8	S	S	110
For-hire truck	S	S	S	S	S	S	203
Private truck	S	S	S	S	S	S	S
Rail	-	-	-	-	-	-	-
Water	192	32.5	1 525	32.2	1 482	75.1	970
Shallow draft	192	32.5	1 525	32.2	1 482	75.1	970
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	5

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	223	100.0	536	100.0	S	S	S
Single modes	219	98.0	535	99.9	S	S	S
Truck ¹	127	56.7	145	27.1	S	S	S
For-hire truck	S	S	S	S	S	S	326
Private truck	S	S	120	22.3	4	1.2	40
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	916
Shallow draft	S	S	S	S	S	S	916
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	508
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	508
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	90
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	787	100.0	2 509	100.0	323	100.0	S
Single modes	707	89.8	2 147	85.6	288	89.2	S
Truck ¹	707	89.8	2 147	85.6	288	89.2	S
For-hire truck	136	17.3	222	8.8	75	23.4	282
Private truck	570	72.4	1 924	76.7	212	65.5	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	685
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	84
Truck and rail	S	S	S	S	S	S	912
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	1 586	100.0	904	100.0	252	100.0	194
Single modes	1 506	94.9	862	95.4	248	98.7	198
Truck ¹	1 506	94.9	862	95.4	248	98.7	198
For-hire truck	S	S	S	S	S	S	308
Private truck	832	52.4	550	60.8	S	S	188
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	42

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	799	100.0	863	100.0	485	100.0	206
Single modes	795	99.5	859	99.5	485	99.9	212
Truck ¹	758	94.9	705	81.7	364	75.0	207
For-hire truck	317	39.7	394	45.7	267	55.0	678
Private truck	433	54.2	302	35.1	92	18.9	150
Rail	36	4.6	154	17.8	121	24.9	812
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	599
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	599
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	44
SCTG 07, OTHER PREPARED FOODSTUFFS AND FATS AND OILS							
Total	1 146	100.0	920	100.0	152	100.0	S
Single modes	1 112	97.0	908	98.7	133	87.8	100
Truck ¹	1 106	96.5	894	97.1	124	81.4	100
For-hire truck	239	20.8	S	S	51	33.6	379
Private truck	867	75.7	803	87.3	73	47.8	96
Rail	S	S	S	S	S	S	668
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 136
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	32	2.8	S	S	S	S	784
Parcel, U.S. Postal Service or courier	16	1.4	2	.2	1	.8	779
Truck and rail	S	S	S	S	S	S	1 840
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 08, ALCOHOLIC BEVERAGES							
Total	782	100.0	543	100.0	17	100.0	23
Single modes	741	94.7	504	92.9	15	88.1	23
Truck ¹	741	94.7	504	92.9	15	88.1	23
For-hire truck	S	S	S	S	S	S	37
Private truck	702	89.8	496	91.4	14	85.3	S
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	71

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	77	100.0	2	100.0	S	S	40
Single modes	75	97.4	2	97.5	S	S	40
Truck ¹	75	97.4	2	97.5	S	S	40
For-hire truck	S	S	S	S	S	S	815
Private truck	63	81.2	2	82.6	S	S	30
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	34
SCTG 10, MONUMENTAL OR BUILDING STONE							
Total	S	S	S	S	S	S	S
Single modes	S	S	S	S	S	S	S
Truck ¹	S	S	S	S	S	S	S
For-hire truck	—	3.5	3	1.0	2	10.7	540
Private truck	S	S	S	S	S	S	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 11, NATURAL SANDS							
Total	131	100.0	S	S	S	S	S
Single modes	129	98.9	S	S	S	S	S
Truck ¹	87	66.5	S	S	427	27.5	S
For-hire truck	51	39.0	2 540	16.7	316	20.4	S
Private truck	S	S	S	S	111	7.1	S
Rail	S	S	S	S	S	S	421
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	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 12, GRAVEL AND CRUSHED STONE							
Total	96	100.0	24 180	100.0	956	100.0	36
Single modes	94	98.2	23 705	98.0	929	97.2	36
Truck ¹	93	97.0	23 461	97.0	909	95.1	36
For-hire truck	29	29.8	7 414	30.7	252	26.3	32
Private truck	64	67.1	16 028	66.3	657	68.7	38
Rail	S	S	S	S	S	S	81
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	53
SCTG 13, NONMETALLIC MINERALS N.E.C.							
Total	83	100.0	S	S	935	100.0	60
Single modes	83	99.4	S	S	935	100.0	61
Truck ¹	S	S	S	S	S	S	54
For-hire truck	S	S	S	S	S	S	S
Private truck	S	S	S	S	S	S	46
Rail	6	6.8	653	6.3	345	36.9	528
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	13
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	13
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	13
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	S	S	S	S	S	S	S
Single modes	S	S	S	S	S	S	S
Truck ¹	S	S	S	S	S	S	S
For-hire truck	S	S	S	S	S	S	92
Private truck	S	S	S	S	S	S	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	126
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	126
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	9

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 15, COAL							
Total	28	100.0	1 007	100.0	120	100.0	121
Single modes	26	92.2	939	93.3	77	64.1	67
Truck ¹	23	84.4	870	86.4	64	53.7	64
For-hire truck	23	84.3	870	86.4	64	53.7	64
Private truck	S	S	S	S	S	S	27
Rail	S	S	S	S	S	S	181
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	633
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	633
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 17, GASOLINE AND AVIATION TURBINE FUEL							
Total	3 366	100.0	11 619	100.0	S	S	48
Single modes	3 349	99.5	11 548	99.4	S	S	49
Truck ¹	2 273	67.5	7 528	64.8	S	S	49
For-hire truck	1 126	33.5	4 822	41.5	S	S	93
Private truck	1 108	32.9	2 520	21.7	63	10.0	19
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	1 076	32.0	4 020	34.6	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 18, FUEL OILS							
Total	835	100.0	3 598	100.0	S	S	43
Single modes	727	87.0	3 155	87.7	S	S	49
Truck ¹	586	70.1	2 332	64.8	S	S	49
For-hire truck	227	27.1	1 115	31.0	S	S	196
Private truck	359	43.0	1 217	33.8	23	7.8	17
Rail	S	S	S	S	S	S	3
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

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	997	100.0	4 655	100.0	1 818	100.0	162
Single modes	985	98.8	4 635	99.6	1 813	99.7	164
Truck ¹	789	79.1	3 539	76.0	974	53.5	154
For-hire truck	667	66.9	3 207	68.9	939	51.6	290
Private truck	113	11.3	281	6.0	29	1.6	39
Rail	151	15.2	854	18.4	788	43.4	716
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 385
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	3	.3	1	—	S	S	740
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	752
Truck and rail	S	S	S	S	S	S	1 278
Truck and water	S	S	S	S	S	S	110
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	9	.9	S	S	S	S	S
SCTG 20, BASIC CHEMICALS							
Total	1 194	100.0	S	S	S	S	392
Single modes	1 128	94.5	S	S	S	S	127
Truck ¹	1 015	85.0	S	S	S	S	113
For-hire truck	188	15.8	160	5.8	78	12.8	359
Private truck	S	S	S	S	S	S	84
Rail	39	3.3	105	3.8	52	8.6	473
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 451
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	40	3.3	S	S	S	S	856
Parcel, U.S. Postal Service or courier	40	3.3	S	S	S	S	856
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	1 187	100.0	27	100.0	10	100.0	245
Single modes	1 038	87.5	25	91.0	S	S	137
Truck ¹	1 038	87.4	25	91.0	S	S	136
For-hire truck	795	67.0	16	60.4	S	S	164
Private truck	224	18.8	7	27.1	—	4.0	108
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 258
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	2	8.6	S	S	496
Parcel, U.S. Postal Service or courier	S	S	2	8.6	S	S	496
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 22, FERTILIZERS							
Total	746	100.0	4 957	100.0	2 566	100.0	141
Single modes	705	94.5	4 655	93.9	2 517	98.1	144
Truck ¹	334	44.8	1 843	37.2	357	13.9	74
For-hire truck	128	17.1	750	15.1	177	6.9	202
Private truck	172	23.0	826	16.7	S	S	44
Rail	371	49.7	2 812	56.7	2 160	84.2	770
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	41	5.5	302	6.1	50	1.9	99
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	1 229	100.0	317	100.0	199	100.0	314
Single modes	1 080	87.9	302	95.3	193	97.0	166
Truck ¹	1 076	87.5	302	95.2	193	96.9	161
For-hire truck	467	38.0	172	54.2	153	77.0	445
Private truck	609	49.5	130	41.0	40	19.9	105
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 472
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	580
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	580
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	33	2.7	6	1.9	1	.7	68
SCTG 24, PLASTICS AND RUBBER							
Total	2 775	100.0	1 119	100.0	966	100.0	317
Single modes	2 454	88.4	1 073	95.9	934	96.7	194
Truck ¹	2 332	84.0	881	78.7	669	69.2	189
For-hire truck	1 863	67.1	776	69.4	630	65.2	472
Private truck	469	16.9	104	9.3	39	4.0	48
Rail	118	4.2	192	17.1	265	27.5	1 384
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 441
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	176	6.3	S	S	S	S	632
Parcel, U.S. Postal Service or courier	135	4.8	11	1.0	9	.9	631
Truck and rail	S	S	S	S	S	S	1 063
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	145	5.2	21	1.9	7	.8	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	22	100.0	S	S	48	100.0	S
Single modes	20	93.3	S	S	30	64.0	S
Truck ¹	14	64.4	S	S	25	52.5	S
For-hire truck	7	30.3	59	14.4	20	41.6	340
Private truck	S	S	S	S	S	S	S
Rail	S	S	S	S	S	S	32
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	181
SCTG 26, WOOD PRODUCTS							
Total	942	100.0	3 204	100.0	1 092	100.0	160
Single modes	927	98.4	3 097	96.7	956	87.5	153
Truck ¹	798	84.8	2 257	70.4	602	55.1	147
For-hire truck	228	24.2	1 301	40.6	459	42.0	405
Private truck	570	60.6	955	29.8	144	13.1	98
Rail	129	13.7	S	S	354	32.4	S
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	313
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	313
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	9	.9	S	S	S	S	S
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	741	100.0	1 271	100.0	972	100.0	140
Single modes	697	94.0	1 245	98.0	944	97.1	145
Truck ¹	450	60.7	474	37.3	184	18.9	111
For-hire truck	302	40.7	320	25.2	161	16.6	442
Private truck	148	20.0	154	12.1	22	2.3	75
Rail	S	S	S	S	S	S	989
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	228
Truck and rail	S	S	S	S	S	S	1 969
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	10	1.4	S	S	S	S	S

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 28, PAPER OR PAPERBOARD ARTICLES							
Total	871	100.0	516	100.0	258	100.0	131
Single modes	828	95.0	499	96.6	242	94.1	73
Truck ¹	821	94.3	496	96.0	237	92.2	S
For-hire truck	436	50.1	298	57.7	212	82.5	S
Private truck	385	44.2	198	38.4	25	9.7	30
Rail	S	S	S	S	S	S	1 643
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 420
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	23	2.7	9	1.7	S	S	556
Parcel, U.S. Postal Service or courier	S	S	S	S	1	.3	545
Truck and rail	S	S	S	S	S	S	1 996
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	97
SCTG 29, PRINTED PRODUCTS							
Total	1 600	100.0	571	100.0	180	100.0	216
Single modes	943	59.0	473	82.8	155	86.1	84
Truck ¹	937	58.6	472	82.6	153	85.4	72
For-hire truck	475	29.7	249	43.6	141	78.4	208
Private truck	463	28.9	223	39.1	S	S	26
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 434
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	294	18.4	17	3.1	14	8.0	885
Parcel, U.S. Postal Service or courier	294	18.4	17	3.1	14	8.0	885
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	989	100.0	130	100.0	98	100.0	723
Single modes	421	42.6	97	74.6	S	S	406
Truck ¹	405	41.0	85	65.9	50	51.4	307
For-hire truck	156	15.8	21	16.1	21	21.0	726
Private truck	241	24.3	63	48.4	S	S	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 603
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	530	53.6	28	21.9	26	26.3	836
Parcel, U.S. Postal Service or courier	530	53.5	28	21.6	25	25.4	836
Truck and rail	S	S	S	S	S	S	2 080
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	37	3.8	S	S	1	.8	S

