README for "Commodity Flow Survey (CFS) 2002" dataset.
Bureau of Transportation Statistics (BTS), U.S. Department of Transportation (USDOT)
2021-01-04

LINKS TO DATASET

A. Dataset archive link:
https://doi.org/10.21949/1520468

SUMMARY OF DATASET

The Commodity Flow Survey (CFS), a component of the Economic Census, is conducted every five years by the U.S. Census Bureau in partnership with the U.S. Department of Transportation's Bureau of Transportation Statistics. The 2002 CFS is the third survey in the program that began in 1993. The CFS is a shipper survey of approximately 100,000 establishments from the industries of mining, manufacturing, wholesale trade, auxiliaries (i.e. warehouses and distribution centers), and select retail and service trade industries that ship commodities. Data requested by the CFS includes the type of commodities shipped, their origin and destination, their value and weight, and mode(s) of transport. The CFS provides a comprehensive multimodal picture of national freight flows and represents the only publicly available source of data for the highway mode. Results from the CFS are used to analyze trends in the movement of goods, mapping spatial patterns of commodity and vehicle flows, forecasting demands for the movement of goods, and for guiding management and investment decisions on transportation infrastructure.

The CFS covers 5 areas: the whole of the United States; individual states; exports; hazardous materials; and, metropolitan areas. The metropolitan areas covered in the survey are: Birmingham-Hoover-Cullman, AL CSA, Remainder of Alabama, Phoenix-Mesa-Scottsdale, AZ MeSA, Tucson, AZ MeSA, Remainder of Arizona, Los Angeles-Long Beach-Riverside, CA CSA, San Diego-Carlsbad-San Marcos, CA MeSA, Sacramento--Arden-Arcade--Truckee, CA-NV CSA (CA Part), San Jose-San Francisco-Oakland, CA CSA, Remainder of California, Denver-Aurora-Boulder, CO CSA, Remainder of Colorado, New York-Newark-Bridgeport, NY-NJ-CT-PA CSA (CT Part), Remainder of Connecticut, Washington-Arlington-Alexandria, DC-VA-MD-WV MeSA (DC Part), Jacksonville, FL MeSA, Miami-Fort Lauderdale-Miami Beach, FL MeSA, Orlando-The Villages, FL CSA, Tampa-St Petersburg-Clearwater, FL MeSA, Remainder of Florida, Atlanta-Sandy Springs-Gainesville, GA-AL CSA (GA Part), Remainder of Georgia, Honolulu, HI MeSA, Remainder of Hawaii, Chicago-Naperville-Michigan City, IL-IN-WI CSA (IL Part), St Louis, MO-IL MeSA (IL Part), Remainder of Illinois, Chicago-Naperville-Michigan City, IL-IN-WI CSA (IN Part), Indianapolis-Anderson-Columbus, IN CSA, Remainder of Indiana, Kansas City, MO-KS MeSA (KS Part), Remainder of Kansas, Louisville-Elizabethtown-Scottsburg, KY-IN CSA (KY Part), Remainder of Kentucky, New Orleans-Metairie-Bogalusa, LA CSA, Remainder of Louisiana, Baltimore-Towson, MD MeSA, Washington-Arlington-Alexandria, DC-VA-MD-WV MeSA (MD Part), Remainder of Maryland, Boston-Worcester-Manchester, MA-NH CSA (MA Part), Remainder of Massachusetts, Detroit-Warren-Flint, MI CSA, Grand Rapids-Wyoming-Holland, MI CSA, Remainder of Michigan, Minneapolis-St Paul-St Cloud, MN-WI CSA (MN Part), Remainder of Minnesota, Kansas City, MO-KS MeSA (MO Part),St Louis-St Charles-Farmington, MO-IL CSA (MO Part), Remainder of Missouri, Las Vegas-Paradise-Pahrump, NV CSA, Remainder of Nevada, New York-Newark-Bridgeport, NY-

NJ-CT-PA CSA (NJ Part), Philadelphia-Camden-Vineland, PA-NJ-DE-MD CSA (NJ Part), Remainder of New Jersey, Albany-Schenectady-Amsterdam, NY CSA, Buffalo-Cheektowaga-Tonawanda, NY MeSA, New York-Newark-Bridgeport, NY-NJ-CT-PA CSA (NY Part), Rochester-Batavia-Seneca Falls, NY CSA, Remainder of New York, Charlotte-Gastonia-Salisbury, NC-SC CSA (NC Part), Greensboro--Winston-Salem--High Point, NC CSA, Raleigh-Durham-Cary, NC CSA, Remainder of North Carolina, Cincinnati-Middletown-Wilmington, OH-KY-IN CSA (OH Part), Cleveland-Akron-Elyria, OH CSA, Columbus-Marion-Chillicothe, OH CSA, Dayton-Springfield-Greenville, OH CSA, Remainder of Ohio, Oklahoma City-Shawnee, OK CSA, Tulsa-Bartlesville, OK CSA, Remainder of Oklahoma, Portland-Vancouver-Beaverton, OR-WA MeSA (OR Part), Remainder of Oregon, Philadelphia-Camden-Vineland, PA-NJ-DE-MD CSA (PA Part), Pittsburgh-New Castle, PA CSA, Remainder of Pennsylvania, Greenville-Anderson-Seneca, SC CSA, Spartanburg-Gaffney-Union, SC CSA, Remainder of South Carolina, Memphis, TN-MS-AR MeSA (TN Part), Nashville-Davidson--Murfreesboro--Columbia, TN CSA, Remainder of Tennessee, Austin-Round Rock, TX MeSA, Dallas-Fort Worth, TX CSA, Houston-Baytown-Huntsville, TX CSA, San Antonio, TX MeSA, Remainder of Texas, Salt Lake City-Ogden-Clearfield, UT CSA, Remainder of Utah, Richmond, VA MeSA, Virginia Beach-Norfolk-Newport News, VA-NC MeSA (VA Part), Washington-Baltimore-Northern Virginia, DC-MD-VA-WV CSA (VA Part), Remainder of Virginia, Seattle-Tacoma-Olympia, WA CSA, Remainder of Washington, Milwaukee-Racine-Waukesha, WI CSA, Remainder of Wisconsin.

