

Concentration Ratios: 2002

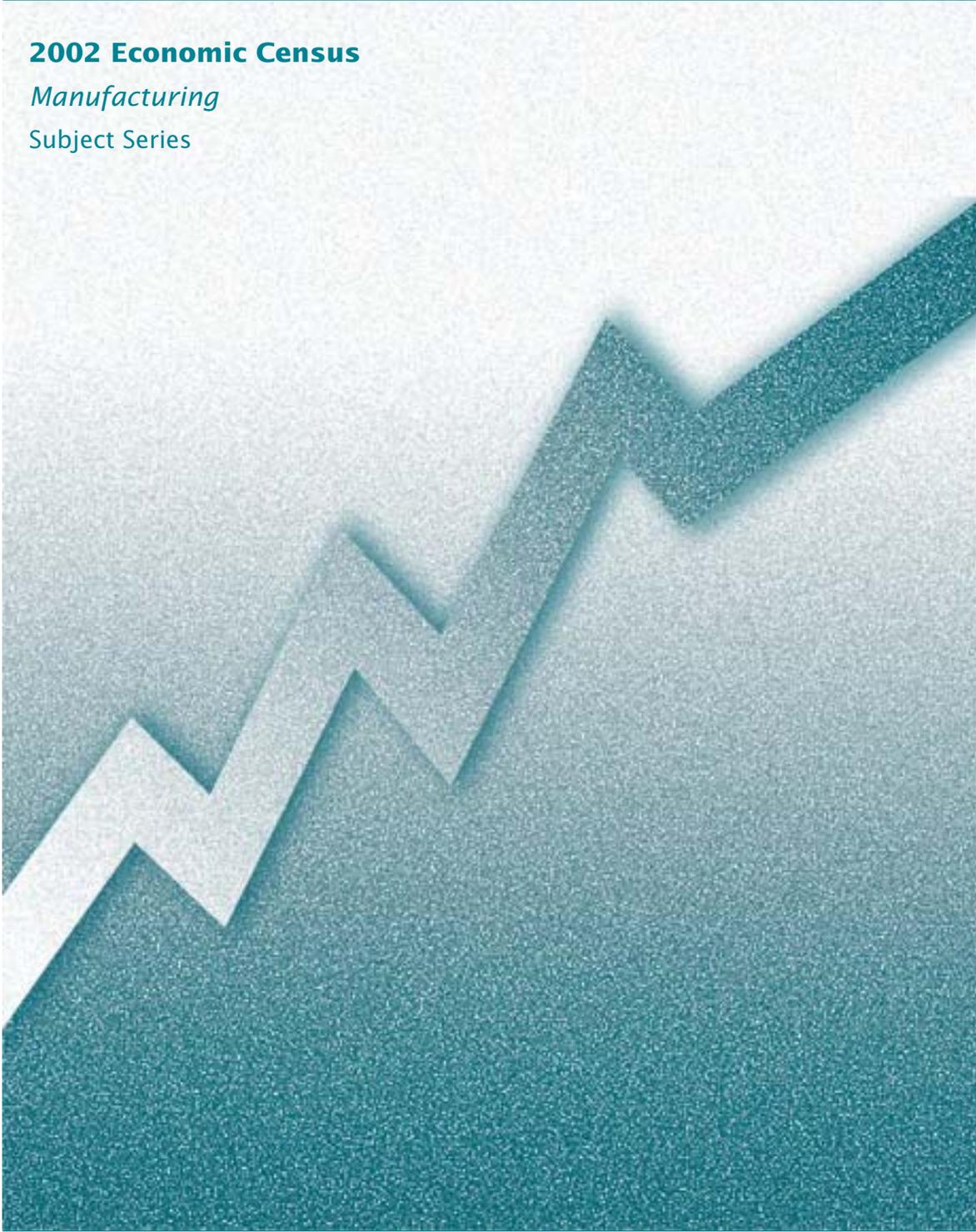
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EC02-31SR-1

2002 Economic Census

Manufacturing

Subject Series



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Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

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

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

- Policymaking agencies of the federal government use the data to monitor economic activity and to 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.

INDUSTRY CLASSIFICATIONS

Data from the 2002 Economic Census are published primarily according to the 2002 North American Industry Classification System (NAICS). NAICS was first adopted in the United States, Canada, and Mexico in 1997. The 2002 Economic Census covers the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information
52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Food Services
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), largely covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 100 subsectors (three-digit codes), 317 industry groups (four-digit codes), and, as implemented in the United States, 1,179 industries (six-digit codes).

RELATIONSHIP TO HISTORICAL INDUSTRY CLASSIFICATIONS

Prior to the 1997 Economic Census, data were published according to the Standard Industrial Classification (SIC) system. While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The 1997 Economic Census *Bridge Between NAICS and SIC* demonstrates the relationships between NAICS and SIC industries. Where changes are significant, it may not be possible to construct time series that include data for points both before and after 1997.

Most industry classifications remained unchanged between 1997 and 2002, but NAICS 2002 includes substantial revisions within the construction and wholesale trade sectors, and a number of revisions for the retail trade and information sectors. These changes are noted in industry definitions and will be demonstrated in the *Bridge Between NAICS 2002 and NAICS 1997*.

For 2002, data for enterprise support establishments (those functioning primarily to support the activities of their company's operating establishments, such as a warehouse or a research and development laboratory) are included in the industry that reflects their activities (such as warehousing). For 1997, such establishments were termed auxiliaries and were excluded from industry totals.

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. (For selected industries, only payroll, employment, and classification are collected for individual establishments, while other data are collected on a consolidated basis.)

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for states, metropolitan and micropolitan statistical areas, counties, and corporate municipalities (places) including cities, towns, townships, villages, and boroughs. Respondents were required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from administrative sources is used as a basis for coding.

AVAILABILITY OF ADDITIONAL DATA

All results of the 2002 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on digital versatile discs (DVD-ROMs) for sale by the Census Bureau. The American FactFinder system at the Internet site allows selective retrieval and downloading of the data. For more information, including a description of reports being issued, see the Internet site, write to the U.S. Census Bureau, Washington, DC 20233-6100, or call Customer Services at 301-763-4100.

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 service trades in 1933. Censuses of construction, manufacturing, and the other business 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 and 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 report forms.

The range of industries covered in the economic census expanded between 1967 and 2002. 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. New for 2002 is coverage of four industries classified in the agriculture, forestry, and fishing sector under the SIC system: landscape architectural services, landscaping services, veterinary services, and pet care services.

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. Reports for 1997 were published primarily on the Internet and copies of 1992 reports are also available there. CD-ROMs issued from the 1987, 1992, and 1997 Economic Censuses contain databases that include all or 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 the 2002 Economic Census and related surveys is published in the *Guide to the 2002 Economic Census* at www.census.gov/econ/census02/guide. More information on the methodology, procedures, and history of the census will be published in the *History of the 2002 Economic Census* at www.census.gov/econ/www/history.html.

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Manufacturing

SCOPE

The Manufacturing sector (sector 31-33) comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction.

Establishments in the manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. However, establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as bakeries, candy stores, and custom tailors, may also be included in this sector. Manufacturing establishments may process materials or may contract with other establishments to process their materials for them. Both types of establishments are included in manufacturing.