See footnotes at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent	
SCTG 31, NONMETALLIC MINERAL PRODUCTS							
Total	2 015	100.0	14 613	100.0	3 252	100.0	258
Single modes	1 957	97.1	14 439	98.8	3 080	94.7	213
Truck ¹	1 874	93.0	13 681	93.6	2 564	78.8	197
For-hire truck	1 175	58.3	3 325	22.8	1 973	60.7	647
Private truck	683	33.9	10 257	70.2	568	17.5	60
Rail	79	3.9	707	4.8	464	14.3	799
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 074
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	863
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	863
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	27	1.3	S	S	S	S	231
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	1 665	100.0	1 626	100.0	424	100.0	184
Single modes	1 600	96.1	1 580	97.2	406	95.7	133
Truck ¹	1 595	95.8	1 567	96.4	388	91.5	126
For-hire truck	703	42.2	609	37.5	269	63.5	377
Private truck	886	53.2	945	58.1	117	27.5	64
Rail	S	S	S	S	S	S	1 043
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 097
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	38	2.3	S	S	2	.4	538
Parcel, U.S. Postal Service or courier	38	2.3	S	S	2	.4	538
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	27	1.6	43	2.7	17	3.9	S
SCTG 33, ARTICLES OF BASE METAL							
Total	3 936	100.0	2 171	100.0	872	100.0	360
Single modes	3 571	90.7	2 097	96.6	815	93.5	319
Truck ¹	3 491	88.7	1 987	91.5	810	92.9	242
For-hire truck	2 248	57.1	1 370	63.1	690	79.1	503
Private truck	1 242	31.6	617	28.4	120	13.8	103
Rail	S	S	S	S	S	S	10
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	4	.2	4	.4	1 441
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	239	6.1	18	.8	17	1.9	615
Parcel, U.S. Postal Service or courier	239	6.1	18	.8	17	1.9	615
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	127	3.2	57	2.6	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	5 890	100.0	770	100.0	459	100.0	494
Single modes	5 199	88.3	726	94.3	425	92.6	450
Truck ¹	5 007	85.0	719	93.5	417	90.9	276
For-hire truck	3 746	63.6	522	67.8	353	76.8	655
Private truck	1 261	21.4	197	25.6	64	14.0	88
Rail	S	S	S	S	S	S	1 661
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	189	3.2	6	.8	7	1.5	1 345
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	457	7.8	17	2.2	15	3.3	685
Parcel, U.S. Postal Service or courier	456	7.7	17	2.2	S	S	685
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	7 758
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	234	4.0	27	3.4	S	S	S
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	6 961	100.0	233	100.0	134	100.0	416
Single modes	6 008	86.3	211	90.4	118	88.6	331
Truck ¹	4 861	69.8	188	80.6	99	74.0	161
For-hire truck	4 081	58.6	113	48.6	88	65.9	407
Private truck	780	11.2	75	32.1	11	8.0	59
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	1 146	16.5	S	S	S	S	1 260
Pipeline ²	S	S	S	S	S	S	S
Multiple modes	875	12.6	17	7.4	15	11.1	624
Parcel, U.S. Postal Service or courier	875	12.6	17	7.4	15	11.1	624
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	78	1.1	S	S	1	.4	50
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	4 284	100.0	659	100.0	525	100.0	275
Single modes	3 778	88.2	603	91.6	504	96.0	S
Truck ¹	1 501	35.0	341	51.8	161	30.6	S
For-hire truck	884	20.6	166	25.2	111	21.1	449
Private truck	617	14.4	175	26.5	50	9.5	S
Rail	S	S	S	S	S	S	1 310
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	—	—	S	S	968
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	102	2.4	10	1.5	S	S	689
Parcel, U.S. Postal Service or courier	102	2.4	10	1.5	S	S	689
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	404	9.4	46	6.9	S	S	63

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	1 243	100.0	S	S	43	100.0	512
Single modes	1 026	82.6	S	S	41	95.0	S
Truck ¹	308	24.8	S	S	2	4.4	S
For-hire truck	241	19.4	3	2.6	2	3.7	544
Private truck	S	S	S	S	S	S	161
Rail	537	43.2	S	S	39	88.5	1 162
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	181	14.6	1	.8	1	2.1	1 096
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	192	15.5	S	S	S	S	872
Parcel, U.S. Postal Service or courier	192	15.5	S	S	S	S	872
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	24	1.9	S	S	—	.1	S
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	601	100.0	18	100.0	9	100.0	642
Single modes	232	38.6	S	S	S	S	787
Truck ¹	205	34.1	S	S	S	S	344
For-hire truck	136	22.6	S	S	S	S	614
Private truck	S	S	S	S	—	1.2	39
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	1 289
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	350	58.2	4	24.5	3	38.2	614
Parcel, U.S. Postal Service or courier	350	58.2	4	24.5	3	38.2	614
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	1	3.5	S	S	S
SCTG 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	290	100.0	46	100.0	23	100.0	249
Single modes	278	96.0	45	97.9	22	97.5	192
Truck ¹	275	95.0	45	97.9	22	97.5	173
For-hire truck	112	38.8	18	38.8	16	69.1	S
Private truck	163	56.2	27	59.1	6	28.4	85
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	531
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	S	S	1	1.4	1	2.3	614
Parcel, U.S. Postal Service or courier	S	S	1	1.4	1	2.3	614
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	—	.7	S	S	16

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	4 118	100.0	777	100.0	451	100.0	495
Single modes	3 063	74.4	694	89.3	391	86.7	384
Truck ¹	2 998	72.8	679	87.3	367	81.5	359
For-hire truck	1 958	47.5	499	64.2	311	68.9	581
Private truck	1 040	25.3	180	23.1	57	12.6	133
Rail	S	S	S	S	S	S	1 628
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	51	1.2	1	.1	1	.3	1 276
Pipeline ²	—	—	—	—	S	S	S
Multiple modes	833	20.2	43	5.6	44	9.9	586
Parcel, U.S. Postal Service or courier	792	19.2	27	3.4	18	4.0	586
Truck and rail	S	S	S	S	S	S	1 543
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	222	5.4	S	S	S	S	114
SCTG 41, WASTE AND SCRAP							
Total	174	100.0	1 452	100.0	218	100.0	135
Single modes	165	94.8	1 316	90.7	152	69.6	126
Truck ¹	74	42.7	490	33.8	89	41.0	146
For-hire truck	45	26.0	S	S	S	S	167
Private truck	29	16.6	S	S	S	S	S
Rail	91	52.2	826	56.9	62	28.6	S
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	322
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	S	S	S	S	S	S	316
Truck and water	S	S	S	S	S	S	679
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 43, MIXED FREIGHT							
Total	2 216	100.0	1 144	100.0	236	100.0	168
Single modes	2 111	95.3	1 090	95.2	228	96.7	162
Truck ¹	2 111	95.3	1 090	95.2	228	96.7	162
For-hire truck	427	19.2	S	S	S	S	546
Private truck	1 679	75.7	854	74.6	117	49.5	85
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	291
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	291
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	360	100.0	S	S	S	S	799
Single modes	257	71.2	S	S	S	S	209
Truck ¹	191	53.1	S	S	S	S	163
For-hire truck	72	20.0	S	S	S	S	232
Private truck	S	S	62	12.6	S	S	121
Rail	S	S	S	S	S	S	918
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	893
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	893
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

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

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

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

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

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

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

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

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

State of destination	Value		Tons		Ton-miles	
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent
Total	57 609	100.0	121 404	100.0	23 869	100.0
NEW ENGLAND STATES						
Connecticut	102	.2	21	—	32	.1
Maine	19	—	4	—	8	—
Massachusetts	472	.8	91	—	156	.7
New Hampshire	34	—	7	—	11	—
Rhode Island	S	S	S	S	S	S
Vermont	27	—	S	S	S	S
MIDDLE ATLANTIC STATES						
New Jersey	440	.8	S	S	S	S
New York	696	1.2	313	.3	425	1.8
Pennsylvania	499	.9	253	.2	345	1.4
EAST NORTH CENTRAL STATES						
Illinois	1 518	2.6	693	.6	501	2.1
Indiana	399	.7	364	.3	303	1.3
Michigan	749	1.3	488	.4	509	2.1
Ohio	S	S	412	.3	423	1.8
Wisconsin	801	1.4	406	.3	372	1.6
WEST NORTH CENTRAL STATES						
Iowa	389	.7	379	.3	235	1.0
Kansas	1 693	2.9	4 518	3.7	1 084	4.5
Minnesota	679	1.2	411	.3	350	1.5
Missouri	1 662	2.9	2 370	2.0	651	2.7
Nebraska	261	.5	636	.5	396	1.7
North Dakota	133	.2	210	.2	239	1.0
South Dakota	51	—	S	S	S	S
SOUTH ATLANTIC STATES						
Delaware	25	—	7	—	9	—
District of Columbia	7	—	S	S	S	S
Florida	1 420	2.5	427	.4	593	2.5
Georgia	783	1.4	422	.3	410	1.7
Maryland	589	1.0	87	—	124	.5
North Carolina	536	.9	136	.1	157	.7
South Carolina	199	.3	219	.2	289	1.2
Virginia	407	.7	154	.1	207	.9
West Virginia	56	.1	S	S	S	S
EAST SOUTH CENTRAL STATES						
Alabama	387	.7	595	.5	519	2.2
Kentucky	244	.4	166	.1	139	.6
Mississippi	384	.7	349	.3	184	.8
Tennessee	729	1.3	803	.7	682	2.9
WEST SOUTH CENTRAL STATES						
Arkansas	1 750	3.0	3 513	2.9	658	2.8
Louisiana	1 116	1.9	1 978	1.6	1 658	6.9
Oklahoma	20 133	34.9	83 798	69.0	3 187	13.4
Texas	9 080	15.8	13 254	10.9	4 025	16.9
MOUNTAIN STATES						
Arizona	407	.7	478	.4	599	2.5
Colorado	871	1.5	773	.6	605	2.5
Idaho	32	—	45	—	60	.3
Montana	315	.5	62	—	94	.4
Nevada	185	.3	S	S	S	S
New Mexico	352	.6	200	.2	121	.5
Utah	322	.6	S	S	S	S
Wyoming	175	.3	108	—	114	.5
PACIFIC STATES						
Alaska	78	.1	35	—	65	.3
California	3 662	6.4	966	.8	1 566	6.6
Hawaii	13	—	S	S	S	S
Oregon	347	.6	81	—	163	.7
Washington	657	1.1	132	.1	288	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. Some unpublished estimates can be derived from other data published in this table. However, figures obtained in this manner are subject to these same limitations.