TABLE OF CONTENTS

A. GENERAL INFORMATION

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0. Title of Dataset:
Commodity Flow Survey (CFS) 2002 [dataset]

1. Description of Dataset:

The Commodity Flow Survey (CFS), a component of the Economic Census, is conducted every five years by the U.S. Census Bureau in partnership with the U.S. Department of Transportation's Bureau of Transportation Statistics. The 2002 CFS is the third survey in the program that began in 1993. The CFS is a shipper survey of approximately 100,000 establishments from the industries of mining, manufacturing, wholesale trade, auxiliaries (i.e. warehouses and distribution centers), and select retail and service trade industries that ship commodities. Data requested by the CFS includes the type of commodities shipped, their origin and destination, their value and weight, and mode(s) of transport. The CFS provides a comprehensive multimodal picture of national freight flows and represents the only publicly available source of data for the highway mode. Results from the CFS are used to analyze trends in the movement of goods, mapping spatial patterns of commodity and vehicle flows, forecasting demands for the movement of goods, and for guiding management and investment decisions on transportation infrastructure.

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Middletown-Wilmington, OH-KY-IN CSA (OH Part), Cleveland-Akron-Elyria, OH CSA, Columbus-Marion-Chillicothe, OH CSA, Dayton-Springfield-Greenville, OH CSA, Remainder of Ohio, Oklahoma City-Shawnee, OK CSA, Tulsa-Bartlesville, OK CSA, Remainder of Oklahoma, Portland-Vancouver-Beaverton, OR-WA MeSA (OR Part), Remainder of Oregon, Philadelphia-Camden-Vineland, PA-NJ-DE-MD CSA (PA Part), Pittsburgh-New Castle, PA CSA, Remainder of Pennsylvania, Greenville-Anderson-Seneca, SC CSA, Spartanburg-Gaffney-Union, SC CSA, Remainder of South Carolina, Memphis, TN-MS-AR MeSA (TN Part), Nashville-Davidson--Murfreesboro--Columbia, TN CSA, Remainder of Tennessee, Austin-Round Rock, TX MeSA, Dallas-Fort Worth, TX CSA, Houston-Baytown-Huntsville, TX CSA, San Antonio, TX MeSA, Remainder of Texas, Salt Lake City-Ogden-Clearfield, UT CSA, Remainder of Utah, Richmond, VA MeSA, Virginia Beach-Norfolk-Newport News, VA-NC MeSA (VA Part), Washington-Baltimore-Northern Virginia, DC-MD-VA-WV CSA (VA Part), Remainder of Virginia, Seattle-Tacoma-Olympia, WA CSA, Remainder of Washington, Milwaukee-Racine-Waukesha, WI CSA, Remainder of Wisconsin.

2. Dataset archive link:
https://doi.org/10.21949/1520468

3. Authorship Information:
Principal Data Creator or Data Manager Contact Information
Institution: Bureau of Transportation Statistics, U.S. Department of Transportation
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4. Date of data collection and update interval:
2002

5. Geographic location of data collection:
United States of America

6. Information about funding sources that supported the collection of the data:
Bureau of Transportation Statistics, U.S. Department of Transportation

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B. SHARING/ACCESS & POLICIES INFORMATION

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0. Recommended citation for the data:
U.S. Department of Transportation, Bureau of Transportation Statistics. (2002). Commodity Flow Survey (CFS) 2002 [datasets].https://doi.org/10.21949/1520468

1. Licenses/restrictions placed on the data:
These data are in the Public Domain.

2. Was data derived from another source?:
No.

3. This dataset and its documentation was created and shared to meet the requirements enumerated in the U.S. Federally-Funded Scientific Research" Version 1.1 << https://doi.org/10.21949/1520559 >> and guidelines suggested by the DOT Public Access website << https://doi.org/10.21949/1503647 >>, in effect and current as of December 03, 2020.

C. DATA & RELATED FILE OVERVIEW

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1. File List for the bts_Commodity_Flow_Survey_2002_DATA_and_Documentation.zip collection. The data files are divided into 5 folders under the categlories: exports, hazardous materials, metropolitian areas, states, united states.