The materials, substances, or components transformed by manufacturing establishments are raw materials that are products of agriculture, forestry, fishing, mining, or quarrying, as well as products of other manufacturing establishments. The materials used may be purchased directly from producers, obtained through customary trade channels, or secured without recourse to the market by transferring the product from one establishment to another, under the same ownership. The new product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become an input for an establishment engaged in further manufacturing. For example, the product of the alumina refinery is the input used in the primary production of aluminum; primary aluminum is the input to an aluminum wire drawing plant; and aluminum wire is the input for a fabricated wire product manufacturing establishment.

The subsectors in the manufacturing sector generally reflect distinct production processes related to material inputs, production equipment, and employee skills. In the machinery area, where assembling is a key activity, parts and accessories for manufactured products are classified in the industry of the finished manufactured item when they are made for separate sale. For example, a replacement refrigerator door would be classified with refrigerators and an attachment for a piece of metal working machinery would be classified with metal working machinery. However, components, input from other manufacturing establishments, are classified based on the production function of the component manufacturer. For example, electronic components are classified in Subsector 334, Computer and Electronic Product Manufacturing; and stampings are classified in Subsector 332, Fabricated Metal Product Manufacturing.

Manufacturing establishments often perform one or more activities that are classified outside the manufacturing sector of NAICS. For instance, almost all manufacturing has some captive research and development or administrative operations, such as accounting, payroll, or management. These captive services are treated the same as captive manufacturing activities. When the services are provided by separate establishments, they are classified to the NAICS sector where such services are primary, not in manufacturing.

The boundaries of manufacturing and the other sectors of the classification system can be somewhat blurry. The establishments in the manufacturing sector are engaged in the transformation of materials into new products. Their output is a new product. However, the definition of what constitutes a new product can be somewhat subjective. As clarification, the following activities are

considered manufacturing in NAICS: milk bottling and pasteurizing; water bottling and processing; fresh fish packaging (oyster shucking, fish filleting); apparel jobbing (assigning of materials to contract factories or shops for fabrication or other contract operations); as well as contracting on materials owned by others; printing and related activities; ready-mixed concrete production; leather converting; grinding of lenses to prescription; wood preserving; electroplating, plating, metal heat treating, and polishing for the trade; lapidary work for the trade; fabricating signs and advertising displays; rebuilding or remanufacturing machinery (i.e., automotive parts); ship repair and renovation; machine shops; and tire retreading.

Exclusions. There are activities that are sometimes considered manufacturing, but for NAICS are classified in another sector. These activities include logging, classified in Sector 11, Agriculture, Forestry, Fishing and Hunting is considered a harvesting operation; the beneficiating of ores and other minerals, classified in Sector 21, Mining, is considered part of the activity of mining; the construction of structures and fabricating operations performed at the site of construction by contractors, is classified in Sector 23, Construction; establishments engaged in breaking of bulk and redistribution in smaller lots, including packaging, repackaging, or bottling products, such as liquors or chemicals; the customized assembly of computers; sorting of scrap; mixing paints to customer order; and cutting metals to customer order, classified in Sector 42, Wholesale Trade or Sector 44-45, Retail Trade, produce a modified version of the same product, not a new product; and publishing and the combined activity of publishing and printing, classified in Sector 51, Information, perform the transformation of information into a product where as the value of the product to the consumer lies in the information content, not in the format in which it is distributed (i.e., the book or software diskette).

The tabulations for this sector do not include central administrative offices, warehouses, or other establishments that serve manufacturing establishments within the same organization. Data for such establishments are classified according to the nature of the service they provide. For example, separate headquarters establishments are reported in NAICS Sector 55, Management of Companies and Enterprises.

The reports described below exclude establishments of firms with no paid employees. These “nonemployers,” typically self-employed individuals or partnerships operating businesses that they have not chosen to incorporate, are reported separately in Nonemployer Statistics. The contribution of nonemployers, relatively small for this sector, may be examined at www.census.gov/nonemployerimpact.

The reports described below cover all manufacturing establishments with one or more paid employees.

Definitions. Industry categories are defined in Appendix B, NAICS Codes, Titles, and Descriptions. Other terms are defined in Appendix A, Explanation of Terms.

REPORTS

The following reports provide statistics on this sector:

Industry Series. There are 473 reports, each covering a single NAICS industry (six-digit code). These reports include such statistics as number of establishments, employment, payroll, value added by manufacture, cost of materials consumed, value of shipments, capital expenditures, etc. The industry reports also include data for states with 100 employees or more in the industry. The data in industry reports are preliminary and subject to change in the following reports.

Geographic Area Series. There are 51 separate reports, one for each state and the District of Columbia. Each state report presents similar statistics at the “all manufacturing” level for each state and its metropolitan and micropolitan areas with 250 employees or more, and for counties, consolidated cities, and places with 500 employees or more. The state reports also include six-digit NAICS level data for industries with 100 employees or more in the state.

Subject Series:

- **Industry-Product Analysis Summary.** This report presents value of shipments, value of product shipments, percentage of product shipments of the total value of shipments, and percentage of distribution of value of product shipments on the NAICS six-digit industry level and by the six- and seven-digit product code levels. It also includes miscellaneous receipts at the six- and seven-digit product code levels by NAICS six-digit industry levels.
- **General Summary.** This report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports, as well as revisions to the data made after the release of the industry and state reports.
- **Product Summary.** This report summarizes the products data published in the industry reports. This report also includes a table with data for products that are primary to more than one industry, which are not in the industry reports.
- **Materials Summary.** This report summarizes the materials data published in the industry reports.
- **Concentration Ratio Summary.** This report publishes data on the percentage of value of shipments and value added accounted for by the 4-, 8-, 20-, and 50-largest companies for each manufacturing industry. Also shown in this report are Herfindahl-Hirschman indexes for each industry.
- **Location of Manufacturing Plants Summary.** This report contains statistics on the number of establishments for the three- and six-digit NAICS industry by state, county, place, and ZIP Code by employment-size of the establishment.

Other reports. Data for this sector are also included in reports with multisector coverage, including Nonemployer Statistics, Comparative Statistics, Bridge Between 2002 NAICS and 1997 NAICS, Business Expenses, and the Survey of Business Owners reports.

GEOGRAPHIC AREAS COVERED

The level of geographic detail varies by report. Maps are available at www.census.gov/econ2002maps. Notes specific to areas in the state are included in Appendix D, Geographic Notes.

1. The United States as a whole.
2. States and the District of Columbia.
3. Metropolitan and micropolitan statistical areas with 250 employees or more. Core based statistical areas (CBSA) contain a core area with a substantial population nucleus, together with adjacent communities having a high degree of social and economic integration with that core. CBSAs are differentiated into metropolitan and micropolitan statistical areas based on size criteria. Both metropolitan and micropolitan areas are defined in terms of entire counties, and are listed in Appendix E, Metropolitan and Micropolitan Statistical Areas.
 - a. Metropolitan Statistical Areas (metro areas). Metro areas have at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.
 - b. Micropolitan Statistical Areas (micro areas). Micro areas have at least one urban cluster of at least 10,000 but less than 50,000 population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.
 - c. Metropolitan Divisions (metro divisions). If specified criteria are met, a metro area containing a single core with a population of 2.5 million or more may be subdivided to form smaller groupings of counties referred to as Metropolitan Divisions.