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

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

State of origin	Value		Tons		Ton-miles	
	Number (million dollars)	Percent	Number (thousands)	Percent	Number (millions)	Percent
Total	66 807	100.0	143 442	100.0	42 118	100.0
NEW ENGLAND STATES						
Connecticut	470	.7	S	S	S	S
Maine	88	.1	30	—	46	.1
Massachusetts	530	.8	20	—	32	—
New Hampshire	S	S	10	—	16	—
Rhode Island	30	—	S	S	S	S
Vermont	21	—	2	—	4	—
MIDDLE ATLANTIC STATES						
New Jersey	725	1.1	247	.2	353	.8
New York	1 520	2.3	186	.1	255	.6
Pennsylvania	813	1.2	148	.1	184	.4
EAST NORTH CENTRAL STATES						
Illinois	1 713	2.6	927	.6	600	1.4
Indiana	944	1.4	536	.4	417	1.0
Michigan	2 255	3.4	1 101	.8	1 129	2.7
Ohio	1 754	2.6	710	.5	712	1.7
Wisconsin	994	1.5	440	.3	401	1.0
WEST NORTH CENTRAL STATES						
Iowa	1 209	1.8	959	.7	605	1.4
Kansas	2 203	3.3	11 291	7.9	2 690	6.4
Minnesota	767	1.1	235	.2	202	.5
Missouri	2 188	3.3	2 181	1.5	696	1.7
Nebraska	554	.8	675	.5	432	1.0
North Dakota	72	.1	S	S	S	S
South Dakota	S	S	40	—	30	—
SOUTH ATLANTIC STATES						
Delaware	S	S	1	—	1	—
District of Columbia	—	—	—	—	—	—
Florida	493	.7	133	—	S	S
Georgia	775	1.2	188	.1	173	.4
Maryland	116	.2	20	—	26	—
North Carolina	1 086	1.6	254	.2	305	.7
South Carolina	433	.6	159	.1	186	.4
Virginia	1 190	1.8	162	.1	188	.4
West Virginia	32	—	S	S	S	S
EAST SOUTH CENTRAL STATES						
Alabama	608	.9	322	.2	237	.6
Kentucky	625	.9	313	.2	305	.7
Mississippi	432	.6	283	.2	169	.4
Tennessee	1 125	1.7	S	S	S	S
WEST SOUTH CENTRAL STATES						
Arkansas	1 935	2.9	6 684	4.7	1 135	2.7
Louisiana	760	1.1	1 381	1.0	815	1.9
Oklahoma	20 133	30.1	83 798	58.4	3 187	7.6
Texas	11 400	17.1	8 617	6.0	3 143	7.5
MOUNTAIN STATES						
Arizona	170	.3	33	—	33	—
Colorado	511	.8	187	.1	136	.3
Idaho	S	S	S	S	S	S
Montana	36	—	46	—	75	.2
Nevada	52	—	S	S	S	S
New Mexico	50	—	253	.2	S	S
Utah	194	.3	S	S	S	S
Wyoming	189	.3	17 962	12.5	19 392	46.0
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	4 187	6.3	698	.5	1 021	2.4
Hawaii	S	S	S	S	S	S
Oregon	212	.3	129	—	286	.7
Washington	320	.5	134	—	290	.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.

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	5.5	—	8.4	—	7.8	—	8.1
Single modes	6.2	1.1	8.4	.5	7.9	.6	12.4
Truck	5.8	1.6	10.0	2.6	9.6	3.6	8.1
For-hire truck	10.0	3.0	13.7	4.0	13.1	4.2	10.4
Private truck	6.3	2.0	14.5	4.3	14.9	2.3	10.1
Rail	32.6	2.3	19.4	2.0	14.1	3.4	9.1
Water	30.7	.1	29.5	.5	28.5	2.0	15.4
Shallow draft	30.7	.1	29.5	.5	28.5	2.0	15.4
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	29.8	.9	47.3	—	44.7	.2	3.2
Pipeline	26.4	.6	35.9	1.4	S	S	S
Multiple modes	7.1	.5	24.8	.1	19.7	.3	5.1
Parcel, U.S. Postal Service or courier	7.5	.5	8.5	—	9.3	—	5.1
Truck and rail	31.1	—	43.4	.1	28.4	.2	26.1
Truck and water	S	S	S	S	S	S	41.3
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	19.8	.9	25.2	.4	32.0	.7	17.6

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

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

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

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

Mode of transportation	Value			Tons			Ton-miles			Average miles per shipment		
	Coefficient of variation of number		Standard error of percent change	Coefficient of variation of number		Standard error of percent change	Coefficient of variation of number		Standard error of percent change	Coefficient of variation		Standard error of percent change
	1997	1993		1997	1993		1997	1993		1997	1993	
All modes	5.5	2.7	7.3	8.4	7.3	11.3	7.8	10.2	10.8	8.1	6.1	13.8
Single modes	6.2	3.9	9.5	8.4	4.3	10.9	7.9	5.2	9.5	12.4	7.0	19.9
Truck	5.8	3.1	8.6	10.0	5.5	15.0	9.6	4.8	12.8	8.1	6.4	13.8
For-hire truck	10.0	3.2	14.0	13.7	9.2	18.3	13.1	5.4	17.3	10.4	8.1	12.7
Private truck	6.3	8.1	12.7	14.5	10.0	25.1	14.9	12.1	20.7	10.1	5.8	15.1
Rail	32.6	10.2	68.5	19.4	18.3	22.8	14.1	11.9	16.9	9.1	8.0	12.9
Water	30.7	31.3	64.7	29.5	31.2	47.1	28.5	31.9	44.4	15.4	23.4	16.4
Shallow draft	30.7	31.3	64.8	29.5	31.2	47.1	28.5	31.9	44.4	15.4	18.7	23.0
Great Lakes	—	—	—	—	—	—	—	—	—	—	—	—
Deep draft	—	S	S	—	S	S	—	S	S	—	31.6	—
Air (includes truck and air)	29.8	49.9	58.3	47.3	21.2	390.6	44.7	23.9	308.6	3.2	2.3	4.2
Pipeline	26.4	28.0	26.1	35.9	29.8	20.7	S	S	S	S	S	S
Multiple modes	7.1	22.8	18.2	24.8	S	S	19.7	23.2	10.1	5.1	5.8	10.8
Parcel, U.S. Postal Service or courier	7.5	5.5	14.9	8.5	6.1	16.3	9.3	7.5	28.4	5.1	6.3	11.8
Truck and rail	31.1	40.6	2.5	43.4	S	S	28.4	28.8	7.5	26.1	17.5	30.4
Truck and water	S	S	S	S	S	S	S	S	S	41.3	29.1	9.5
Rail and water	—	S	S	—	S	S	—	S	S	—	31.6	—
Other multiple modes	—	—	—	—	—	—	—	—	—	—	—	—
Other and unknown modes	19.8	35.2	27.0	25.2	S	S	32.0	S	S	17.6	17.2	23.5

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

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

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

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

Mode of transportation	Value (percent)		Tons (percent)		Ton-miles (percent)	
	1997	1993	1997	1993	1997	1993
All modes	-	-	-	-	-	-
Single modes	1.1	2.5	.5	4.2	.6	4.9
Truck	1.6	1.9	2.6	5.3	3.6	4.7
For-hire truck	3.0	1.7	4.0	3.8	4.2	3.7
Private truck	2.0	1.9	4.3	3.5	2.3	1.8
Rail	2.3	.4	2.0	2.0	3.4	3.2
Water .....	.1	.1	.5	.5	2.0	1.9
Shallow draft .....	.1	.1	.5	.5	2.0	1.9
Great Lakes	-	-	-	-	-	-
Deep draft	-	S	-	S	-	S
Air (includes truck and air) .....	.9	1.8	-	-	.2	-
Pipeline .....	.6	1.1	1.4	2.4	S	S
Multiple modes .....	.5	3.0	.1	S	.3	1.2
Parcel, U.S. Postal Service or courier .....	.5	.4	-	-	-	-
Truck and rail	-	2.8	.1	S	.2	1.3
Truck and water	S	S	S	S	S	S
Rail and water	-	S	-	S	-	S
Other multiple modes	-	-	-	-	-	-
Other and unknown modes .....	.9	2.3	.4	S	.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.

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	7.8	-	7.5
Truck	9.5	3.6	7.3
Rail	14.1	3.5	9.9
Shallow draft	27.1	1.9	13.1
Great Lakes	-	-	-
Deep draft	S	S	31.6
Air	48.3	.2	4.3
Parcel, U.S. Postal Service or courier	9.3	-	5.1
Pipeline	S	S	S
Other and unknown modes	32.0	.7	17.6

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

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

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

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

Mode of transportation and distance shipped (based on Great Circle Distance)	Value		Tons		Ton-miles	
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage
All modes	5.5	—	8.4	—	7.8	—
Less than 50 miles	7.0	2.2	13.9	3.9	20.0	.7
50 to 99 miles	6.5	.5	15.6	2.0	14.0	1.1
100 to 249 miles	4.5	.7	12.3	2.0	13.4	1.3
250 to 499 miles	7.8	.9	11.4	1.1	12.7	2.0
500 to 749 miles	7.1	.7	7.9	.5	8.5	1.3
750 to 999 miles	23.0	1.7	18.0	.4	19.1	1.8
1,000 to 1,499 miles	18.8	1.9	14.7	.3	14.0	2.0
1,500 to 1,999 miles	18.1	.2	12.6	—	10.5	.2
2,000 miles or more	37.3	—	37.8	—	33.3	.1
Single modes	6.2	—	8.4	—	7.9	—
Less than 50 miles	7.7	2.3	13.8	4.0	21.2	.8
50 to 99 miles	6.4	.5	15.9	2.0	14.3	1.0
100 to 249 miles	5.4	.9	12.9	2.1	13.8	1.4
250 to 499 miles	8.5	1.2	11.7	1.1	13.2	2.0
500 to 749 miles	7.8	.8	7.7	.5	8.4	1.4
750 to 999 miles	25.4	1.9	18.2	.4	19.4	1.8
1,000 to 1,499 miles	22.4	2.1	14.1	.3	13.5	2.0
1,500 to 1,999 miles	21.5	.3	13.0	—	10.8	.2
2,000 miles or more	42.2	—	39.4	—	36.6	.1
Truck	5.8	—	10.0	—	9.6	—
Less than 50 miles	7.8	2.4	15.2	4.2	21.7	1.1
50 to 99 miles	6.5	.5	17.0	2.5	15.8	1.6
100 to 249 miles	5.6	.8	14.6	2.3	14.7	2.5
250 to 499 miles	9.3	1.2	14.8	1.1	14.9	2.2
500 to 749 miles	6.1	.5	10.7	.2	10.8	1.1
750 to 999 miles	24.1	1.6	27.4	.3	29.9	2.4
1,000 to 1,499 miles	21.6	2.0	20.2	.2	19.5	2.2
1,500 to 1,999 miles	23.8	.1	16.0	—	16.0	.1
2,000 miles or more	43.5	—	43.8	—	43.9	.2
For-hire truck	10.0	—	13.7	—	13.1	—
Less than 50 miles	26.7	2.6	20.9	5.5	25.4	.8
50 to 99 miles	17.7	.7	25.1	4.0	23.1	1.9
100 to 249 miles	10.8	1.7	23.9	2.3	21.8	1.6
250 to 499 miles	9.4	1.8	18.5	2.1	18.7	2.6
500 to 749 miles	8.2	.7	13.0	1.1	13.2	1.6
750 to 999 miles	26.5	2.3	28.8	.9	31.2	3.3
1,000 to 1,499 miles	27.2	2.9	22.6	1.1	21.9	2.6
1,500 to 1,999 miles	26.5	.2	15.0	—	15.1	.1
2,000 miles or more	43.5	.1	43.8	—	43.9	.4
Private truck	6.3	—	14.5	—	14.9	—
Less than 50 miles	7.6	2.2	20.4	4.9	22.3	2.2
50 to 99 miles	7.0	.8	23.0	3.6	21.9	3.7
100 to 249 miles	11.1	1.5	26.5	3.4	29.4	4.6
250 to 499 miles	16.8	1.4	10.6	.4	11.6	1.7
500 to 749 miles	14.9	.6	16.5	—	16.4	.7
750 to 999 miles	16.3	.3	23.6	—	24.6	.6
1,000 to 1,499 miles	31.9	1.6	26.8	—	25.7	1.0
1,500 to 1,999 miles	35.2	—	S	S	S	S
2,000 miles or more	—	—	—	—	—	—
Rail	32.6	—	19.4	—	14.1	—
Less than 50 miles	25.2	1.8	44.1	3.8	S	S
50 to 99 miles	28.9	.9	49.9	1.4	39.0	.4
100 to 249 miles	31.3	3.7	45.3	4.1	38.3	2.1
250 to 499 miles	37.8	3.0	18.2	2.3	18.7	1.8
500 to 749 miles	49.1	3.4	15.4	2.4	13.8	2.3
750 to 999 miles	36.1	2.3	16.6	2.4	15.9	3.0
1,000 to 1,499 miles	46.2	4.5	19.0	.9	18.9	1.9
1,500 to 1,999 miles	37.0	4.1	18.3	.2	15.2	.7
2,000 miles or more	—	—	—	—	—	—
Water	30.7	—	29.5	—	28.5	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	30.5	8.3	29.7	8.0	27.8	7.7
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Shallow draft	30.7	—	29.5	—	28.5	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	30.5	8.3	29.7	8.0	27.8	7.7
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)	29.8	—	47.3	—	44.7	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	44.0	.4	46.9	.5	48.2	.2
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	28.5	3.5	43.9	4.1	S	S
500 to 749 miles	27.4	1.1	S	S	S	S
750 to 999 miles	S	S	47.9	2.9	47.5	4.1
1,000 to 1,499 miles	27.8	4.2	22.8	5.9	23.7	7.9
1,500 to 1,999 miles	32.1	4.8	S	S	S	S
2,000 miles or more	S	S	S	S	S	S
Pipeline	26.4	—	35.9	—	S	S
Less than 50 miles	41.1	18.1	S	S	S	S
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	—	—	—	—	—	—
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	—	—	—	—	—	—
Multiple modes	7.1	—	24.8	—	19.7	—
Less than 50 miles	18.2	1.0	20.7	1.5	22.9	—
50 to 99 miles	24.5	.9	12.1	.7	12.4	—
100 to 249 miles	14.4	2.3	S	S	S	S
250 to 499 miles	13.8	1.0	S	S	S	S
500 to 749 miles	9.2	1.2	22.0	2.8	25.0	2.4
750 to 999 miles	12.0	1.5	16.7	1.7	18.1	1.6
1,000 to 1,499 miles	9.7	2.3	9.2	6.3	10.1	8.0
1,500 to 1,999 miles	18.5	.3	26.9	.7	27.2	1.5
2,000 miles or more	25.9	—	36.7	.1	S	S
Parcel, U.S. Postal Service or courier	7.5	—	8.5	—	9.3	—
Less than 50 miles	18.2	1.0	20.1	1.3	19.7	—
50 to 99 miles	24.5	.9	12.1	.4	12.4	—
100 to 249 miles	14.4	2.2	11.0	1.0	11.6	.4
250 to 499 miles	13.5	.9	14.0	1.5	14.3	1.1
500 to 749 miles	9.2	1.2	8.4	.9	8.8	1.1
750 to 999 miles	11.2	1.5	13.3	1.4	13.0	1.7
1,000 to 1,499 miles	10.4	2.2	11.7	2.0	11.5	2.8
1,500 to 1,999 miles	19.3	.3	40.1	.8	40.5	2.2
2,000 miles or more	30.2	—	27.1	.2	21.9	.4
Truck and rail	31.1	—	43.4	—	28.4	—
Less than 50 miles	—	—	—	—	—	—
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	S	S	S	S	S	S
250 to 499 miles	49.7	2.3	S	S	S	S
500 to 749 miles	S	S	S	S	S	S
750 to 999 miles	37.8	3.6	36.0	2.7	36.7	2.3
1,000 to 1,499 miles	26.8	10.4	20.2	18.2	20.6	13.9
1,500 to 1,999 miles	S	S	S	S	S	S
2,000 miles or more	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S
Less than 50 miles	S	S	S	S	S	S
50 to 99 miles	—	—	—	—	—	—
100 to 249 miles	—	—	—	—	—	—
250 to 499 miles	S	S	S	S	S	S
500 to 749 miles	—	—	—	—	—	—
750 to 999 miles	—	—	—	—	—	—
1,000 to 1,499 miles	—	—	—	—	—	—
1,500 to 1,999 miles	—	—	—	—	—	—
2,000 miles or more	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	19.8	—	25.2	—	32.0	—
Less than 50 miles	33.2	6.5	31.0	8.6	42.4	4.7
50 to 99 miles	33.8	2.3	S	S	S	S
100 to 249 miles	30.9	3.6	30.3	4.9	28.7	6.3
250 to 499 miles	22.4	2.7	33.4	1.6	32.4	2.9
500 to 749 miles	47.8	2.4	34.7	1.4	38.9	4.4
750 to 999 miles	37.8	1.7	S	S	S	S
1,000 to 1,499 miles	37.3	3.3	49.4	5.0	S	S
1,500 to 1,999 miles	47.2	.3	S	S	S	S
2,000 miles or more	S	S	S	S	S	S