A. Filename: Exports Folder

1. bts_commodity_flow_survey_exports_2002_table_01a.csv
2. bts_commodity_flow_survey_exports_2002_table_01b.csv
3. bts_commodity_flow_survey_exports_2002_table_01c.csv
4. bts_commodity_flow_survey_exports_2002_table_02a.csv
5. bts_commodity_flow_survey_exports_2002_table_02b.csv
6. bts_commodity_flow_survey_exports_2002_table_02c.csv
7. bts_commodity_flow_survey_exports_2002_table_03a.csv
8. bts_commodity_flow_survey_exports_2002_table_03b.csv
9. bts_commodity_flow_survey_exports_2002_table_03c.csv
10. bts_commodity_flow_survey_exports_2002_table_04a.csv
11. bts_commodity_flow_survey_exports_2002_table_04b.csv
12. bts_commodity_flow_survey_exports_2002_table_04c.csv
13. bts_commodity_flow_survey_exports_2002_table_05a.csv
14. bts_commodity_flow_survey_exports_2002_table_05b.csv
15. bts_commodity_flow_survey_exports_2002_table_05c.csv
16. bts_commodity_flow_survey_exports_2002_table_06.csv
17. bts_commodity_flow_survey_exports_2002_table_07a.csv
18. bts_commodity_flow_survey_exports_2002_table_07b.csv
19. bts_commodity_flow_survey_exports_2002_table_07c.csv
20. bts_commodity_flow_survey_exports_2002_table_08.csv
21. bts_commodity_flow_survey_exports_2002_table_b_01a.csv
22. bts_commodity_flow_survey_exports_2002_table_b_01b.csv
23. bts_commodity_flow_survey_exports_2002_table_b_01c.csv
24. bts_commodity_flow_survey_exports_2002_table_b_02a.csv
25. bts_commodity_flow_survey_exports_2002_table_b_02b.csv
26. bts_commodity_flow_survey_exports_2002_table_b_02c.csv
27. bts_commodity_flow_survey_exports_2002_table_b_03a.csv
28. bts_commodity_flow_survey_exports_2002_table_b_03b.csv
29. bts_commodity_flow_survey_exports_2002_table_b_03c.csv
30. bts_commodity_flow_survey_exports_2002_table_b_04a.csv
31. bts_commodity_flow_survey_exports_2002_table_b_04b.csv
32. bts_commodity_flow_survey_exports_2002_table_b_04c.csv
33. bts_commodity_flow_survey_exports_2002_table_b_05a.csv
34. bts_commodity_flow_survey_exports_2002_table_b_05b.csv
35. bts_commodity_flow_survey_exports_2002_table_b_05c.csv
36. bts_commodity_flow_survey_exports_2002_table_b_06.csv
37. bts_commodity_flow_survey_exports_2002_table_b_07a.csv
38. bts_commodity_flow_survey_exports_2002_table_b_07b.csv
39. bts_commodity_flow_survey_exports_2002_table_b_07c.csv

40. bts_commodity_flow_survey_exports_2002_table_b_08.csv
41. bts_commodity_flow_survey_exports_2002_table_list.pdf

Short description:

CSV files that contains the survey data that was collected for 2002, focused on the exports report and the associated tables.

B. Filename: Hazardous Materials Folder

1. bts_commodity_flow_survey_hazardous_2002_table_01_a.csv
2. bts_commodity_flow_survey_hazardous_2002_table_01_b.csv
3. bts_commodity_flow_survey_hazardous_2002_table_01_c.csv
4. bts_commodity_flow_survey_hazardous_2002_table_02_a.csv
5. bts_commodity_flow_survey_hazardous_2002_table_02_b.csv
6. bts_commodity_flow_survey_hazardous_2002_table_02_c.csv
7. bts_commodity_flow_survey_hazardous_2002_table_03.csv
8. bts_commodity_flow_survey_hazardous_2002_table_04.csv
9. bts_commodity_flow_survey_hazardous_2002_table_05_a.csv
10. bts_commodity_flow_survey_hazardous_2002_table_05_b.csv
11. bts_commodity_flow_survey_hazardous_2002_table_06_a.csv
12. bts_commodity_flow_survey_hazardous_2002_table_06_b.csv
13. bts_commodity_flow_survey_hazardous_2002_table_06_c.csv
14. bts_commodity_flow_survey_hazardous_2002_table_07_a.csv
15. bts_commodity_flow_survey_hazardous_2002_table_07_b.csv
16. bts_commodity_flow_survey_hazardous_2002_table_07_c.csv
17. bts_commodity_flow_survey_hazardous_2002_table_08.csv
18. bts_commodity_flow_survey_hazardous_2002_table_09_a.csv
19. bts_commodity_flow_survey_hazardous_2002_table_09_b.csv
20. bts_commodity_flow_survey_hazardous_2002_table_09_c.csv
21. bts_commodity_flow_survey_hazardous_2002_table_09_d.csv
22. bts_commodity_flow_survey_hazardous_2002_table_09_e.csv
23. bts_commodity_flow_survey_hazardous_2002_table_09_f.csv
24. bts_commodity_flow_survey_hazardous_2002_table_10.csv
25. bts_commodity_flow_survey_hazardous_2002_table_11_a.csv
26. bts_commodity_flow_survey_hazardous_2002_table_11_b.csv
27. bts_commodity_flow_survey_hazardous_2002_table_11_c.csv
28. bts_commodity_flow_survey_hazardous_2002_table_12_a.csv
29. bts_commodity_flow_survey_hazardous_2002_table_12_b.csv
30. bts_commodity_flow_survey_hazardous_2002_table_12_c.csv
31. bts_commodity_flow_survey_hazardous_2002_table_13_a.csv
32. bts_commodity_flow_survey_hazardous_2002_table_13_b.csv
33. bts_commodity_flow_survey_hazardous_2002_table_13_c.csv
34. bts_commodity_flow_survey_hazardous_2002_table_14_a.csv
35. bts_commodity_flow_survey_hazardous_2002_table_14_b.csv
36. bts_commodity_flow_survey_hazardous_2002_table_15_a.csv
37. bts_commodity_flow_survey_hazardous_2002_table_15_b.csv
38. bts_commodity_flow_survey_hazardous_2002_table_16_a.csv
39. bts_commodity_flow_survey_hazardous_2002_table_16_b.csv
40. bts_commodity_flow_survey_hazardous_2002_table_16_c.csv
41. bts_commodity_flow_survey_hazardous_2002_table_17.csv