-
- d. Combined Statistical Areas (combined areas). If specified criteria are met, adjacent metro and micro areas, in various combinations, may become the components of a new set of areas called Combined Statistical Areas. The areas that combine retain their own designations as metro or micro areas within the larger combined area.
4. Counties and county equivalents defined as of January 1, 2002, with 500 employees or more. Counties are the primary divisions of states, except in Louisiana where they are called parishes and in Alaska where they are called boroughs, census areas, and city and boroughs. Maryland, Missouri, Nevada, and Virginia have one place or more that is independent of any county organization and constitutes primary divisions of their states. These places are treated as counties and as places.
 5. Economic places with 500 employees or more.
 - a. Municipalities of 2,500 inhabitants or more defined as of January 1, 2002. These are areas of significant population incorporated as cities, boroughs, villages, or towns according to the 2000 Census of Population. For the economic census, boroughs and census areas in Alaska and boroughs in New York are not included in this category.
 - b. Consolidated cities defined as of January 1, 2002. Consolidated cities are consolidated governments that consist of separately incorporated municipalities.
 - c. Townships in Michigan, New Jersey, and Pennsylvania, and towns in New York, Wisconsin, and the six New England states with 10,000 inhabitants or more (according to the 2000 Census of Population).
 - d. Balance of county. Areas outside the entities listed above, including incorporated municipalities with populations of fewer than 2,500, town and townships not qualifying as noted above, and the remainders of counties outside places are categorized as "Balance of county."

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 2002 data are expressed in 2002 dollars, and 1997 data, in 1997 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

COMPARABILITY OF THE 1997 AND 2002 ECONOMIC CENSUSES

Both the 2002 Economic Census and the 1997 Economic Census present data based on the North American Industry Classification System (NAICS). While there were revisions to selected industries for 2002, this sector is not affected by those revisions.

For 2002, there has been an additional data table and an additional report added, which did not exist in 1997. The table for 2002 shows data for products primary to more than one industry. The report for 2002 is the **Industry-Product Analysis Summary**.

RELIABILITY OF DATA

All data compiled for this sector are subject to nonsampling errors. Nonsampling errors can be attributed to many sources: inability to identify all cases in the actual universe; definition and classification difficulties; differences in the interpretation of questions; errors in recording or coding the data obtained; and other errors of collection, response, coverage, processing, and estimation for missing or misreported data. Selected data in tables titled "Detailed Statistics" are based on the Annual Survey of Manufactures and are subject to sampling errors as well as nonsampling errors.

No direct measurement of these effects has been obtained except for estimation for missing or misreported data, as by the percentages shown in the tables. Precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize the effects of nonsampling errors. More information on the reliability of the data is included in Appendix C, Methodology.

DISCLOSURE

In accordance with federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments in a specific industry or geographic area is not considered a disclosure; therefore, this information may be released even though other information is withheld. Techniques employed to limit disclosure are discussed at www.census.gov/epcd/ec02/disclosure.htm.

The disclosure analysis for "industry statistics" files is based on the total value of shipments. When the total value of shipments cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. Nonetheless, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for capital expenditures, which can be suppressed even though value of shipments data are published.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The Census Bureau conducts the Annual Survey of Manufactures (ASM) in each of the 4 years between the economic censuses. The ASM is a probability-based sample of approximately 55,000 establishments and collects many of the same industry statistics (including employment, payroll, value of shipments, etc.) as the economic census. However, there are selected statistics not included in the ASM. Among these are the number of companies and establishments, detailed product and materials data, and substate geographic data. In addition to the ASM, the Census Bureau conducts the Current Industrial Reports (CIR) program. The CIR program publishes selected detailed product statistics for selected manufacturing industries at the U.S. level annually and, in some cases, monthly and/or quarterly. The Census Bureau also conducts the monthly Manufacturers' Shipments, Inventories, and Orders (M3) Program, which publishes detailed statistics for manufacturing industries at the U.S. level.

In addition, the County Business Patterns program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county, and Statistics of U.S. Businesses provides annual statistics classified by the employment size of the enterprise, further classified by industry for the United States, and by broader categories for states and metropolitan areas.

CONTACTS FOR DATA USERS

Questions about these data may be directed to the U.S. Census Bureau, Manufacturing & Construction Division, Information Services Center, 301-763-4673 or ask.census.gov.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with these data:

A	Standard error of 100 percent or more
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue
N	Not available or not comparable
S	Withheld because estimates did not meet publication standards
X	Not applicable
Z	Less than half the unit shown
a	0 to 19 employees
b	20 to 99 employees
c	100 to 249 employees
e	250 to 499 employees
f	500 to 999 employees
g	1,000 to 2,499 employees
h	2,500 to 4,999 employees
i	5,000 to 9,999 employees
j	10,000 to 24,999 employees
k	25,000 to 49,999 employees

l	50,000 to 99,999 employees
m	100,000 employees or more
p	10 to 19 percent estimated
q	20 to 29 percent estimated
r	Revised
s	Sampling error exceeds 40 percent
nsk	Not specified by kind
-	Represents zero (page image/print only)
(CC)	Consolidated city
(IC)	Independent city

Table 1. Share of Industry Statistics for Companies Ranked by Value Added: 2002

[Percent. Detail may not add to total because of rounding. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

Company rank group based on value added ¹	All employees	Payroll	Production workers			Value added	Total cost of materials	Total value of shipments	Total capital expenditures
			Total	Hours	Wages				
50 largest companies	12.1	16.9	11.1	11.4	16.4	25.3	23.7	24.5	19.9
51st to 100th largest companies	5.3	6.1	5.3	5.5	6.5	8.4	9.1	8.8	8.6
101st to 150th largest companies	3.9	4.1	4.0	4.1	4.3	5.0	5.2	5.1	5.3
151st to 200th largest companies	3.1	3.6	3.0	3.0	3.5	3.7	5.8	4.8	4.6
201st and larger companies	75.5	69.3	76.5	76.0	69.3	57.5	56.3	56.9	61.5