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

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

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

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

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment— coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
All modes	5.5	—	8.4	—	7.8	—	8.1
Less than 50 lb	10.1	1.2	28.0	—	9.2	—	11.8
50 to 99 lb	8.1	.3	11.2	—	8.9	—	11.0
100 to 499 lb	14.6	1.0	11.1	.2	12.5	.1	13.0
500 to 749 lb	19.7	.6	12.0	—	14.0	—	17.6
750 to 999 lb	22.2	.4	10.0	—	17.0	—	14.3
1,000 to 9,999 lb	17.1	2.4	9.5	.9	13.3	.8	9.6
10,000 to 49,999 lb	6.5	2.4	13.9	4.0	10.6	3.2	10.2
50,000 to 99,999 lb	26.0	2.4	15.7	3.0	24.1	2.2	13.4
100,000 lb or more	10.7	.7	16.1	2.8	12.6	3.2	8.5
Single modes	6.2	—	8.4	—	7.9	—	12.4
Less than 50 lb	16.6	1.0	15.2	—	16.0	—	20.7
50 to 99 lb	13.3	.3	12.4	—	16.3	—	24.6
100 to 499 lb	16.6	1.1	12.8	.2	12.8	—	14.3
500 to 749 lb	20.3	.7	13.5	.1	14.8	—	21.2
750 to 999 lb	23.9	.5	9.9	—	14.5	—	14.2
1,000 to 9,999 lb	17.8	2.6	10.5	.9	13.9	.8	9.5
10,000 to 49,999 lb	5.9	2.6	14.1	4.2	10.8	3.5	9.9
50,000 to 99,999 lb	27.1	2.7	16.5	3.0	26.4	2.2	13.7
100,000 lb or more	10.9	.9	16.3	2.9	12.6	3.4	8.6
Truck	5.8	—	10.0	—	9.6	—	8.1
Less than 50 lb	22.2	1.1	16.6	—	17.2	—	11.6
50 to 99 lb	12.0	.2	13.7	—	14.6	—	15.5
100 to 499 lb	17.4	1.3	12.9	.2	13.0	.2	13.9
500 to 749 lb	22.0	.9	13.5	.1	15.3	.1	21.6
750 to 999 lb	24.3	.6	9.9	—	13.5	—	13.8
1,000 to 9,999 lb	19.4	3.2	10.6	1.2	14.3	1.4	9.6
10,000 to 49,999 lb	6.1	2.9	14.3	3.9	11.4	3.0	9.6
50,000 to 99,999 lb	21.5	1.6	16.6	3.2	28.0	3.0	9.9
100,000 lb or more	21.8	.4	34.7	1.0	21.3	1.0	23.1
For-hire truck	10.0	—	13.7	—	13.1	—	10.4
Less than 50 lb	37.5	1.4	19.4	—	27.4	—	22.1
50 to 99 lb	16.3	.2	18.9	—	17.6	—	9.5
100 to 499 lb	28.5	2.0	18.0	.1	15.9	.2	7.2
500 to 749 lb	39.0	1.3	14.8	—	19.1	.1	10.6
750 to 999 lb	41.6	.8	16.7	—	14.8	—	8.9
1,000 to 9,999 lb	31.5	4.9	19.9	.9	19.3	1.3	7.4
10,000 to 49,999 lb	11.1	3.9	13.3	4.5	16.4	3.3	12.5
50,000 to 99,999 lb	24.0	1.7	22.7	4.4	31.1	3.6	9.7
100,000 lb or more	30.6	.8	40.5	1.3	32.3	1.4	35.4
Private truck	6.3	—	14.5	—	14.9	—	10.1
Less than 50 lb	15.2	1.1	17.4	—	15.6	—	13.0
50 to 99 lb	13.3	.4	13.8	—	14.4	—	14.4
100 to 499 lb	7.1	.8	13.6	.3	12.8	.1	15.6
500 to 749 lb	20.8	.8	16.4	.2	17.3	.1	22.8
750 to 999 lb	18.7	.4	11.5	.1	17.7	—	17.0
1,000 to 9,999 lb	8.6	2.0	10.2	1.9	20.9	2.4	16.0
10,000 to 49,999 lb	11.3	2.4	19.1	3.8	17.6	2.9	20.4
50,000 to 99,999 lb	31.8	1.9	18.9	3.0	24.4	2.6	8.2
100,000 lb or more	41.5	.3	36.1	.6	43.4	1.2	37.5
Rail	32.6	—	19.4	—	14.1	—	9.1
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	S	S	S	S	S	S	31.6
100 to 499 lb	49.3	—	41.3	—	—	—	27.8
500 to 749 lb	S	S	S	S	S	S	29.8
750 to 999 lb	S	S	S	S	S	S	29.8
1,000 to 9,999 lb	44.3	4.1	44.3	—	41.8	—	26.3
10,000 to 49,999 lb	46.6	1.7	29.9	.5	32.9	.7	27.3
50,000 to 99,999 lb	49.7	14.7	38.2	1.0	36.9	1.6	20.7
100,000 lb or more	12.6	14.3	19.9	1.0	14.0	1.6	9.5
Water	30.7	—	29.5	—	28.5	—	15.4
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	30.7	—	29.5	—	28.5	—	15.4
Shallow draft	30.7	—	29.5	—	28.5	—	15.4
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	30.7	—	29.5	—	28.5	—	15.4

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)	29.8	—	47.3	—	44.7	—	3.2
Less than 50 lb	24.0	7.2	36.5	3.7	38.1	3.6	3.2
50 to 99 lb	S	S	S	S	S	S	10.0
100 to 499 lb	24.3	3.4	28.0	4.8	34.9	5.9	9.5
500 to 749 lb	34.9	2.9	27.3	2.2	33.6	2.2	17.3
750 to 999 lb	50.0	1.1	S	S	S	S	27.5
1,000 to 9,999 lb	S	S	S	S	44.9	8.7	31.0
10,000 to 49,999 lb	S	S	S	S	S	S	25.0
50,000 to 99,999 lb	S	S	S	S	S	S	31.2
100,000 lb or more	—	—	—	—	—	—	—
Pipeline	26.4	—	35.9	—	S	S	S
Less than 50 lb	S	S	S	S	S	S	S
50 to 99 lb	—	—	—	—	S	S	S
100 to 499 lb	—	—	—	—	S	S	S
500 to 749 lb	—	—	—	—	S	S	S
750 to 999 lb	—	—	—	—	S	S	S
1,000 to 9,999 lb	S	S	S	S	S	S	S
10,000 to 49,999 lb	S	S	S	S	S	S	S
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	28.6	17.6	38.9	17.4	S	S	S
Multiple modes	7.1	—	24.8	—	19.7	—	5.1
Less than 50 lb	8.7	2.8	4.1	5.5	6.3	3.8	5.7
50 to 99 lb	9.1	1.3	8.0	2.5	8.9	2.0	3.6
100 to 499 lb	15.8	2.4	17.6	4.6	19.3	5.0	5.3
500 to 749 lb	32.2	.3	35.3	.7	42.6	.7	17.1
750 to 999 lb	36.9	.1	42.3	.6	S	S	22.3
1,000 to 9,999 lb	S	S	S	S	S	S	S
10,000 to 49,999 lb	31.6	1.1	47.5	7.8	30.7	8.0	17.4
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	7.5	—	8.5	—	9.3	—	5.1
Less than 50 lb	8.7	2.6	4.1	2.7	6.3	3.4	5.7
50 to 99 lb	9.1	1.5	8.0	1.7	8.9	1.9	3.6
100 to 499 lb	15.8	2.5	17.6	3.5	19.3	4.7	5.3
500 to 749 lb	32.2	.3	35.3	2.4	42.6	2.7	17.1
750 to 999 lb	36.9	.1	42.3	1.0	S	S	22.3
1,000 to 9,999 lb	S	S	S	S	S	S	S
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Truck and rail	31.1	—	43.4	—	28.4	—	26.1
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	31.6
10,000 to 49,999 lb	31.8	1.4	47.6	11.2	31.1	6.8	18.0
50,000 to 99,999 lb	S	S	S	S	S	S	S
100,000 lb or more	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	41.3
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	S	S	S	S	S	S	31.6
10,000 to 49,999 lb	S	S	S	S	S	S	31.6
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	S	S	S	S	S	S	31.6

See footnote at end of table.