42. bts_commodity_flow_survey_hazardous_2002_table_b_01_a.csv
43. bts_commodity_flow_survey_hazardous_2002_table_b_01_b.csv
44. bts_commodity_flow_survey_hazardous_2002_table_b_01_c.csv
45. bts_commodity_flow_survey_hazardous_2002_table_b_02_a.csv
46. bts_commodity_flow_survey_hazardous_2002_table_b_02_b.csv
47. bts_commodity_flow_survey_hazardous_2002_table_b_02_c.csv
48. bts_commodity_flow_survey_hazardous_2002_table_b_03.csv
49. bts_commodity_flow_survey_hazardous_2002_table_b_04.csv
50. bts_commodity_flow_survey_hazardous_2002_table_b_05_a.csv
51. bts_commodity_flow_survey_hazardous_2002_table_b_05_b.csv
52. bts_commodity_flow_survey_hazardous_2002_table_b_06_a.csv
53. bts_commodity_flow_survey_hazardous_2002_table_b_06_b.csv
54. bts_commodity_flow_survey_hazardous_2002_table_b_06_c.csv
55. bts_commodity_flow_survey_hazardous_2002_table_b_07_a.csv
56. bts_commodity_flow_survey_hazardous_2002_table_b_07_b.csv
57. bts_commodity_flow_survey_hazardous_2002_table_b_07_c.csv
58. bts_commodity_flow_survey_hazardous_2002_table_b_08.csv
59. bts_commodity_flow_survey_hazardous_2002_table_b_09_a.csv
60. bts_commodity_flow_survey_hazardous_2002_table_b_09_b.csv
61. bts_commodity_flow_survey_hazardous_2002_table_b_09_c.csv
62. bts_commodity_flow_survey_hazardous_2002_table_b_09_d.csv
63. bts_commodity_flow_survey_hazardous_2002_table_b_09_e.csv
64. bts_commodity_flow_survey_hazardous_2002_table_b_09_f.csv
65. bts_commodity_flow_survey_hazardous_2002_table_b_10.csv
66. bts_commodity_flow_survey_hazardous_2002_table_b_11_a.csv
67. bts_commodity_flow_survey_hazardous_2002_table_b_11_bcsv
68. bts_commodity_flow_survey_hazardous_2002_table_b_11_c.csv
69. bts_commodity_flow_survey_hazardous_2002_table_b_12_a.csv
70. bts_commodity_flow_survey_hazardous_2002_table_b_12_b.csv
71. bts_commodity_flow_survey_hazardous_2002_table_b_13_a.csv
72. bts_commodity_flow_survey_hazardous_2002_table_b_13_b.csv
73. bts_commodity_flow_survey_hazardous_2002_table_b_13_c.csv
74. bts_commodity_flow_survey_hazardous_2002_table_b_14_a.csv
75. bts_commodity_flow_survey_hazardous_2002_table_b_14_b.csv
76. bts_commodity_flow_survey_hazardous_2002_table_b_15_a.csv
77. bts_commodity_flow_survey_hazardous_2002_table_b_15_b.csv
78. bts_commodity_flow_survey_hazardous_2002_table_b_16_a.csv
79. bts_commodity_flow_survey_hazardous_2002_table_b_16_b.csv
80. bts_commodity_flow_survey_hazardous_2002_table_b_16_c.csv
81. bts_commodity_flow_survey_hazardous_2002_table_b_17.csv
82. bts_commodity_flow_survey_hazardous_2002_table_list.pdf

Short description:

CSV files that contains the survey data that was collected for 2002, focused on the hazardous materials report and the associated tables.

C. Filename: Metropolitian Areas Folder

1. bts_commodity_flow_survey_metropolitian_2002_table_01.csv
2. bts_commodity_flow_survey_metropolitian_2002_table_02.csv

3. bts_commodity_flow_survey_metropolitian_2002_table_03.csv
4. bts_commodity_flow_survey_metropolitian_2002_table_04.csv
5. bts_commodity_flow_survey_metropolitian_2002_table_05.csv
6. bts_commodity_flow_survey_metropolitian_2002_table_06.csv
7. bts_commodity_flow_survey_metropolitian_2002_table_07.csv
8. bts_commodity_flow_survey_metropolitian_2002_table_08.csv
9. bts_commodity_flow_survey_metropolitian_2002_table_b_01.csv
10. bts_commodity_flow_survey_metropolitian_2002_table_b_02.csv
11. bts_commodity_flow_survey_metropolitian_2002_table_b_03.csv
12. bts_commodity_flow_survey_metropolitian_2002_table_b_04.csv
13. bts_commodity_flow_survey_metropolitian_2002_table_b_05.csv
14. bts_commodity_flow_survey_metropolitian_2002_table_b_06.csv
15. bts_commodity_flow_survey_metropolitian_2002_table_b_07.csv
16. bts_commodity_flow_survey_metropolitian_2002_table_b_08.csv
17. bts_commodity_flow_survey_metropolitian_2002_table_list.pdf

Short description:

CSV files that contains the survey data that was collected for 2002, focused on metropolitan area data on an individualized basis.