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing				
	All companies	23 334	458 247 704	100.0	X
	4 largest companies	X	X	16.8	X
	8 largest companies	X	X	25.4	X
	20 largest companies	X	X	39.8	X
	50 largest companies	X	X	53.1	118.7
3111	Animal food manufacturing				
	All companies	1 211	27 985 648	100.0	X
	4 largest companies	X	X	29.8	X
	8 largest companies	X	X	40.9	X
	20 largest companies	X	X	59.0	X
	50 largest companies	X	X	73.0	364.9
31111	Animal food manufacturing				
	All companies	1 211	27 985 648	100.0	X
	4 largest companies	X	X	29.8	X
	8 largest companies	X	X	40.9	X
	20 largest companies	X	X	59.0	X
	50 largest companies	X	X	73.0	364.9
311111	Dog and cat food manufacturing				
	All companies	176	10 624 932	100.0	X
	4 largest companies	X	X	64.2	X
	8 largest companies	X	X	81.3	X
	20 largest companies	X	X	93.2	X
	50 largest companies	X	X	98.0	1 845.4
311119	Other animal food manufacturing				
	All companies	1 043	17 360 716	100.0	X
	4 largest companies	X	X	26.1	X
	8 largest companies	X	X	37.6	X
	20 largest companies	X	X	54.3	X
	50 largest companies	X	X	66.8	256.0
3112	Grain and oilseed milling				
	All companies	506	47 198 757	100.0	X
	4 largest companies	X	X	47.3	X
	8 largest companies	X	X	60.7	X
	20 largest companies	X	X	75.4	X
	50 largest companies	X	X	88.2	685.5
31121	Flour milling and malt manufacturing				
	All companies	285	9 048 106	100.0	X
	4 largest companies	X	X	41.5	X
	8 largest companies	X	X	54.7	X
	20 largest companies	X	X	72.9	X
	50 largest companies	X	X	89.7	529.5
311211	Flour milling				
	All companies	211	6 840 797	100.0	X
	4 largest companies	X	X	53.6	X
	8 largest companies	X	X	67.4	X
	20 largest companies	X	X	82.1	X
	50 largest companies	X	X	94.4	812.3
311212	Rice milling				
	All companies	62	1 728 419	100.0	X
	4 largest companies	X	X	53.6	X
	8 largest companies	X	X	72.7	X
	20 largest companies	X	X	89.6	X
	50 largest companies	X	X	99.6	1 039.0
311213	Malt manufacturing				
	All companies	16	478 890	100.0	X
	4 largest companies	X	X	91.4	X
	8 largest companies	X	X	98.7	X
	20 largest companies	X	X	100.0	2 192.4
	50 largest companies	X	X	—	—
31122	Starch and vegetable fats and oils manufacturing				
	All companies	191	29 048 124	100.0	X
	4 largest companies	X	X	58.4	X
	8 largest companies	X	X	69.6	X
	20 largest companies	X	X	86.4	X
	50 largest companies	X	X	96.2	1 117.1
311221	Wet corn milling				
	All companies	35	7 961 922	100.0	X
	4 largest companies	X	X	68.7	X
	8 largest companies	X	X	90.2	X
	20 largest companies	X	X	99.6	X
	50 largest companies	X	X	100.0	1 524.2

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing—Con.				
3112	Grain and oilseed milling—Con.				
31122	Starch and vegetable fats and oils manufacturing—Con.				
311222	Soybean processing				
	All companies	62	12 766 864	100.0	X
	4 largest companies	X	X	79.9	X
	8 largest companies	X	X	89.4	X
	20 largest companies	X	X	97.9	X
	50 largest companies	X	X	99.9	1 817.9
311223	Other oilseed processing				
	All companies	34	1 129 107	100.0	X
	4 largest companies	X	X	57.5	X
	8 largest companies	X	X	76.6	X
	20 largest companies	X	X	97.5	X
	50 largest companies	X	X	100.0	1 069.0
311225	Fats and oils refining and blending				
	All companies	77	7 190 231	100.0	X
	4 largest companies	X	X	48.2	X
	8 largest companies	X	X	74.3	X
	20 largest companies	X	X	92.7	X
	50 largest companies	X	X	99.5	850.6
31123	Breakfast cereal manufacturing				
	All companies	45	9 102 527	100.0	X
	4 largest companies	X	X	78.4	X
	8 largest companies	X	X	91.1	X
	20 largest companies	X	X	98.8	X
	50 largest companies	X	X	100.0	2 521.3
311230	Breakfast cereal manufacturing				
	All companies	45	9 102 527	100.0	X
	4 largest companies	X	X	78.4	X
	8 largest companies	X	X	91.1	X
	20 largest companies	X	X	98.8	X
	50 largest companies	X	X	100.0	2 521.3
3113	Sugar and confectionery product manufacturing				
	All companies	1 656	25 490 835	100.0	X
	4 largest companies	X	X	37.7	X
	8 largest companies	X	X	51.7	X
	20 largest companies	X	X	68.5	X
	50 largest companies	X	X	82.7	511.8
31131	Sugar manufacturing				
	All companies	52	6 630 273	100.0	X
	4 largest companies	X	X	58.5	X
	8 largest companies	X	X	75.3	X
	20 largest companies	X	X	92.9	X
	50 largest companies	X	X	D	1 062.2
311311	Sugarcane mills				
	All companies	30	1 663 833	100.0	X
	4 largest companies	X	X	51.4	X
	8 largest companies	X	X	69.8	X
	20 largest companies	X	X	99.2	X
	50 largest companies	X	X	100.0	887.6
311312	Cane sugar refining				
	All companies	13	2 696 992	100.0	X
	4 largest companies	X	X	D	X
	8 largest companies	X	X	99.9	X
	20 largest companies	X	X	100.0	D
	50 largest companies	X	X	—	—
311313	Beet sugar manufacturing				
	All companies	12	2 269 448	100.0	X
	4 largest companies	X	X	79.5	X
	8 largest companies	X	X	97.4	X
	20 largest companies	X	X	100.0	2 082.0
	50 largest companies	X	X	—	—
31132	Chocolate and confectionery manufacturing from cacao beans				
	All companies	138	4 078 568	100.0	X
	4 largest companies	X	X	69.0	X
	8 largest companies	X	X	87.9	X
	20 largest companies	X	X	96.7	X
	50 largest companies	X	X	98.8	1 793.1
311320	Chocolate and confectionery manufacturing from cacao beans				
	All companies	138	4 078 568	100.0	X
	4 largest companies	X	X	69.0	X
	8 largest companies	X	X	87.9	X
	20 largest companies	X	X	96.7	X
	50 largest companies	X	X	98.8	1 793.1

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing—Con.				
3113	Sugar and confectionery product manufacturing—Con.				
31133	Confectionery manufacturing from purchased chocolate				
	All companies	1 008	8 833 323	100.0	X
	4 largest companies	X	X	60.4	X
	8 largest companies	X	X	71.9	X
	20 largest companies	X	X	82.2	X
	50 largest companies	X	X	89.5	1 473.8
311330	Confectionery manufacturing from purchased chocolate				
	All companies	1 008	8 833 323	100.0	X
	4 largest companies	X	X	60.4	X
	8 largest companies	X	X	71.9	X
	20 largest companies	X	X	82.2	X
	50 largest companies	X	X	89.5	1 473.8
31134	Nonchocolate confectionery manufacturing				
	All companies	476	5 948 671	100.0	X
	4 largest companies	X	X	44.9	X
	8 largest companies	X	X	58.5	X
	20 largest companies	X	X	75.9	X
	50 largest companies	X	X	91.1	645.7
311340	Nonchocolate confectionery manufacturing				
	All companies	476	5 948 671	100.0	X
	4 largest companies	X	X	44.9	X
	8 largest companies	X	X	58.5	X
	20 largest companies	X	X	75.9	X
	50 largest companies	X	X	91.1	645.7
3114	Fruit and vegetable preserving and specialty food manufacturing				
	All companies	1 360	53 667 899	100.0	X
	4 largest companies	X	X	24.3	X
	8 largest companies	X	X	36.1	X
	20 largest companies	X	X	52.0	X
	50 largest companies	X	X	69.4	224.5
31141	Frozen food manufacturing				
	All companies	506	21 880 056	100.0	X
	4 largest companies	X	X	33.4	X
	8 largest companies	X	X	47.9	X
	20 largest companies	X	X	66.8	X
	50 largest companies	X	X	82.4	413.8
311411	Frozen fruit, juice, and vegetable manufacturing				
	All companies	153	9 177 777	100.0	X
	4 largest companies	X	X	39.4	X
	8 largest companies	X	X	55.2	X
	20 largest companies	X	X	77.9	X
	50 largest companies	X	X	93.4	533.4
311412	Frozen specialty food manufacturing				
	All companies	361	12 702 279	100.0	X
	4 largest companies	X	X	41.2	X
	8 largest companies	X	X	58.3	X
	20 largest companies	X	X	75.9	X
	50 largest companies	X	X	89.0	657.5
31142	Fruit and vegetable canning, pickling, and drying				
	All companies	877	31 787 843	100.0	X
	4 largest companies	X	X	27.0	X
	8 largest companies	X	X	39.8	X
	20 largest companies	X	X	57.3	X
	50 largest companies	X	X	75.9	309.6
311421	Fruit and vegetable canning				
	All companies	632	18 869 098	100.0	X
	4 largest companies	X	X	23.7	X
	8 largest companies	X	X	37.9	X
	20 largest companies	X	X	59.7	X
	50 largest companies	X	X	78.5	256.7
311422	Specialty canning				
	All companies	115	7 637 160	100.0	X
	4 largest companies	X	X	71.0	X
	8 largest companies	X	X	83.9	X
	20 largest companies	X	X	93.5	X
	50 largest companies	X	X	99.0	2 798.5
311423	Dried and dehydrated food manufacturing				
	All companies	151	5 281 585	100.0	X
	4 largest companies	X	X	42.3	X
	8 largest companies	X	X	59.0	X
	20 largest companies	X	X	78.4	X
	50 largest companies	X	X	94.4	645.5