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

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

Mode of transportation and shipment size	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
Multiple modes—Con.							
Rail and water	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Less than 50 lb	—	—	—	—	—	—	—
50 to 99 lb	—	—	—	—	—	—	—
100 to 499 lb	—	—	—	—	—	—	—
500 to 749 lb	—	—	—	—	—	—	—
750 to 999 lb	—	—	—	—	—	—	—
1,000 to 9,999 lb	—	—	—	—	—	—	—
10,000 to 49,999 lb	—	—	—	—	—	—	—
50,000 to 99,999 lb	—	—	—	—	—	—	—
100,000 lb or more	—	—	—	—	—	—	—
Other and unknown modes	19.8	—	25.2	—	32.0	—	17.6
Less than 50 lb	S	S	S	S	S	S	18.3
50 to 99 lb	37.7	1.5	S	S	S	S	S
100 to 499 lb	16.0	1.2	21.7	4	29.2	2	33.0
500 to 749 lb	23.5	.7	32.1	2	29.3	2	S
750 to 999 lb	S	S	S	S	S	S	25.4
1,000 to 9,999 lb	16.5	4.4	35.8	4.4	24.5	5.2	21.3
10,000 to 49,999 lb	29.0	5.2	26.3	8.3	34.1	6.9	22.9
50,000 to 99,999 lb	41.6	3.1	34.2	8.7	44.7	8.0	S
100,000 lb or more	S	S	S	S	S	S	28.7

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

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

Table B-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	5.5	—	8.4	—	7.8	—	8.1
01	Live animals and live fish	47.4	—	S	S	S	S	25.8
02	Cereal grains	32.0	.4	32.0	1.3	26.7	2.1	S
03	Other agricultural products	31.5	.1	41.7	.2	S	S	S
04	Animal feed and products of animal origin, n.e.c.	22.6	.3	22.6	.6	20.6	.3	S
05	Meat, fish, seafood, and their preparations	32.5	.9	32.5	.2	44.9	.6	21.5
06	Milled grain products and preparations, and bakery products	20.7	.3	14.2	.1	12.4	.3	39.3
07	Other prepared foodstuffs and fats and oils	24.1	.5	33.0	.3	31.2	.2	S
08	Alcoholic beverages	19.9	.3	34.0	.2	38.1	—	47.8
09	Tobacco products	38.8	—	38.0	—	S	S	23.9
10	Monumental or building stone	S	S	S	S	S	S	S
11	Natural sands	30.0	—	S	S	S	S	S
12	Gravel and crushed stone	33.8	—	34.0	5.5	26.2	1.4	29.1
13	Nonmetallic minerals n.e.c.	48.1	—	S	S	49.6	1.5	39.9
14	Metallic ores and concentrates	S	S	S	S	S	S	S
15	Coal	23.6	—	23.2	.3	41.2	.2	26.5
17	Gasoline and aviation turbine fuel	22.4	1.5	25.1	2.9	S	S	29.4
18	Fuel oils	26.6	.4	31.2	1.0	S	S	22.9
19	Coal and petroleum products, n.e.c.	21.2	.4	27.1	1.1	21.1	1.5	16.8
20	Basic chemicals	33.0	—	S	S	S	S	22.7
21	Pharmaceutical products	31.5	.7	29.1	—	49.3	—	18.1
22	Fertilizers	24.2	.3	24.4	.9	27.9	2.5	42.2
23	Chemical products and preparations, n.e.c.	16.5	.3	14.1	—	23.7	.2	15.3
24	Plastics and rubber	13.5	.7	17.8	.2	17.0	.7	17.5
25	Logs and other wood in the rough	40.5	—	S	S	47.7	.1	S
26	Wood products	15.8	.3	23.1	.6	24.4	.8	15.4
27	Pulp, newsprint, paper, and paperboard	29.7	.4	38.6	.5	44.0	1.9	27.3
28	Paper or paperboard articles	19.2	.3	19.5	.1	21.9	.3	28.0
29	Printed products	20.0	.6	18.4	.1	26.4	.2	41.3
30	Textiles, leather, and articles of textiles or leather	13.9	.3	31.4	—	46.1	.2	13.3
31	Nonmetallic mineral products	19.2	.7	16.3	2.0	21.5	2.9	11.3
32	Base metal in primary or semifinished forms and in finished basic shapes	22.9	.6	27.9	.3	22.4	.5	16.7
33	Articles of base metal	7.0	.6	26.1	.5	21.9	.8	21.5
34	Machinery	16.7	1.4	15.4	.1	18.0	.4	16.5
35	Electronic and other electrical equipment and components and office equipment	30.8	2.7	18.9	—	28.6	.2	20.8
36	Motorized and other vehicles (including parts)	30.0	2.1	27.8	.2	35.7	.7	31.2
37	Transportation equipment, n.e.c.	19.1	.5	S	S	43.5	.1	28.1
38	Precision instruments and apparatus	19.3	.2	37.3	—	44.5	—	14.5
39	Furniture, mattresses and mattress supports, lamps, lighting fittings, and illuminated signs	17.8	.1	19.2	—	26.5	—	19.6
40	Miscellaneous manufactured products	15.6	1.0	15.7	.1	9.3	.3	8.3
41	Waste and scrap	30.4	—	35.9	.4	30.9	.3	26.7
43	Mixed freight	20.9	.9	21.7	.2	40.4	.4	40.4
--	Commodity unknown	28.6	.2	S	S	S	S	21.4

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

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

Table B-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	5.5	—	8.4	—	7.8	—	8.1
Single modes	6.2	1.1	8.4	.5	7.9	.6	12.4
Truck	5.8	1.6	10.0	2.6	9.6	3.6	8.1
For-hire truck	10.0	3.0	13.7	4.0	13.1	4.2	10.4
Private truck	6.3	2.0	14.5	4.3	14.9	2.3	10.1
Rail	32.6	2.3	19.4	2.0	14.1	3.4	9.1
Water	30.7	.1	29.5	.5	28.5	2.0	15.4
Shallow draft	30.7	.1	29.5	.5	28.5	2.0	15.4
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	29.8	.9	47.3	—	44.7	.2	3.2
Pipeline	26.4	.6	35.9	1.4	S	S	S
Multiple modes	7.1	.5	24.8	.1	19.7	.3	5.1
Parcel, U.S. Postal Service or courier	7.5	.5	8.5	—	9.3	—	5.1
Truck and rail	31.1	—	43.4	.1	28.4	.2	26.1
Truck and water	S	S	S	S	S	S	41.3
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	19.8	.9	25.2	.4	32.0	.7	17.6
SCTG 01, LIVE ANIMALS AND LIVE FISH							
Total	47.4	—	S	S	S	S	25.8
Single modes	48.1	2.0	S	S	S	S	26.1
Truck	48.1	2.0	S	S	S	S	26.1
For-hire truck	—	—	—	—	—	—	—
Private truck	48.1	2.0	S	S	S	S	26.1
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	29.4
SCTG 02, CEREAL GRAINS							
Total	32.0	—	32.0	—	26.7	—	S
Single modes	32.0	—	32.0	—	26.7	—	S
Truck	46.0	13.4	46.8	13.8	S	S	23.2
For-hire truck	S	S	S	S	S	S	26.2
Private truck	S	S	S	S	S	S	S
Rail	—	—	—	—	—	—	—
Water	26.6	13.4	27.2	13.8	26.2	13.4	15.4
Shallow draft	26.6	13.4	27.2	13.8	26.2	13.4	15.4
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	31.7

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 03, OTHER AGRICULTURAL PRODUCTS							
Total	31.5	—	41.7	—	S	S	S
Single modes	31.8	1.2	41.8	.4	S	S	S
Truck	48.2	13.2	35.7	19.0	S	S	S
For-hire truck	S	S	S	S	S	S	30.1
Private truck	S	S	44.7	14.9	44.8	17.9	47.8
Rail	—	—	—	—	—	—	—
Water	S	S	S	S	S	S	27.9
Shallow draft	S	S	S	S	S	S	27.9
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	29.8
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	29.8
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.6
SCTG 04, ANIMAL FEED AND PRODUCTS OF ANIMAL ORIGIN, N.E.C.							
Total	22.6	—	22.6	—	20.6	—	S
Single modes	23.5	5.8	25.1	6.2	20.8	4.5	S
Truck	23.5	5.8	25.1	6.2	20.8	4.5	S
For-hire truck	31.8	3.8	20.8	3.5	26.0	6.9	14.8
Private truck	23.2	5.2	26.8	5.1	24.6	6.6	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	30.0
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	S	S	S	S	S	S	28.7
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 05, MEAT, FISH, SEAFOOD, AND THEIR PREPARATIONS							
Total	32.5	—	32.5	—	44.9	—	21.5
Single modes	32.5	2.2	32.6	2.2	45.5	1.9	21.4
Truck	32.5	2.2	32.6	2.2	45.5	1.9	21.4
For-hire truck	S	S	S	S	S	S	28.3
Private truck	39.5	8.8	39.5	8.7	S	S	24.2
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	31.3

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 06, MILLED GRAIN PRODUCTS AND PREPARATIONS, AND BAKERY PRODUCTS							
Total	20.7	—	14.2	—	12.4	—	39.3
Single modes	20.9	.9	14.4	.8	12.4	.1	38.0
Truck	22.8	3.3	17.2	6.8	15.0	8.8	38.4
For-hire truck	24.9	6.8	15.3	6.0	17.9	9.1	10.0
Private truck	27.5	7.1	26.6	6.9	26.6	8.1	40.3
Rail	46.6	3.4	47.2	6.9	48.3	8.9	26.0
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.6
SCTG 07, OTHER PREPARED FOODSTUFFS AND FATS AND OILS							
Total	24.1	—	33.0	—	31.2	—	S
Single modes	24.5	5.3	33.2	5.3	29.7	10.0	35.5
Truck	24.5	5.3	34.0	6.0	31.1	11.0	35.5
For-hire truck	32.9	10.2	S	S	43.2	9.9	32.2
Private truck	26.0	9.9	33.2	11.1	33.0	12.2	35.5
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	31.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	41.6	5.2	S	S	S	S	24.0
Parcel, U.S. Postal Service or courier	36.4	5.3	31.0	5.3	40.7	10.4	22.7
Truck and rail	S	S	S	S	S	S	29.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 08, ALCOHOLIC BEVERAGES							
Total	19.9	—	34.0	—	38.1	—	47.8
Single modes	19.4	2.9	33.2	3.3	32.1	4.2	49.1
Truck	19.4	2.9	33.2	3.3	32.1	4.2	49.1
For-hire truck	S	S	S	S	S	S	33.8
Private truck	18.9	3.3	33.6	3.3	33.3	4.6	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.0

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 09, TOBACCO PRODUCTS							
Total	38.8	—	38.0	—	S	S	23.9
Single modes	40.2	3.8	39.0	2.3	S	S	23.9
Truck	40.2	3.8	39.0	2.3	S	S	23.9
For-hire truck	S	S	S	S	S	S	32.0
Private truck	39.0	5.8	33.9	4.7	S	S	18.8
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.6
SCTG 10, MONUMENTAL OR BUILDING STONE							
Total	S	S	S	S	S	S	S
Single modes	S	S	S	S	S	S	S
Truck	S	S	S	S	S	S	S
For-hire truck	45.6	11.9	43.0	10.5	41.1	11.1	27.2
Private truck	S	S	S	S	S	S	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	—	—	—	—	—	—	—
SCTG 11, NATURAL SANDS							
Total	30.0	—	S	S	S	S	S
Single modes	30.3	1.0	S	S	S	S	S
Truck	34.9	9.3	S	S	37.7	15.4	S
For-hire truck	43.9	9.2	34.4	8.4	48.0	6.6	S
Private truck	S	S	S	S	47.9	13.1	S
Rail	S	S	S	S	S	S	32.0
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	30.6