D. Filename: States Folder

1. bts_commodity_flow_survey_states_2002_table_01_a.csv
2. bts_commodity_flow_survey_states_2002_table_01_b.csv
3. bts_commodity_flow_survey_states_2002_table_02.csv
4. bts_commodity_flow_survey_states_2002_table_03.csv
5. bts_commodity_flow_survey_states_2002_table_04.csv
6. bts_commodity_flow_survey_states_2002_table_05_a.csv
7. bts_commodity_flow_survey_states_2002_table_05_b.csv
8. bts_commodity_flow_survey_states_2002_table_06.csv
9. bts_commodity_flow_survey_states_2002_table_07.csv
10. bts_commodity_flow_survey_states_2002_table_08.csv
11. bts_commodity_flow_survey_states_2002_table_09.csv
12. bts_commodity_flow_survey_states_2002_table_10.csv
13. bts_commodity_flow_survey_states_2002_table_11.csv
14. bts_commodity_flow_survey_states_2002_table_13.csv
15. bts_commodity_flow_survey_states_2002_table_15.csv
16. bts_commodity_flow_survey_states_2002_table_18.csv
17. bts_commodity_flow_survey_states_2002_table_19.csv
18. bts_commodity_flow_survey_states_2002_table_20.csv
19. bts_commodity_flow_survey_states_2002_table_b_01_a.csv
20. bts_commodity_flow_survey_states_2002_table_b_01_b.csv
21. bts_commodity_flow_survey_states_2002_table_b_02.csv
22. bts_commodity_flow_survey_states_2002_table_b_03.csv
23. bts_commodity_flow_survey_states_2002_table_b_04.csv
24. bts_commodity_flow_survey_states_2002_table_b_05_a.csv
25. bts_commodity_flow_survey_states_2002_table_b_05_b.csv
26. bts_commodity_flow_survey_states_2002_table_b_06.csv
27. bts_commodity_flow_survey_states_2002_table_b_07.csv
28. bts_commodity_flow_survey_states_2002_table_b_08.csv

29. bts_commodity_flow_survey_states_2002_table_b_09.csv
30. bts_commodity_flow_survey_states_2002_table_b_10.csv
31. bts_commodity_flow_survey_states_2002_table_b_11.csv
32. bts_commodity_flow_survey_states_2002_table_b_13.csv
33. bts_commodity_flow_survey_states_2002_table_b_15.csv
34. bts_commodity_flow_survey_states_2002_table_b_18.csv
35. bts_commodity_flow_survey_states_2002_table_b_19.csv
36. bts_commodity_flow_survey_states_2002_table_b_20.csv
37. bts_commodity_flow_survey_states_2002_table_list.pdf

Short description:

CSV files that contains the survey data that was collected for 2002, focused on state data on an individualized basis.

E. Filename: United States

1. bts_commodity_flow_survey_US_2002_table_01_a.csv
2. bts_commodity_flow_survey_US_2002_table_01_b.csv
3. bts_commodity_flow_survey_US_2002_table_02_a.csv
4. bts_commodity_flow_survey_US_2002_table_02_b.csv
5. bts_commodity_flow_survey_US_2002_table_02_c.csv
6. bts_commodity_flow_survey_US_2002_table_02_d.csv
7. bts_commodity_flow_survey_US_2002_table_02_e.csv
8. bts_commodity_flow_survey_US_2002_table_03_a.csv
9. bts_commodity_flow_survey_US_2002_table_03_b.csv
10. bts_commodity_flow_survey_US_2002_table_03_c.csv
11. bts_commodity_flow_survey_US_2002_table_03_d.csv
12. bts_commodity_flow_survey_US_2002_table_03_e.csv
13. bts_commodity_flow_survey_US_2002_table_04_a.csv
14. bts_commodity_flow_survey_US_2002_table_04_b.csv
15. bts_commodity_flow_survey_US_2002_table_04_c.csv
16. bts_commodity_flow_survey_US_2002_table_04_d.csv
17. bts_commodity_flow_survey_US_2002_table_04_e.csv
18. bts_commodity_flow_survey_US_2002_table_05_a.csv
19. bts_commodity_flow_survey_US_2002_table_05_b.csv
20. bts_commodity_flow_survey_US_2002_table_06.csv
21. bts_commodity_flow_survey_US_2002_table_07.csv
22. bts_commodity_flow_survey_US_2002_table_08.csv
23. bts_commodity_flow_survey_US_2002_table_09.csv
24. bts_commodity_flow_survey_US_2002_table_10_a.csv
25. bts_commodity_flow_survey_US_2002_table_10_b.csv
26. bts_commodity_flow_survey_US_2002_table_10_c.csv
27. bts_commodity_flow_survey_US_2002_table_11_a.csv
28. bts_commodity_flow_survey_US_2002_table_11_b.csv
29. bts_commodity_flow_survey_US_2002_table_11_c.csv
30. bts_commodity_flow_survey_US_2002_table_12.csv
31. bts_commodity_flow_survey_US_2002_table_13.csv
32. bts_commodity_flow_survey_US_2002_table_14.csv
33. bts_commodity_flow_survey_US_2002_table_b_01_a.csv
34. bts_commodity_flow_survey_US_2002_table_b_01_b.csv