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing—Con.				
3115	Dairy product manufacturing				
	All companies	1 170	66 211 933	100.0	X
	4 largest companies	X	X	24.9	X
	8 largest companies	X	X	36.1	X
	20 largest companies	X	X	55.2	X
	50 largest companies	X	X	74.6	298.4
31151	Dairy product (except frozen) manufacturing				
	All companies	825	58 005 956	100.0	X
	4 largest companies	X	X	27.2	X
	8 largest companies	X	X	39.2	X
	20 largest companies	X	X	58.0	X
	50 largest companies	X	X	76.2	333.3
311511	Fluid milk manufacturing				
	All companies	315	24 888 743	100.0	X
	4 largest companies	X	X	42.6	X
	8 largest companies	X	X	53.6	X
	20 largest companies	X	X	69.2	X
	50 largest companies	X	X	83.7	1 060.4
311512	Creamery butter manufacturing				
	All companies	33	1 604 947	100.0	X
	4 largest companies	X	X	57.5	X
	8 largest companies	X	X	80.4	X
	20 largest companies	X	X	98.9	X
	50 largest companies	X	X	100.0	1 046.1
311513	Cheese manufacturing				
	All companies	366	22 042 079	100.0	X
	4 largest companies	X	X	34.6	X
	8 largest companies	X	X	50.1	X
	20 largest companies	X	X	72.8	X
	50 largest companies	X	X	88.0	441.6
311514	Dry, condensed, and evaporated dairy product manufacturing				
	All companies	158	9 470 187	100.0	X
	4 largest companies	X	X	47.4	X
	8 largest companies	X	X	61.4	X
	20 largest companies	X	X	81.6	X
	50 largest companies	X	X	95.5	767.3
31152	Ice cream and frozen dessert manufacturing				
	All companies	364	8 205 977	100.0	X
	4 largest companies	X	X	48.0	X
	8 largest companies	X	X	64.4	X
	20 largest companies	X	X	82.3	X
	50 largest companies	X	X	93.1	735.8
311520	Ice cream and frozen dessert manufacturing				
	All companies	364	8 205 977	100.0	X
	4 largest companies	X	X	48.0	X
	8 largest companies	X	X	64.4	X
	20 largest companies	X	X	82.3	X
	50 largest companies	X	X	93.1	735.8
3116	Animal slaughtering and processing				
	All companies	3 335	122 958 689	100.0	X
	4 largest companies	X	X	42.1	X
	8 largest companies	X	X	54.6	X
	20 largest companies	X	X	65.8	X
	50 largest companies	X	X	75.1	619.5
31161	Animal slaughtering and processing				
	All companies	3 335	122 958 689	100.0	X
	4 largest companies	X	X	42.1	X
	8 largest companies	X	X	54.6	X
	20 largest companies	X	X	65.8	X
	50 largest companies	X	X	75.1	619.5
311611	Animal (except poultry) slaughtering				
	All companies	1 777	57 291 725	100.0	X
	4 largest companies	X	X	58.7	X
	8 largest companies	X	X	73.9	X
	20 largest companies	X	X	83.1	X
	50 largest companies	X	X	90.0	1 053.7
311612	Meat processed from carcasses				
	All companies	1 194	25 690 297	100.0	X
	4 largest companies	X	X	24.2	X
	8 largest companies	X	X	33.3	X
	20 largest companies	X	X	47.6	X
	50 largest companies	X	X	64.0	239.1

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing—Con.				
3116	Animal slaughtering and processing—Con.				
31161	Animal slaughtering and processing—Con.				
311613	Rendering and meat byproduct processing				
	All companies	122	2 157 193	100.0	X
	4 largest companies	X	X	34.1	X
	8 largest companies	X	X	50.7	X
	20 largest companies	X	X	77.7	X
	50 largest companies	X	X	94.7	458.1
311615	Poultry processing				
	All companies	310	37 819 474	100.0	X
	4 largest companies	X	X	46.3	X
	8 largest companies	X	X	59.9	X
	20 largest companies	X	X	77.5	X
	50 largest companies	X	X	92.3	773.3
3117	Seafood product preparation and packaging				
	All companies	648	8 797 171	100.0	X
	4 largest companies	X	X	20.5	X
	8 largest companies	X	X	28.7	X
	20 largest companies	X	X	46.0	X
	50 largest companies	X	X	68.1	173.5
31171	Seafood product preparation and packaging				
	All companies	648	8 797 171	100.0	X
	4 largest companies	X	X	20.5	X
	8 largest companies	X	X	28.7	X
	20 largest companies	X	X	46.0	X
	50 largest companies	X	X	68.1	173.5
311711	Seafood canning				
	All companies	128	1 245 674	100.0	X
	4 largest companies	X	X	45.5	X
	8 largest companies	X	X	60.2	X
	20 largest companies	X	X	83.8	X
	50 largest companies	X	X	95.4	695.2
311712	Fresh and frozen seafood processing				
	All companies	529	7 551 497	100.0	X
	4 largest companies	X	X	20.4	X
	8 largest companies	X	X	29.8	X
	20 largest companies	X	X	48.8	X
	50 largest companies	X	X	70.3	180.1
3118	Bakeries and tortilla manufacturing				
	All companies	10 413	49 062 387	100.0	X
	4 largest companies	X	X	27.7	X
	8 largest companies	X	X	44.2	X
	20 largest companies	X	X	58.1	X
	50 largest companies	X	X	69.1	302.2
31181	Bread and bakery product manufacturing				
	All companies	9 515	30 943 119	100.0	X
	4 largest companies	X	X	38.9	X
	8 largest companies	X	X	50.4	X
	20 largest companies	X	X	59.6	X
	50 largest companies	X	X	68.5	494.2
311811	Retail bakeries				
	All companies	7 079	2 798 305	100.0	X
	4 largest companies	X	X	3.7	X
	8 largest companies	X	X	6.0	X
	20 largest companies	X	X	10.1	X
	50 largest companies	X	X	15.1	7.2
311812	Commercial bakeries				
	All companies	2 259	23 975 997	100.0	X
	4 largest companies	X	X	46.1	X
	8 largest companies	X	X	60.3	X
	20 largest companies	X	X	69.9	X
	50 largest companies	X	X	79.1	739.2
311813	Frozen cakes, pies, and other pastries manufacturing				
	All companies	227	4 168 817	100.0	X
	4 largest companies	X	X	30.2	X
	8 largest companies	X	X	43.7	X
	20 largest companies	X	X	67.0	X
	50 largest companies	X	X	86.5	344.7