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 12, GRAVEL AND CRUSHED STONE							
Total	33.8	—	34.0	—	26.2	—	29.1
Single modes	33.5	1.0	33.7	1.0	24.7	1.1	30.8
Truck	34.1	1.4	34.2	1.2	25.6	2.4	30.9
For-hire truck	39.0	7.7	40.5	8.0	47.6	8.5	27.8
Private truck	36.6	8.0	36.5	8.3	31.8	8.4	32.7
Rail	S	S	S	S	S	S	30.4
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	31.2
SCTG 13, NONMETALLIC MINERALS N.E.C.							
Total	48.1	—	S	S	49.6	—	39.9
Single modes	48.3	.5	S	S	49.6	—	41.3
Truck	S	S	S	S	S	S	36.2
For-hire truck	S	S	S	S	S	S	S
Private truck	S	S	S	S	S	S	38.1
Rail	33.1	8.8	22.1	10.5	30.5	9.0	18.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	30.0
SCTG 14, METALLIC ORES AND CONCENTRATES							
Total	S	S	S	S	S	S	S
Single modes	S	S	S	S	S	S	S
Truck	S	S	S	S	S	S	S
For-hire truck	S	S	S	S	S	S	31.6
Private truck	S	S	S	S	S	S	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	31.6
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.6
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.0

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 15, COAL							
Total	23.6	—	23.2	—	41.2	—	26.5
Single modes	22.3	3.7	22.2	3.3	27.6	10.5	24.4
Truck	23.1	4.6	23.6	4.3	27.4	10.6	24.5
For-hire truck	23.1	4.6	23.6	4.3	27.4	10.6	24.5
Private truck	S	S	S	S	S	S	31.6
Rail	S	S	S	S	S	S	29.8
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	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	22.4	—	25.1	—	S	S	29.4
Single modes	22.3	.7	25.2	.6	S	S	29.6
Truck	28.3	11.6	33.6	12.1	S	S	29.5
For-hire truck	46.6	8.6	48.5	9.5	S	S	49.3
Private truck	35.1	12.8	40.9	14.0	47.7	13.9	20.5
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	29.6	11.8	40.3	12.3	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 18, FUEL OILS							
Total	26.6	—	31.2	—	S	S	22.9
Single modes	29.1	6.5	34.3	6.1	S	S	20.0
Truck	23.9	9.4	28.2	10.6	S	S	20.1
For-hire truck	39.0	11.3	43.5	11.9	S	S	33.4
Private truck	28.2	10.7	35.5	11.4	26.8	13.6	40.6
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	S	S	S	S	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 19, COAL AND PETROLEUM PRODUCTS, N.E.C.							
Total	21.2	—	27.1	—	21.1	—	16.8
Single modes	21.4	1.3	27.3	.5	21.2	.8	22.8
Truck	29.3	8.0	37.6	10.7	40.7	13.6	25.7
For-hire truck	36.1	11.1	41.6	10.8	42.5	13.1	26.6
Private truck	25.8	3.9	29.2	3.7	43.1	3.2	48.7
Rail	36.6	6.8	38.9	10.1	40.2	13.1	22.0
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	31.6
Pipeline	S	S	S	S	S	S	S
Multiple modes	45.3	.2	40.9	—	S	S	24.2
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	24.9
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	41.8	1.3	S	S	S	S	S
SCTG 20, BASIC CHEMICALS							
Total	33.0	—	S	S	S	S	22.7
Single modes	35.6	5.3	S	S	S	S	47.0
Truck	39.5	8.1	S	S	S	S	27.2
For-hire truck	22.7	7.5	21.8	8.5	30.7	12.1	30.5
Private truck	S	S	S	S	S	S	21.3
Rail	41.2	2.6	42.6	3.3	46.9	5.5	24.0
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	21.3
Pipeline	—	—	—	—	S	S	S
Multiple modes	43.3	5.1	S	S	S	S	20.9
Parcel, U.S. Postal Service or courier	43.3	5.1	S	S	S	S	20.9
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 21, PHARMACEUTICAL PRODUCTS							
Total	31.5	—	29.1	—	49.3	—	18.1
Single modes	35.4	6.7	33.1	7.9	S	S	21.3
Truck	35.4	6.7	33.1	7.9	S	S	21.6
For-hire truck	37.3	11.4	41.2	11.3	S	S	20.8
Private truck	38.0	11.4	38.2	11.2	44.6	11.6	40.4
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	29.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	47.7	7.9	S	S	22.2
Parcel, U.S. Postal Service or courier	S	S	47.7	7.9	S	S	22.2
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	34.6

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 22, FERTILIZERS							
Total	24.2	—	24.4	—	27.9	—	42.2
Single modes	26.7	5.2	27.1	5.9	28.8	3.5	47.1
Truck	40.9	8.9	36.4	8.9	49.5	10.2	27.9
For-hire truck	44.4	3.8	38.8	3.8	46.1	3.4	14.4
Private truck	41.8	9.3	39.2	9.6	S	S	40.2
Rail	23.3	8.4	28.6	9.3	29.4	10.7	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	45.4	5.2	42.1	5.9	41.9	3.5	28.5
SCTG 23, CHEMICAL PRODUCTS AND PREPARATIONS, N.E.C.							
Total	16.5	—	14.1	—	23.7	—	15.3
Single modes	15.3	3.2	13.4	1.4	23.3	.8	20.3
Truck	15.4	3.2	13.4	1.4	23.3	.8	21.4
For-hire truck	18.3	9.0	24.2	7.9	30.6	10.3	18.4
Private truck	32.7	9.3	20.2	7.9	21.8	10.5	34.0
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	23.5
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	15.4
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	15.4
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	30.1	.9	37.9	1.1	48.0	.3	17.8
SCTG 24, PLASTICS AND RUBBER							
Total	13.5	—	17.8	—	17.0	—	17.5
Single modes	13.7	2.9	17.8	1.1	16.6	1.0	27.2
Truck	13.1	3.9	16.9	7.4	16.7	10.3	28.2
For-hire truck	14.0	5.8	18.6	8.3	17.1	10.4	18.5
Private truck	28.4	3.3	20.2	2.0	25.4	.4	29.7
Rail	46.9	1.6	44.4	7.5	42.3	10.4	25.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	26.4
Pipeline	—	—	—	—	S	S	S
Multiple modes	43.9	1.6	S	S	S	S	11.5
Parcel, U.S. Postal Service or courier	30.8	1.2	35.0	.3	33.0	.5	11.5
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	38.0	3.1	38.3	.9	31.5	.4	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 25, LOGS AND OTHER WOOD IN THE ROUGH							
Total	40.5	—	S	S	47.7	—	S
Single modes	41.3	5.8	S	S	38.7	8.5	S
Truck	45.2	9.8	S	S	43.4	11.1	S
For-hire truck	48.0	10.4	45.6	9.8	49.7	10.5	28.5
Private truck	S	S	S	S	S	S	S
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	—	—	—	—	—	—	—
Parcel, U.S. Postal Service or courier	—	—	—	—	—	—	—
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	31.6
SCTG 26, WOOD PRODUCTS							
Total	15.8	—	23.1	—	24.4	—	15.4
Single modes	15.9	.7	23.1	1.8	18.0	5.1	15.0
Truck	15.8	3.1	15.5	7.4	21.2	10.1	14.4
For-hire truck	15.5	4.4	28.8	9.0	30.5	9.6	10.4
Private truck	24.2	5.4	29.2	9.1	38.2	7.0	17.9
Rail	27.0	2.9	S	S	31.3	8.1	S
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	31.0
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	31.0
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	40.1	.4	S	S	S	S	S
SCTG 27, PULP, NEWSPRINT, PAPER, AND PAPERBOARD							
Total	29.7	—	38.6	—	44.0	—	27.3
Single modes	30.0	3.9	39.7	7.1	45.8	10.3	31.7
Truck	35.4	9.2	26.8	14.2	31.0	17.2	37.5
For-hire truck	46.0	10.8	33.3	9.4	33.7	11.2	20.9
Private truck	24.0	14.1	23.5	14.6	35.6	14.6	37.2
Rail	S	S	S	S	S	S	27.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	S
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	25.3
Truck and rail	S	S	S	S	S	S	29.8
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	48.2	3.1	S	S	S	S	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 28, PAPER OR PAPERBOARD ARTICLES							
Total	19.2	—	19.5	—	21.9	—	28.0
Single modes	19.4	2.1	19.6	1.4	21.6	4.3	49.7
Truck	19.1	2.0	19.5	1.3	21.2	4.3	S
For-hire truck	25.5	9.6	22.8	10.2	22.3	10.4	S
Private truck	23.6	9.4	30.5	9.9	49.6	8.8	39.8
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	30.0
Pipeline	—	—	—	—	S	S	S
Multiple modes	40.6	1.0	44.3	1.2	S	S	38.1
Parcel, U.S. Postal Service or courier	S	S	S	S	44.1	.7	19.5
Truck and rail	S	S	S	S	S	S	28.0
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	42.8
SCTG 29, PRINTED PRODUCTS							
Total	20.0	—	18.4	—	26.4	—	41.3
Single modes	15.1	9.5	21.5	8.1	31.7	8.4	27.7
Truck	15.0	9.5	21.5	8.1	32.0	8.6	32.2
For-hire truck	17.2	7.1	23.4	6.9	35.3	10.0	36.1
Private truck	22.3	5.5	26.7	7.1	S	S	37.0
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	16.2
Pipeline	—	—	—	—	S	S	S
Multiple modes	34.1	6.6	30.4	4.3	39.0	8.4	10.9
Parcel, U.S. Postal Service or courier	34.1	6.6	30.4	4.3	39.0	8.4	10.9
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S
SCTG 30, TEXTILES, LEATHER, AND ARTICLES OF TEXTILES OR LEATHER							
Total	13.9	—	31.4	—	46.1	—	13.3
Single modes	13.6	5.9	38.0	6.9	S	S	31.6
Truck	14.0	5.3	30.7	6.4	44.5	9.6	27.7
For-hire truck	19.3	3.1	18.1	6.9	23.4	10.1	14.4
Private truck	30.0	5.4	44.9	9.8	S	S	S
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	20.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	19.5	6.0	26.5	7.1	30.7	10.7	10.9
Parcel, U.S. Postal Service or courier	19.6	6.0	27.0	7.1	31.9	10.7	10.9
Truck and rail	S	S	S	S	S	S	31.6
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	25.0	.7	S	S	45.6	.7	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 31, NONMETALLIC MINERAL PRODUCTS							
Total	19.2	—	16.3	—	21.5	—	11.3
Single modes	18.5	.7	16.2	.5	20.0	2.9	8.5
Truck	19.9	1.5	17.9	2.5	25.5	4.9	8.2
For-hire truck	30.6	5.0	23.1	5.9	33.9	6.4	12.7
Private truck	16.3	5.9	26.3	8.3	30.5	5.2	12.7
Rail	28.5	1.6	31.9	2.7	30.5	4.7	20.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	24.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	16.9
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	16.9
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	38.2	.5	S	S	S	S	42.4
SCTG 32, BASE METAL IN PRIMARY OR SEMIFINISHED FORMS AND IN FINISHED BASIC SHAPES							
Total	22.9	—	27.9	—	22.4	—	16.7
Single modes	23.9	1.6	28.2	1.1	23.2	1.8	14.3
Truck	24.0	1.6	28.7	2.9	25.2	5.1	13.4
For-hire truck	19.2	4.9	30.1	5.9	22.3	7.2	18.8
Private truck	33.5	4.9	41.3	7.0	50.0	6.9	16.3
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	26.7
Pipeline	S	S	S	S	S	S	S
Multiple modes	29.1	1.3	S	S	40.7	.2	11.9
Parcel, U.S. Postal Service or courier	29.1	1.3	S	S	40.7	.2	11.9
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	23.7	.8	22.7	1.1	26.0	1.7	S
SCTG 33, ARTICLES OF BASE METAL							
Total	7.0	—	26.1	—	21.9	—	21.5
Single modes	7.8	2.3	27.1	2.6	23.9	3.6	21.1
Truck	8.0	2.6	28.6	4.2	24.1	3.6	13.6
For-hire truck	17.1	7.8	44.8	8.0	29.9	6.8	12.4
Private truck	20.2	6.7	21.6	6.9	29.3	6.2	19.9
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	41.1	.2	34.2	.3	16.4
Pipeline	—	—	—	—	S	S	S
Multiple modes	27.4	1.8	29.3	.3	33.9	.9	15.8
Parcel, U.S. Postal Service or courier	27.4	1.8	29.3	.3	33.9	.9	15.8
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	29.2	1.2	44.5	2.6	S	S	S