35. bts_commodity_flow_survey_US_2002_table_b_02_a.csv
36. bts_commodity_flow_survey_US_2002_table_b_02_b.csv
37. bts_commodity_flow_survey_US_2002_table_b_02_c.csv
38. bts_commodity_flow_survey_US_2002_table_b_02_d.csv
39. bts_commodity_flow_survey_US_2002_table_b_02_e.csv
40. bts_commodity_flow_survey_US_2002_table_b_03_a.csv
41. bts_commodity_flow_survey_US_2002_table_b_03_b.csv
42. bts_commodity_flow_survey_US_2002_table_b_03_c.csv
43. bts_commodity_flow_survey_US_2002_table_b_03_d.csv
44. bts_commodity_flow_survey_US_2002_table_b_03_e.csv
45. bts_commodity_flow_survey_US_2002_table_b_04_a.csv
46. bts_commodity_flow_survey_US_2002_table_b_04_b.csv
47. bts_commodity_flow_survey_US_2002_table_b_04_c.csv
48. bts_commodity_flow_survey_US_2002_table_b_04_d.csv
49. bts_commodity_flow_survey_US_2002_table_b_04_e.csv
50. bts_commodity_flow_survey_US_2002_table_b_05_a.csv
51. bts_commodity_flow_survey_US_2002_table_b_05_b.csv
52. bts_commodity_flow_survey_US_2002_table_b_06.csv
53. bts_commodity_flow_survey_US_2002_table_b_07.csv
54. bts_commodity_flow_survey_US_2002_table_b_08.csv
55. bts_commodity_flow_survey_US_2002_table_b_09.csv
56. bts_commodity_flow_survey_US_2002_table_b_10_a.csv
57. bts_commodity_flow_survey_US_2002_table_b_10_b.csv
58. bts_commodity_flow_survey_US_2002_table_b_10_c.csv
59. bts_commodity_flow_survey_US_2002_table_b_11_a.csv
60. bts_commodity_flow_survey_US_2002_table_b_11_b.csv
61. bts_commodity_flow_survey_US_2002_table_b_11_c.csv
62. bts_commodity_flow_survey_US_2002_table_b_12.csv
63. bts_commodity_flow_survey_US_2002_table_b_13.csv
64. bts_commodity_flow_survey_US_2002_table_b_14.csv
41. bts_commodity_flow_survey_US_2002_table_list.pdf

Short description:

CSV files that contains the survey data that was collected for 2002, focused on the national level report and the associated tables.

F. Filename:

bts_commodity_flow_survey_2002_DMP_20210104.pdf

Short description:

A PDF file containing the Data Management Plan that was created for current and future management of the data and associated files.

G. Filename:

bts_commodity_flow_survey_2002_README.txt

Short description:

The README.txt file that includes human-readable information about the data, variable definitions, contact information, and other contextual information. The file you are reading now.

H. Filename:
bts_commodity_flow_survey_2002_Metadata.json
Short description:
The machine-readable .json metadata file based on Project Open Data metadata schema v1.1.

D. METHODOLOGICAL INFORMATION

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1. Description of methods used for collection/generation of data:

OVERVIEW
The primary goal for the 2002 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 secondary objective is to estimate the volume of shipments moving from one geographic area to another (i.e., flows of commodities between states, regions, etc.) by mode and commodity. A detailed description of the sample design for the 2002 CFS is provided below.

SAMPLE DESIGN
The sample for the 2002 Commodity Flow Survey (CFS) was selected using a stratified three-stage design in which the first-stage sampling units were establishments, the second-stage sampling units were groups of four 1-week periods (reporting weeks) within the survey year, and the third-stage sampling units were shipments.

FIRST STAGE
Sampling frame:
To create the first-stage sampling frame, we extracted a subset of establishment records from the Business Register (formerly the Standard Statistical Establishment List) as of September 2001. The Business Register is a database of all known establishments located in the United States or its territories. (An establishment is a single physical location where business transactions take place or services are performed.) Establishments located in the United States, having nonzero payroll in 2000, and classified in mining (except oil and gas extraction), manufacturing, wholesale, or electronic shopping and mail order retail industries, as defined by the 1997 North American Industry Classification System (NAICS), were included on the sampling frame. Auxiliary establishments (e.g. warehouses and central administrative offices) with shipping activity were also included on the sampling frame. 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 included on the sampling frame are referred to as nonauxiliary establishments.

Some portion of establishments classified in the Retail Trade sector in the 1997 Economic Census was expected to be classified in the Wholesale Trade sector in the 2002 Economic Census. Because we wanted complete coverage of the Wholesale Trade sector as defined for the 2002 Economic Census, the 2002 CFS sampling frame also included establishments that were classified in particular retail industries (automotive parts and accessories, tires, floor coverings, building materials, nursery and garden, and office supplies) in the 1997 Economic Census and had characteristics indicating that they were likely to be classified as wholesale in the 2002 Economic Census. Of the establishments selected for the 2002 CFS from this set of establishments, only those that were classified as wholesale in the 2002 Economic Census were used in the production of estimates for this report.