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing—Con.				
3118	Bakeries and tortilla manufacturing—Con.				
31182	Cookie, cracker, and pasta manufacturing				
	All companies	655	16 587 001	100.0	X
	4 largest companies	X	X	47.4	X
	8 largest companies	X	X	58.5	X
	20 largest companies	X	X	75.9	X
	50 largest companies	X	X	88.6	751.7
311821	Cookie and cracker manufacturing				
	All companies	296	10 431 801	100.0	X
	4 largest companies	X	X	66.6	X
	8 largest companies	X	X	78.6	X
	20 largest companies	X	X	90.6	X
	50 largest companies	X	X	96.4	1 629.0
311822	Flour mixes and dough manufacturing from purchased flour				
	All companies	183	4 660 173	100.0	X
	4 largest companies	X	X	47.3	X
	8 largest companies	X	X	60.0	X
	20 largest companies	X	X	79.9	X
	50 largest companies	X	X	93.0	1 095.7
311823	Dry pasta manufacturing				
	All companies	185	1 495 027	100.0	X
	4 largest companies	X	X	64.5	X
	8 largest companies	X	X	80.2	X
	20 largest companies	X	X	87.7	X
	50 largest companies	X	X	94.6	1 386.8
31183	Tortilla manufacturing				
	All companies	272	1 532 267	100.0	X
	4 largest companies	X	X	56.1	X
	8 largest companies	X	X	62.6	X
	20 largest companies	X	X	73.4	X
	50 largest companies	X	X	87.9	2 031.4
311830	Tortilla manufacturing				
	All companies	272	1 532 267	100.0	X
	4 largest companies	X	X	56.1	X
	8 largest companies	X	X	62.6	X
	20 largest companies	X	X	73.4	X
	50 largest companies	X	X	87.9	2 031.4
3119	Other food manufacturing				
	All companies	3 412	56 874 385	100.0	X
	4 largest companies	X	X	33.9	X
	8 largest companies	X	X	42.8	X
	20 largest companies	X	X	51.6	X
	50 largest companies	X	X	62.5	386.7
31191	Snack food manufacturing				
	All companies	411	17 047 428	100.0	X
	4 largest companies	X	X	56.2	X
	8 largest companies	X	X	64.7	X
	20 largest companies	X	X	78.4	X
	50 largest companies	X	X	89.6	1 980.2
311911	Roasted nuts and peanut butter manufacturing				
	All companies	145	4 812 383	100.0	X
	4 largest companies	X	X	33.5	X
	8 largest companies	X	X	54.4	X
	20 largest companies	X	X	79.6	X
	50 largest companies	X	X	94.5	481.3
311919	Other snack food manufacturing				
	All companies	267	12 235 045	100.0	X
	4 largest companies	X	X	74.8	X
	8 largest companies	X	X	81.7	X
	20 largest companies	X	X	89.5	X
	50 largest companies	X	X	95.5	D
31192	Coffee and tea manufacturing				
	All companies	258	5 542 276	100.0	X
	4 largest companies	X	X	51.2	X
	8 largest companies	X	X	63.2	X
	20 largest companies	X	X	81.6	X
	50 largest companies	X	X	93.0	840.1
311920	Coffee and tea manufacturing				
	All companies	258	5 542 276	100.0	X
	4 largest companies	X	X	51.2	X
	8 largest companies	X	X	63.2	X
	20 largest companies	X	X	81.6	X
	50 largest companies	X	X	93.0	840.1

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311	Food manufacturing—Con.				
3119	Other food manufacturing—Con.				
31193	Flavoring syrup and concentrate manufacturing				
	All companies	144	8 153 955	100.0	X
	4 largest companies	X	X	D	X
	8 largest companies	X	X	89.0	X
	20 largest companies	X	X	93.1	X
	50 largest companies	X	X	97.2	D
311930	Flavoring syrup and concentrate manufacturing				
	All companies	144	8 153 955	100.0	X
	4 largest companies	X	X	D	X
	8 largest companies	X	X	89.0	X
	20 largest companies	X	X	93.1	X
	50 largest companies	X	X	97.2	D
31194	Seasoning and dressing manufacturing				
	All companies	531	11 301 659	100.0	X
	4 largest companies	X	X	25.3	X
	8 largest companies	X	X	36.5	X
	20 largest companies	X	X	54.0	X
	50 largest companies	X	X	72.6	263.4
311941	Mayonnaise, dressing, and other prepared sauce manufacturing				
	All companies	261	5 662 985	100.0	X
	4 largest companies	X	X	38.5	X
	8 largest companies	X	X	54.7	X
	20 largest companies	X	X	73.4	X
	50 largest companies	X	X	87.8	611.1
311942	Spice and extract manufacturing				
	All companies	276	5 638 674	100.0	X
	4 largest companies	X	X	28.7	X
	8 largest companies	X	X	38.8	X
	20 largest companies	X	X	58.0	X
	50 largest companies	X	X	80.2	369.0
31199	All other food manufacturing				
	All companies	2 121	14 829 067	100.0	X
	4 largest companies	X	X	19.8	X
	8 largest companies	X	X	26.7	X
	20 largest companies	X	X	39.1	X
	50 largest companies	X	X	54.0	138.4
311991	Perishable prepared food manufacturing				
	All companies	567	5 470 274	100.0	X
	4 largest companies	X	X	23.6	X
	8 largest companies	X	X	35.1	X
	20 largest companies	X	X	52.0	X
	50 largest companies	X	X	70.6	225.9
311999	All other miscellaneous food manufacturing				
	All companies	1 561	9 358 793	100.0	X
	4 largest companies	X	X	24.5	X
	8 largest companies	X	X	32.2	X
	20 largest companies	X	X	45.6	X
	50 largest companies	X	X	62.6	221.3
312	Beverage and tobacco product manufacturing				
	All companies	2 534	105 456 615	100.0	X
	4 largest companies	X	X	42.6	X
	8 largest companies	X	X	58.3	X
	20 largest companies	X	X	74.5	X
	50 largest companies	X	X	85.5	709.5
3121	Beverage manufacturing				
	All companies	2 445	65 843 207	100.0	X
	4 largest companies	X	X	39.5	X
	8 largest companies	X	X	53.2	X
	20 largest companies	X	X	69.2	X
	50 largest companies	X	X	81.7	511.8
31211	Soft drink and ice manufacturing				
	All companies	916	34 508 693	100.0	X
	4 largest companies	X	X	48.2	X
	8 largest companies	X	X	59.0	X
	20 largest companies	X	X	74.4	X
	50 largest companies	X	X	86.7	780.2
312111	Soft drink manufacturing				
	All companies	294	32 081 757	100.0	X
	4 largest companies	X	X	51.9	X
	8 largest companies	X	X	63.4	X
	20 largest companies	X	X	78.2	X
	50 largest companies	X	X	90.1	895.7