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 34, MACHINERY							
Total	16.7	—	15.4	—	18.0	—	16.5
Single modes	16.4	1.9	15.3	1.1	17.3	1.5	19.8
Truck	16.0	1.7	15.2	1.2	17.2	1.8	17.4
For-hire truck	16.7	3.0	15.8	3.9	17.0	4.7	7.5
Private truck	18.6	2.9	26.9	3.9	40.1	4.0	48.4
Rail	S	S	S	S	S	S	31.6
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	38.5	.8	31.1	.2	38.1	.4	9.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	38.2	1.6	40.7	.5	45.2	.9	9.8
Parcel, U.S. Postal Service or courier	38.3	1.6	41.7	.5	S	S	9.8
Truck and rail	—	—	—	—	—	—	—
Truck and water	S	S	S	S	S	S	31.6
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	15.7	1.1	34.5	.9	S	S	S
SCTG 35, ELECTRONIC AND OTHER ELECTRICAL EQUIPMENT AND COMPONENTS AND OFFICE EQUIPMENT							
Total	30.8	—	18.9	—	28.6	—	20.8
Single modes	36.3	7.1	20.4	3.1	30.3	3.8	31.9
Truck	39.1	6.7	22.9	5.8	34.2	5.7	38.7
For-hire truck	46.0	8.6	33.7	8.4	38.5	7.7	30.6
Private truck	19.3	4.8	40.6	7.5	31.0	4.4	34.8
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	46.6	4.4	S	S	S	S	3.9
Pipeline	S	S	S	S	S	S	S
Multiple modes	17.5	6.5	17.5	1.6	28.6	3.6	12.3
Parcel, U.S. Postal Service or courier	17.5	6.5	17.5	1.6	28.6	3.6	12.3
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	30.3	1.0	S	S	33.9	.4	24.4
SCTG 36, MOTORIZED AND OTHER VEHICLES (INCLUDING PARTS)							
Total	30.0	—	27.8	—	35.7	—	31.2
Single modes	36.0	9.7	31.0	7.3	37.9	9.0	S
Truck	19.0	12.2	30.2	9.2	30.2	15.5	S
For-hire truck	26.3	4.8	29.9	2.9	29.6	10.0	16.5
Private truck	20.4	8.9	32.2	7.1	34.6	5.9	S
Rail	S	S	S	S	S	S	28.1
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	46.4	—	S	S	25.5
Pipeline	—	—	—	—	S	S	S
Multiple modes	44.2	2.3	44.7	1.6	S	S	18.4
Parcel, U.S. Postal Service or courier	44.2	2.3	44.7	1.6	S	S	18.4
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	47.9	8.6	31.5	6.5	S	S	22.0

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 37, TRANSPORTATION EQUIPMENT, N.E.C.							
Total	19.1	—	S	S	43.5	—	28.1
Single modes	22.2	7.3	S	S	45.3	6.0	S
Truck	43.1	7.2	S	S	38.7	8.2	S
For-hire truck	40.1	6.4	38.7	9.9	38.0	8.3	26.8
Private truck	S	S	S	S	S	S	29.4
Rail	33.2	10.6	S	S	49.5	15.2	24.9
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	28.4	7.5	28.5	5.4	22.9	6.2	15.6
Pipeline	—	—	—	—	S	S	S
Multiple modes	45.2	7.4	S	S	S	S	23.2
Parcel, U.S. Postal Service or courier	45.2	7.4	S	S	S	S	23.2
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	46.1	.6	S	S	46.5	.4	S
SCTG 38, PRECISION INSTRUMENTS AND APPARATUS							
Total	19.3	—	37.3	—	44.5	—	14.5
Single modes	28.1	4.4	S	S	S	S	18.4
Truck	32.2	5.4	S	S	S	S	22.8
For-hire truck	40.8	5.4	S	S	S	S	14.4
Private truck	S	S	S	S	48.9	2.2	49.5
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	22.4
Pipeline	—	—	—	—	S	S	S
Multiple modes	20.2	4.9	24.6	10.2	32.4	9.4	17.1
Parcel, U.S. Postal Service or courier	20.2	4.9	24.6	10.2	32.4	9.4	17.1
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	45.8	2.7	S	S	S
SCTG 39, FURNITURE, MATTRESSES AND MATTRESS SUPPORTS, LAMPS, LIGHTING FITTINGS, AND ILLUMINATED SIGNS							
Total	17.8	—	19.2	—	26.5	—	19.6
Single modes	17.3	2.3	19.7	2.3	27.2	7.4	17.0
Truck	17.0	2.5	19.7	2.3	27.2	7.4	19.2
For-hire truck	32.6	8.0	35.6	8.8	39.0	14.7	S
Private truck	13.6	8.2	23.1	8.2	44.3	13.0	14.9
Rail	—	—	—	—	—	—	—
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	S	S	S	S	S	S	29.9
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	45.3	1.7	43.8	6.3	21.1
Parcel, U.S. Postal Service or courier	S	S	45.3	1.7	43.8	6.3	21.1
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	32.6	.7	S	S	49.7

See footnote at end of table.

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

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

SCTG code, description, and mode of transportation	Value		Tons		Ton-miles		Average miles per shipment—coefficient of variation
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	
SCTG 40, MISCELLANEOUS MANUFACTURED PRODUCTS							
Total	15.6	—	15.7	—	9.3	—	8.3
Single modes	13.5	3.7	16.7	3.0	11.1	4.2	15.2
Truck	13.6	3.7	16.9	3.6	10.3	4.9	17.1
For-hire truck	14.0	6.4	21.8	6.5	13.5	7.1	15.3
Private truck	37.3	5.8	30.8	5.9	36.4	4.7	20.1
Rail	S	S	S	S	S	S	28.7
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	29.8	.3	34.4	—	35.3	.2	10.8
Pipeline	—	—	—	—	S	S	S
Multiple modes	31.6	2.6	28.1	2.8	35.5	4.2	9.7
Parcel, U.S. Postal Service or courier	33.4	2.4	27.6	1.2	24.7	.8	9.7
Truck and rail	S	S	S	S	S	S	28.0
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	44.8	3.0	S	S	S	S	26.5
SCTG 41, WASTE AND SCRAP							
Total	30.4	—	35.9	—	30.9	—	26.7
Single modes	32.0	5.2	36.0	5.4	34.2	10.6	29.4
Truck	39.7	12.7	39.0	12.1	42.7	11.9	48.1
For-hire truck	42.3	9.1	S	S	S	S	33.7
Private truck	49.2	9.1	S	S	S	S	S
Rail	36.5	11.9	38.8	11.4	36.7	13.3	S
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	32.0
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	S
SCTG 43, MIXED FREIGHT							
Total	20.9	—	21.7	—	40.4	—	40.4
Single modes	21.9	5.5	23.3	5.9	42.0	7.0	42.2
Truck	21.9	5.5	23.3	5.9	42.0	7.0	42.2
For-hire truck	49.6	7.7	S	S	S	S	26.9
Private truck	22.4	7.5	22.2	7.7	19.6	11.7	20.0
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	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	28.6	—	S	S	S	S	21.4
Single modes	40.8	13.5	S	S	S	S	26.3
Truck	43.4	11.5	S	S	S	S	32.4
For-hire truck	33.1	9.9	S	S	S	S	46.8
Private truck	S	S	48.3	11.8	S	S	27.0
Rail	S	S	S	S	S	S	29.2
Water	—	—	—	—	—	—	—
Shallow draft	—	—	—	—	—	—	—
Great Lakes	—	—	—	—	—	—	—
Deep draft	—	—	—	—	—	—	—
Air (includes truck and air)	—	—	—	—	—	—	—
Pipeline	—	—	—	—	S	S	S
Multiple modes	S	S	S	S	S	S	22.9
Parcel, U.S. Postal Service or courier	S	S	S	S	S	S	22.9
Truck and rail	—	—	—	—	—	—	—
Truck and water	—	—	—	—	—	—	—
Rail and water	—	—	—	—	—	—	—
Other multiple modes	—	—	—	—	—	—	—
Other and unknown modes	S	S	S	S	S	S	S

— 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	5.5	—	8.4	—	7.8	—
NEW ENGLAND STATES						
Connecticut	27.3	—	40.8	—	40.5	—
Maine	29.5	—	33.0	—	33.3	—
Massachusetts	25.0	.2	42.2	—	43.2	.3
New Hampshire	35.4	—	45.8	—	45.8	—
Rhode Island	S	S	S	S	S	S
Vermont	49.2	—	S	S	S	S
MIDDLE ATLANTIC STATES						
New Jersey	13.1	.1	S	S	S	S
New York	17.9	.2	23.3	—	21.9	.3
Pennsylvania	16.6	.1	21.0	—	21.7	.3
EAST NORTH CENTRAL STATES						
Illinois	13.6	.4	20.3	—	22.2	.4
Indiana	9.2	—	27.3	.1	26.1	.4
Michigan	8.3	.1	18.8	.1	19.3	.4
Ohio	S	S	11.4	—	11.5	.3
Wisconsin	14.5	.2	13.5	—	13.6	.2
WEST NORTH CENTRAL STATES						
Iowa	17.7	.1	21.9	—	22.3	.2
Kansas	7.4	.3	20.6	.8	22.0	.6
Minnesota	26.3	.3	27.6	.2	28.0	.5
Missouri	22.1	.4	17.3	.4	13.7	.4
Nebraska	19.7	—	22.8	.2	22.6	.4
North Dakota	25.4	—	33.1	—	32.1	.3
South Dakota	19.1	—	S	S	S	S
SOUTH ATLANTIC STATES						
Delaware	29.6	—	41.0	—	41.4	—
District of Columbia	34.7	—	S	S	S	S
Florida	23.9	.4	40.7	.1	41.3	.9
Georgia	14.7	.2	20.3	—	19.7	.3
Maryland	27.7	.2	25.4	—	26.8	.1
North Carolina	29.4	.3	32.5	—	33.3	.2
South Carolina	17.7	—	32.8	—	36.7	.4
Virginia	31.5	.2	41.4	—	42.1	.3
West Virginia	29.6	—	S	S	S	S
EAST SOUTH CENTRAL STATES						
Alabama	15.6	.1	24.5	.2	29.6	.8
Kentucky	19.1	—	37.5	—	42.6	.2
Mississippi	12.3	—	23.3	—	21.8	.2
Tennessee	16.3	.2	18.0	.1	18.5	.5
WEST SOUTH CENTRAL STATES						
Arkansas	9.2	.3	30.1	.9	30.6	.7
Louisiana	20.1	.4	30.2	.5	32.2	2.0
Oklahoma	4.6	2.3	10.6	2.6	13.8	1.7
Texas	8.6	1.4	15.2	1.3	9.7	1.6
MOUNTAIN STATES						
Arizona	21.8	.2	23.8	—	24.4	.5
Colorado	22.1	.3	22.3	.1	24.3	.5
Idaho	31.7	—	49.7	—	49.7	.1
Montana	22.6	.1	41.6	—	43.5	.1
Nevada	44.0	.2	S	S	S	S
New Mexico	15.6	—	20.9	—	19.4	.1
Utah	32.3	.1	S	S	S	S
Wyoming	40.9	.1	36.3	—	38.3	.2
PACIFIC STATES						
Alaska	40.6	—	43.1	—	43.2	.1
California	30.0	1.3	12.2	.1	12.6	.7
Hawaii	33.4	—	S	S	S	S
Oregon	32.7	.2	21.2	—	21.0	.2
Washington	19.9	.2	32.6	—	31.5	.3