Establishments classified in forestry, fishing, utilities, construction, transportation, services, and all other retail industries were not included on the sampling frame. Farms and government-owned entities (except government-owned liquor stores) were also excluded from the sampling frame. The resulting frame comprised approximately 760,000 establishments.

For each establishment we extracted sales, payroll, number of employees, a six-digit NAICS code, name and address, and a primary identifier. We also computed a measure of size for each establishment. The measure of size was designed to approximate an establishment's annual total value of shipments for the year 2000.

All of the establishments included on the sampling frame had state, county, and place geographic codes. We used these codes to assign each establishment to one of the 273 metropolitan areas (MAs) defined as a combination of the metropolitan statistical areas (MSAs) and consolidated metropolitan statistical areas (CMSAs). Establishments not located in an MA were assigned to MA 9999.

Stratification:
We stratified the sampling frame by geography and industry. Geographic strata were defined by a combination of the 50 states, the District of Columbia, and the top 50 metropolitan areas (MAs) based on their population in Census 2000. If a particular MA was not one of the 50 largest, then it was collapsed with the remaining MAs and non-MAs within the state in which the particular MA resided. We refer to these collapsed strata as Rest of State (ROS) strata. When an MA crossed state boundaries, we considered the size of each part of the MA relative to the MAs total measure of size when determining whether or not to create strata in each state in which the MA was defined. The industry strata were determined as follows. Within each of the geographic strata, we started with a total of 45 industry groups based on 1997 NAICS: three mining (four-digit NAICS); 21 manufacturing (three-digit NAICS); 18 wholesale (four-digit NAICS); 1 retail (NAICS 4541); and 2 auxiliary (NAICS 4931 and 5511). We then implemented a rule that states a particular industry stratum will be defined within a geographic stratum if it contributes at least 2 percent to its corresponding state total measure of size or it contributes at least 2 percent to the national total measure of size for the industry. Industry groups not meeting these criteria were combined into at most 12 new collapsed industry strata using a clustering algorithm. Because of potential differences in shipping patterns between auxiliary and nonauxiliary establishments, we created two industry strata of auxiliary establishments in every geographic stratum. We refer to a particular geographic-by-industry combination as a primary stratum. Also note that a separate stratum was created at the national level for those Retail Trade sector establishments that we included in our sample.

Sample size and allocation:
To reduce the sampling variability of the estimates, we used a stratified design with a certainty component. Within each primary stratum, a boundary (or cutoff) that divides the certainty establishments from the noncertainty establishments was determined using the Lavallee-Hidiroglou algorithm. If an establishment's measure of size was greater than the cutoff, the establishment was selected with certainty. Establishments selected with certainty were sure to be selected and represent only themselves (i.e., had a selection probability of one and a sampling weight of one).

Because the 2002 sample was about half the size of the 1997 CFS sample, we were concerned about the ability of the sample to capture less frequent types of shipments (e.g., air, water, rail, and hazardous materials). After considering several different alternatives, we felt the best approach was to identify those establishments which made the bulk of these types of shipments in 1997 and then select them with certainty. To identify these establishments, we proceeded as follows.

We identified all establishments in the 1997 CFS sample that reported shipments made by air, water, or rail. We also identified those establishments that reported shipments of hazardous materials. For each of these establishments, we computed the percentage of the establishment's total value and tonnage accounted for by each of these types of shipments. Next, we matched these establishments to the sampling frame for the 2002 CFS and identified each establishment with measure of size less than the certainty boundary. For both value and tons, we then looked to see what percent of the total volume of shipments for each type of shipment was captured by selecting with certainty the top 50, top 100, or all establishments. We considered the top 50 establishments as those establishments making the largest volume of each type of shipment (air, water, rail, hazardous). Once these establishments were identified, we grouped them into one file and unduplicated them. This procedure added a total of about 500 certainty establishments.

Establishments not selected with certainty made up the noncertainty frame. We further stratified 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 increased the efficiency of the sample design. The Dalenius-Hodges cumulative f rule was used to set the substratum boundaries. We then used optimum allocation to determine the sample size required within each substratum to meet a coefficient of variation constraint on an estimate of the total measure of size for the primary stratum. Within each substratum, a simple random sample of establishments was selected without replacement.

To arrive at the final sample size, we allocated additional establishments to some of the strata so that the minimum substratum sample size was two and the probability of selecting any establishment was no less than 1 in 100. In total, the first-stage sample comprised 51,005 establishments.

SECOND STAGE

The frame for the second stage of sampling consisted of 52-weeks from January 6, 2002 to January 4, 2003. Each establishment selected into the 2002 CFS sample was systematically assigned to report for four reporting weeks-one in each quarter of the reference year. Each of the 4-weeks was in the same relative position of the quarter. For example, an establishment might have been requested to report data for the 5th, 18th, 31st, and 44th weeks of the reference year. In this instance, each reporting week corresponds to the 5th week of each quarter. Prior to assignment of weeks to establishments, we sorted the selected sample by primary stratum (state x metropolitan area x industry) and measure-of-size.

THIRD STAGE

For each of the four reporting weeks in which an establishment was asked to report, we requested the respondent to construct a sampling frame consisting of all shipments made by the establishment in the reporting week. Each respondent was asked to count or estimate the total number of shipments comprising the sampling frame and to record this number on the questionnaire. For each assigned reporting week, if an establishment made more than 40 shipments during that week, we asked the respondent to select a systematic sample of the establishment's shipments and to provide us with information only about the selected shipments. If an establishment made 40 or fewer shipments during that week, we asked the respondent to provide information about all of the establishment's shipments made during that week; i.e., no sampling was required.