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
312	Beverage and tobacco product manufacturing—Con.				
3121	Beverage manufacturing—Con.				
31211	Soft drink and ice manufacturing—Con.				
312112	Bottled water manufacturing				
	All companies	201	1 828 078	100.0	X
	4 largest companies	X	X	62.6	X
	8 largest companies	X	X	76.7	X
	20 largest companies	X	X	87.0	X
	50 largest companies	X	X	95.5	1 409.2
312113	Ice manufacturing				
	All companies	425	598 858	100.0	X
	4 largest companies	X	X	42.9	X
	8 largest companies	X	X	50.6	X
	20 largest companies	X	X	60.7	X
	50 largest companies	X	X	73.1	763.1
31212	Breweries				
	All companies	349	17 864 107	100.0	X
	4 largest companies	X	X	90.8	X
	8 largest companies	X	X	93.8	X
	20 largest companies	X	X	96.4	X
	50 largest companies	X	X	98.1	D
312120	Breweries				
	All companies	349	17 864 107	100.0	X
	4 largest companies	X	X	90.8	X
	8 largest companies	X	X	93.8	X
	20 largest companies	X	X	96.4	X
	50 largest companies	X	X	98.1	D
31213	Wineries				
	All companies	1 127	9 413 154	100.0	X
	4 largest companies	X	X	46.5	X
	8 largest companies	X	X	60.8	X
	20 largest companies	X	X	73.2	X
	50 largest companies	X	X	81.1	887.6
312130	Wineries				
	All companies	1 127	9 413 154	100.0	X
	4 largest companies	X	X	46.5	X
	8 largest companies	X	X	60.8	X
	20 largest companies	X	X	73.2	X
	50 largest companies	X	X	81.1	887.6
31214	Distilleries				
	All companies	67	4 057 253	100.0	X
	4 largest companies	X	X	70.5	X
	8 largest companies	X	X	85.0	X
	20 largest companies	X	X	97.3	X
	50 largest companies	X	X	99.9	1 609.4
312140	Distilleries				
	All companies	67	4 057 253	100.0	X
	4 largest companies	X	X	70.5	X
	8 largest companies	X	X	85.0	X
	20 largest companies	X	X	97.3	X
	50 largest companies	X	X	99.9	1 609.4
3122	Tobacco manufacturing				
	All companies	91	39 613 408	100.0	X
	4 largest companies	X	X	86.7	X
	8 largest companies	X	X	93.2	X
	20 largest companies	X	X	98.8	X
	50 largest companies	X	X	99.9	D
31221	Tobacco stemming and redrying				
	All companies	13	1 077 004	100.0	X
	4 largest companies	X	X	84.6	X
	8 largest companies	X	X	98.2	X
	20 largest companies	X	X	100.0	2 111.9
	50 largest companies	X	X	—	—
312210	Tobacco stemming and redrying				
	All companies	13	1 077 004	100.0	X
	4 largest companies	X	X	84.6	X
	8 largest companies	X	X	98.2	X
	20 largest companies	X	X	100.0	2 111.9
	50 largest companies	X	X	—	—

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
312	Beverage and tobacco product manufacturing—Con.				
3122	Tobacco manufacturing—Con.				
31222	Tobacco product manufacturing				
	All companies	84	38 536 404	100.0	X
	4 largest companies	X	X	88.3	X
	8 largest companies	X	X	94.9	X
	20 largest companies	X	X	99.5	X
	50 largest companies	X	X	99.9	D
312221	Cigarette manufacturing				
	All companies	15	34 799 732	100.0	X
	4 largest companies	X	X	95.3	X
	8 largest companies	X	X	99.4	X
	20 largest companies	X	X	100.0	D
	50 largest companies	X	X	—	—
312229	Other tobacco product manufacturing				
	All companies	70	3 736 672	100.0	X
	4 largest companies	X	X	71.9	X
	8 largest companies	X	X	90.2	X
	20 largest companies	X	X	98.9	X
	50 largest companies	X	X	99.9	2 473.1
313	Textile mills				
	All companies	3 279	45 497 392	100.0	X
	4 largest companies	X	X	13.9	X
	8 largest companies	X	X	23.1	X
	20 largest companies	X	X	39.6	X
	50 largest companies	X	X	56.8	105.6
3131	Fiber, yarn, and thread mills				
	All companies	384	10 629 613	100.0	X
	4 largest companies	X	X	38.0	X
	8 largest companies	X	X	51.2	X
	20 largest companies	X	X	73.2	X
	50 largest companies	X	X	88.0	526.4
31311	Fiber, yarn, and thread mills				
	All companies	384	10 629 613	100.0	X
	4 largest companies	X	X	38.0	X
	8 largest companies	X	X	51.2	X
	20 largest companies	X	X	73.2	X
	50 largest companies	X	X	88.0	526.4
313111	Yarn spinning mills				
	All companies	216	6 007 024	100.0	X
	4 largest companies	X	X	34.5	X
	8 largest companies	X	X	51.1	X
	20 largest companies	X	X	74.8	X
	50 largest companies	X	X	92.6	455.2
313112	Yarn texturizing, throwing, and twisting mills				
	All companies	100	4 328 830	100.0	X
	4 largest companies	X	X	58.4	X
	8 largest companies	X	X	75.5	X
	20 largest companies	X	X	89.4	X
	50 largest companies	X	X	98.2	1 259.1
313113	Thread mills				
	All companies	83	293 759	100.0	X
	4 largest companies	X	X	64.4	X
	8 largest companies	X	X	77.2	X
	20 largest companies	X	X	91.9	X
	50 largest companies	X	X	98.7	2 487.6
3132	Fabric mills				
	All companies	1 511	22 475 928	100.0	X
	4 largest companies	X	X	17.2	X
	8 largest companies	X	X	25.8	X
	20 largest companies	X	X	44.2	X
	50 largest companies	X	X	63.2	154.8
31321	Broadwoven fabric mills				
	All companies	643	11 408 319	100.0	X
	4 largest companies	X	X	19.5	X
	8 largest companies	X	X	33.2	X
	20 largest companies	X	X	58.0	X
	50 largest companies	X	X	79.7	223.4
313210	Broadwoven fabric mills				
	All companies	643	11 408 319	100.0	X
	4 largest companies	X	X	19.5	X
	8 largest companies	X	X	33.2	X
	20 largest companies	X	X	58.0	X
	50 largest companies	X	X	79.7	223.4