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

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

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

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

State of origin	Value		Tons		Ton-miles	
	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage	Coefficient of variation of number	Standard error of percentage
Total	3.4	—	6.8	—	14.5	—
NEW ENGLAND STATES						
Connecticut	31.9	.2	S	S	S	S
Maine	37.8	—	44.5	—	37.5	—
Massachusetts	23.4	.2	24.4	—	24.3	—
New Hampshire	S	S	35.2	—	36.2	—
Rhode Island	40.5	—	S	S	S	S
Vermont	36.5	—	40.1	—	40.1	—
MIDDLE ATLANTIC STATES						
New Jersey	31.4	.3	39.6	—	39.3	.5
New York	25.6	.6	16.6	—	16.3	.1
Pennsylvania	16.9	.2	9.2	—	9.4	—
EAST NORTH CENTRAL STATES						
Illinois	10.6	.2	16.7	.1	15.5	.3
Indiana	20.4	.3	28.9	.1	29.4	.5
Michigan	24.1	.9	43.7	.3	44.5	1.6
Ohio	14.2	.4	18.3	.1	19.7	.6
Wisconsin	14.9	.2	19.4	.1	19.4	.4
WEST NORTH CENTRAL STATES						
Iowa	27.1	.5	26.9	.2	27.0	.5
Kansas	10.5	.4	23.0	2.1	27.6	2.1
Minnesota	29.3	.3	36.3	—	35.0	.2
Missouri	11.5	.4	14.0	.3	15.5	.3
Nebraska	37.7	.3	31.8	.1	36.2	.4
North Dakota	41.1	—	S	S	S	S
South Dakota	S	S	31.6	—	30.8	—
SOUTH ATLANTIC STATES						
Delaware	S	S	48.9	—	49.4	—
District of Columbia	—	—	—	—	—	—
Florida	21.6	.2	48.2	—	S	S
Georgia	14.6	.1	11.2	—	11.8	—
Maryland	18.6	—	44.3	—	44.9	—
North Carolina	23.5	.4	23.5	—	24.1	.4
South Carolina	35.2	.2	23.4	—	23.5	.2
Virginia	24.5	.5	29.0	—	30.0	.2
West Virginia	28.8	—	S	S	S	S
EAST SOUTH CENTRAL STATES						
Alabama	21.7	.2	23.1	—	22.5	—
Kentucky	16.0	.1	35.6	—	44.5	.2
Mississippi	21.6	.1	21.1	—	23.6	.1
Tennessee	16.5	.3	S	S	S	S
WEST SOUTH CENTRAL STATES						
Arkansas	8.3	.3	31.3	1.7	23.5	.8
Louisiana	16.9	.2	28.3	.4	32.2	1.4
Oklahoma	4.6	1.1	10.6	4.1	13.8	1.6
Texas	20.6	2.7	13.1	1.0	17.8	1.9
MOUNTAIN STATES						
Arizona	39.3	—	29.5	—	26.2	—
Colorado	36.0	.3	27.1	—	29.7	.1
Idaho	S	S	S	S	S	S
Montana	41.0	—	37.9	—	39.2	—
Nevada	31.1	—	S	S	S	S
New Mexico	31.5	—	45.1	—	S	S
Utah	40.5	.1	S	S	S	S
Wyoming	24.3	—	34.6	3.6	34.4	9.0
PACIFIC STATES						
Alaska	S	S	S	S	S	S
California	23.5	1.4	21.9	.1	21.8	.5
Hawaii	S	—	S	S	S	S
Oregon	26.3	—	45.9	—	49.3	.3
Washington	27.3	.1	34.6	—	37.3	.1

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

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

Appendix C.

Sample Design, Data Collection, and Estimation

INTRODUCTION

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

SAMPLE DESIGN

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

First Stage

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

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

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

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

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

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

Second Stage

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

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

Third Stage

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

DATA COLLECTION

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

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

ESTIMATION

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

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

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

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

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

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

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

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

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

Appendix D.

Standard Classification of Transported Goods Code Information

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

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

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

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

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

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

Appendix E. Sample Report Forms and Instructions

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

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

**1997 COMMODITY FLOW SURVEY
CENSUS OF TRANSPORTATION**

Reporting period:

Please return by:

RETURN TO

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

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

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

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

Item 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

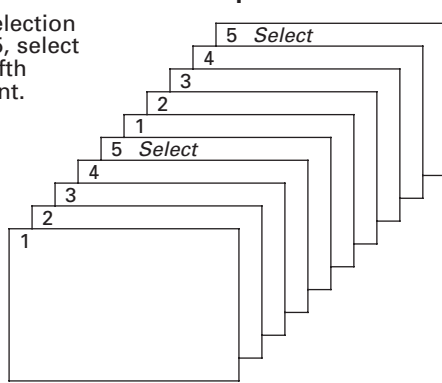
4 — Railroad
Continued →

SELECTING YOUR SAMPLE OF SHIPMENTS

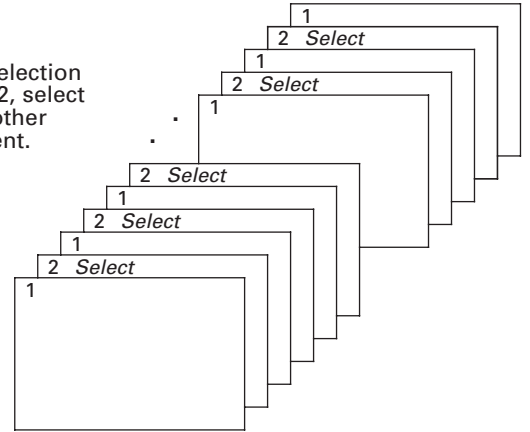
1. Use the file or combination of files that best reflects your full range of outbound shipping activities.
2. Begin with the first shipment. Count the shipments until you reach your selection rate. Select this shipment to report on in item F.
3. Continue counting with the next shipment. Count this shipment 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						| | | |		| | | |
14						| | | |		| | | |
15						| | | |		| | | |
16						| | | |		| | | |
17						| | | |		| | | |
18						| | | |		| | | |
19						| | | |		| | | |
20						| | | |		| | | |
21						| | | |		| | | |
22						| | | |		| | | |
23						| | | |		| | | |
24						| | | |		| | | |
25						| | | |		| | | |
26						| | | |		| | | |
27						| | | |		| | | |
28						| | | |		| | | |
29						| | | |		| | | |
30						| | | |		| | | |
31						| | | |		| | | |
32						| | | |		| | | |
33						| | | |		| | | |
34						| | | |		| | | |

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

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

2 — Private truck
3 — For-hire truck

4 — Railroad
Continued →

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

5 — Shallow draft vessel
6 — Deep draft vessel

7 — Pipeline
8 — Air

9 — Other mode
0 — Unknown

Item F SHIPMENT CHARACTERISTICS — Continued

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

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

Item G

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

Yes

No

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

Yes

No

If yes to item G1 or item G2:

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

Yes

No

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

Total value in whole dollars

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

Yes

No

Item J CERTIFICATION

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

Signature	Title
-----------	-------

Containerized? (Y/N)	U.S. destination (Complete for all shipments.)			Mode(s) of transport to U.S. destination <i>Enter all that apply in order used. Use codes below.</i>	Export? (Y/N)	Foreign destination <small>(for export shipments only)</small> 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)
									35
									36
									37
									38
									39
									40

5 — Shallow draft vessel
6 — Deep draft vessel

7 — Pipeline
8 — Air

9 — Other mode
0 — Unknown

Remarks

THANK YOU FOR COMPLETING YOUR REPORT

**1997 COMMODITY FLOW SURVEY
CENSUS OF TRANSPORTATION**

Reporting period:

Please return by:

RETURN TO

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

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

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

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

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

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

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

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

Month	Day	Year

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

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

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

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

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

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

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

DO NOT PROCEED UNTIL YOU HAVE COMPLETED ITEM D.

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

Item E SAMPLING INSTRUCTIONS

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

FINDING YOUR SELECTION RATE

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

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

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

Please enter your selection rate. →

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

CONTINUE ON NEXT PAGE. ↗

Item F SHIPMENT CHARACTERISTICS

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

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

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

2 — Private truck
3 — For-hire truck

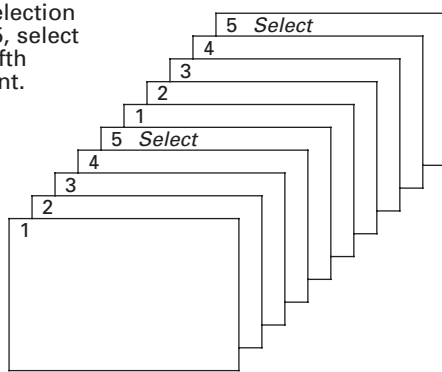
4 — Railroad
Continued →

SELECTING YOUR SAMPLE OF SHIPMENTS

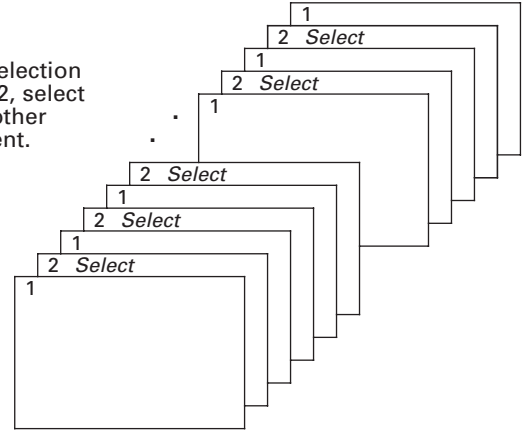
1. Use the file or combination of files that best reflects your full range of outbound shipping activities.
2. Begin with the first shipment. Count the shipments until you reach your selection rate. Select this shipment to report on in item F.
3. Continue counting with the next shipment. Count this shipment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

In the following examples, each rectangle represents one shipment.

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



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



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

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

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

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

Item F SHIPMENT CHARACTERISTICS — Continued

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

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

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

2 — Private truck
3 — For-hire truck

4 — Railroad
Continued →

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

5 — Shallow draft vessel
6 — Deep draft vessel

7 — Pipeline
8 — Air

9 — Other mode
0 — Unknown

Item F SHIPMENT CHARACTERISTICS — Continued

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

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

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

2 — Private truck
3 — For-hire truck

4 — Railroad
Continued →

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

Total value in whole dollars

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

Yes

No

Item I AVAILABILITY AND USE OF ON-SITE SHIPPING FACILITIES

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

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

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

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

Item J USE OF OFF-SITE SHIPPING FACILITIES

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

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

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

PLEASE CONTINUE ON PAGE 8.

Item K USE AND AVAILABILITY OF TRANSPORTATION EQUIPMENT

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

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

Item L TRANSPORTATION DECISIONS

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

1 Your company 2 Receiver of shipment 3 Other

Remarks

Item M CERTIFICATION

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

Instructions for Completing the Commodity Flow Survey

TIPS FOR COMPLETING THE CFS QUESTIONNAIRE

Please read all instructions.

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

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

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

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

Why are you conducting the CFS?

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

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

Who reports in the CFS?

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

Why is my participation important?

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

Your report helps ensure quality results.

Is this survey mandatory?

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

Will my data be kept confidential?

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

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

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

How often must I report?

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

The CFS will not be conducted again until 2002.

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE

Items A – C

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

Item D

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

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

What we mean by a "shipment":

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

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

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

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

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

A special note about "shipments":

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

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

Item E: Sampling Instructions

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

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

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

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

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

PART II – INSTRUCTIONS FOR COMPLETING YOUR QUESTIONNAIRE – Continued

Item F: Shipment Characteristics

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

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

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

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.