DATA COLLECTION

Each establishment selected into the CFS sample was mailed a questionnaire for each of its four reporting weeks. We mailed each establishment a questionnaire once every quarter of 2002. For a given establishment,

we requested that the respondent provide the following information about each of the establishment's reported shipments: shipment identification number, the date on which the shipment was made, value, weight, commodity, mode(s) of transportation, domestic destination or port of exit, an indication of whether the shipment was an export, and the United Nations or North America (UN/NA) number for hazardous material shipments. For a shipment that included more than one commodity, the respondent was instructed to report the commodity that made up the greatest percentage of the shipment's weight. For an export shipment, we also asked the respondent to provide the mode of export and the foreign destination city and country. See Appendix E for a copy of the questionnaire.

IMPUTATION OF SHIPMENT VALUE OR WEIGHT

To correct for nonresponse to either the value or weight item for a given shipment reported in the CFS, the missing value or value that failed edit is replaced by a predicted value obtained from an appropriate model. Such a shipment is considered a ``recipient'' if its commodity code is valid and the other item is reported greater than zero and passed edit. The recipient's item that is missing or failed edit is imputed as follows. First, a ``donor'' shipment is randomly selected from shipments that were reported in the CFS with:

The same commodity code as the recipient.
Both value and weight items reported greater than zero and passed edit.
Origin and value for the item reported by the recipient similar to those of the recipient.

Then, the donor's value and weight data are used to calculate a ratio, which is applied to the recipient's reported item, to impute the item that is missing or failed edit. If no donor is found, the median ratio for all shipments reported in the survey with the same commodity code as the recipient and with both value and weight items reported greater than zero is applied to the recipient's reported item. For either the value or weight item, about 3 percent of the shipment records input to the calculation of estimates have imputed data for the item.

ESTIMATION

Estimated totals (e.g., value of shipments, tons, ton-miles) are produced as the sum of weighted shipment data (reported or imputed). Percent change and percent-of-total estimates are derived using the appropriate estimated totals. Estimates of average miles per shipment are computed by dividing an estimate of the total miles traveled by the estimated number of shipments. The annualized growth rate A for estimates from year y1 to y2 is computed as:

uppercase a caret = 100 times (uppercase x caret subscript {lowercase y subscript {2}} superscript {1 divided by (lowercase y subscript {2} minus lowercase y subscript {1})} divided by uppercase x caret subscript {y subscript {1}} minus 1).

where uppercase x caret subscript {lowercase y {subscript {1}}. and uppercase x caret subscript {lowercase y {subscript {2}}. are estimates of the value of shipments, tons, ton-miles, or average miles per shipment for years y1 and y2, respectively. The annualized growth rate measures the annual rate of change between estimates from any 2 years by assuming a constant yearly rate of change.

Each shipment has associated with it a single tabulation weight, which was used in computing all estimates to which the shipment contributes. The tabulation weight is a product of seven different component weights. A description of each component weight follows.

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

Like establishments, we identified shipments as either certainty or noncertainty. (See the Nonsampling Error section in Appendix B for a description of how certainty shipments were identified.) For noncertainty shipments, the shipment weight was defined as the ratio of the total number of shipments (as reported by the respondent) made by an establishment in a reporting week to the number of sampled shipments for the same week. This weight uses data from the sampled shipments to represent all the establishment's shipments made in the reporting week. However, a respondent may have failed to provide sufficient information about a particular sampled shipment. For example, a respondent may not have been able to provide value, weight, or a destination for one of the sampled shipments. If this data item could not be imputed, then this shipment did not contribute to tabulations and was 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 applied 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 for certainty shipments from a particular establishment's reporting week is 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 was 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 was one. For each establishment, the quarterly estimates were added to produce an estimate of the establishment's value of shipments for the entire survey year. Whenever an establishment did not provide the Census Bureau with a response for each of its four reporting weeks, we computed 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 computed an estimate of each establishment's value of shipments for the entire survey year. We then multiplied this estimate by a factor that adjusts the estimate using value of shipments and sales data obtained from other surveys and censuses conducted by the Census Bureau. This weight, 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 was then weighted by the establishment weight. This weight is equal to the reciprocal of the establishment's probability of being selected into the sample.

A final adjustment weight, the industry-level adjustment weight, uses information from other surveys and censuses conducted by the Census Bureau 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 (2001) and the year in which the data were collected (2002). Separate industry-level adjustment weights were determined for nonauxiliary and auxiliary establishments.

2. Instrument- or software-specific information needed to interpret the data:
The data and documentation files can be opened with any text reader. Some versions of the documentation files may be opened with PDF reading software.

E. DATA-SPECIFIC INFORMATION

Varies depending on the data table.

F. UPDATE LOG

This bts_commodity_flow_survey_2002_README.txt file was originally created on 2021-01-04 by Jesse A. Long https://orcid.org/0000-0002-4962-1380 NTL Data Management and Data Curation Fellow, jesse.long.ctr@dot.gov

[Note changes or update to the readme.txt file, e.g.:]

2021-01-04: Original file created
2021-05-05: Abstract updated to include Metropolitan Areas