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
313	Textile mills—Con.				
3132	Fabric mills—Con.				
31322	Narrow fabric mills and schiffli machine embroidery				
	All companies	343	1 396 950	100.0	X
	4 largest companies	X	X	23.6	X
	8 largest companies	X	X	38.3	X
	20 largest companies	X	X	60.4	X
	50 largest companies	X	X	82.1	258.4
313221	Narrow fabric mills				
	All companies	208	1 247 929	100.0	X
	4 largest companies	X	X	26.4	X
	8 largest companies	X	X	42.9	X
	20 largest companies	X	X	67.5	X
	50 largest companies	X	X	88.5	318.8
313222	Schiffli machine embroidery				
	All companies	135	149 021	100.0	X
	4 largest companies	X	X	35.6	X
	8 largest companies	X	X	54.5	X
	20 largest companies	X	X	76.0	X
	50 largest companies	X	X	91.3	484.5
31323	Nonwoven fabric mills				
	All companies	218	5 921 838	100.0	X
	4 largest companies	X	X	50.8	X
	8 largest companies	X	X	62.9	X
	20 largest companies	X	X	75.3	X
	50 largest companies	X	X	89.5	1 147.3
313230	Nonwoven fabric mills				
	All companies	218	5 921 838	100.0	X
	4 largest companies	X	X	50.8	X
	8 largest companies	X	X	62.9	X
	20 largest companies	X	X	75.3	X
	50 largest companies	X	X	89.5	1 147.3
31324	Knit fabric mills				
	All companies	330	3 748 821	100.0	X
	4 largest companies	X	X	35.1	X
	8 largest companies	X	X	45.5	X
	20 largest companies	X	X	62.4	X
	50 largest companies	X	X	80.7	441.9
313241	Weft knit fabric mills				
	All companies	166	2 150 760	100.0	X
	4 largest companies	X	X	54.1	X
	8 largest companies	X	X	66.7	X
	20 largest companies	X	X	81.0	X
	50 largest companies	X	X	92.4	1 112.1
313249	Other knit fabric and lace mills				
	All companies	168	1 598 061	100.0	X
	4 largest companies	X	X	30.6	X
	8 largest companies	X	X	43.6	X
	20 largest companies	X	X	68.0	X
	50 largest companies	X	X	87.8	371.8
3133	Textile and fabric finishing and fabric coating mills				
	All companies	1 494	12 391 851	100.0	X
	4 largest companies	X	X	16.5	X
	8 largest companies	X	X	26.5	X
	20 largest companies	X	X	39.8	X
	50 largest companies	X	X	56.0	124.8
31331	Textile and fabric finishing mills				
	All companies	1 293	10 439 536	100.0	X
	4 largest companies	X	X	19.5	X
	8 largest companies	X	X	30.7	X
	20 largest companies	X	X	46.0	X
	50 largest companies	X	X	62.3	166.7
313311	Broadwoven fabric finishing mills				
	All companies	951	6 829 131	100.0	X
	4 largest companies	X	X	28.9	X
	8 largest companies	X	X	40.8	X
	20 largest companies	X	X	55.2	X
	50 largest companies	X	X	70.2	298.4
313312	Textile and fabric finishing (except broadwoven fabric) mills				
	All companies	350	3 610 405	100.0	X
	4 largest companies	X	X	28.0	X
	8 largest companies	X	X	43.0	X
	20 largest companies	X	X	60.2	X
	50 largest companies	X	X	79.8	317.5

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
313	Textile mills—Con.				
3133	Textile and fabric finishing and fabric coating mills—Con.				
31332	Fabric coating mills				
	All companies	207	1 952 315	100.0	X
	4 largest companies	X	X	19.6	X
	8 largest companies	X	X	33.4	X
	20 largest companies	X	X	58.2	X
	50 largest companies	X	X	80.4	218.9
313320	Fabric coating mills				
	All companies	207	1 952 315	100.0	X
	4 largest companies	X	X	19.6	X
	8 largest companies	X	X	33.4	X
	20 largest companies	X	X	58.2	X
	50 largest companies	X	X	80.4	218.9
314	Textile product mills				
	All companies	6 943	32 085 578	100.0	X
	4 largest companies	X	X	35.0	X
	8 largest companies	X	X	41.6	X
	20 largest companies	X	X	52.4	X
	50 largest companies	X	X	61.9	403.0
3141	Textile furnishings mills				
	All companies	2 738	22 302 195	100.0	X
	4 largest companies	X	X	49.4	X
	8 largest companies	X	X	58.2	X
	20 largest companies	X	X	70.4	X
	50 largest companies	X	X	80.3	793.6
31411	Carpet and rug mills				
	All companies	342	13 958 654	100.0	X
	4 largest companies	X	X	65.0	X
	8 largest companies	X	X	75.6	X
	20 largest companies	X	X	88.1	X
	50 largest companies	X	X	95.3	1 756.4
314110	Carpet and rug mills				
	All companies	342	13 958 654	100.0	X
	4 largest companies	X	X	65.0	X
	8 largest companies	X	X	75.6	X
	20 largest companies	X	X	88.1	X
	50 largest companies	X	X	95.3	1 756.4
31412	Curtain and linen mills				
	All companies	2 399	8 343 541	100.0	X
	4 largest companies	X	X	41.0	X
	8 largest companies	X	X	48.5	X
	20 largest companies	X	X	59.2	X
	50 largest companies	X	X	71.4	618.4
314121	Curtain and drapery mills				
	All companies	1 778	1 457 473	100.0	X
	4 largest companies	X	X	16.1	X
	8 largest companies	X	X	24.5	X
	20 largest companies	X	X	39.1	X
	50 largest companies	X	X	52.4	111.0
314129	Other household textile product mills				
	All companies	629	6 886 068	100.0	X
	4 largest companies	X	X	49.7	X
	8 largest companies	X	X	58.7	X
	20 largest companies	X	X	70.2	X
	50 largest companies	X	X	82.6	902.3
3149	Other textile product mills				
	All companies	4 219	9 783 383	100.0	X
	4 largest companies	X	X	11.7	X
	8 largest companies	X	X	18.3	X
	20 largest companies	X	X	29.1	X
	50 largest companies	X	X	41.8	62.3
31491	Textile bag and canvas mills				
	All companies	1 824	2 512 021	100.0	X
	4 largest companies	X	X	9.9	X
	8 largest companies	X	X	16.8	X
	20 largest companies	X	X	29.1	X
	50 largest companies	X	X	44.5	58.5
314911	Textile bag mills				
	All companies	280	655 866	100.0	X
	4 largest companies	X	X	23.8	X
	8 largest companies	X	X	34.9	X
	20 largest companies	X	X	54.1	X
	50 largest companies	X	X	76.2	263.2

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
314	Textile product mills—Con.				
3149	Other textile product mills—Con.				
31491	Textile bag and canvas mills—Con.				
314912	Canvas and related product mills				
	All companies	1 544	1 856 155	100.0	X
	4 largest companies	X	X	12.4	X
	8 largest companies	X	X	20.5	X
	20 largest companies	X	X	34.2	X
	50 largest companies	X	X	49.4	80.0
31499	All other textile product mills				
	All companies	2 400	7 271 362	100.0	X
	4 largest companies	X	X	15.7	X
	8 largest companies	X	X	24.6	X
	20 largest companies	X	X	38.9	X
	50 largest companies	X	X	53.5	109.6
314991	Rope, cordage, and twine mills				
	All companies	157	716 103	100.0	X
	4 largest companies	X	X	42.8	X
	8 largest companies	X	X	55.2	X
	20 largest companies	X	X	72.7	X
	50 largest companies	X	X	89.4	613.7
314992	Tire cord and tire fabric mills				
	All companies	18	1 166 858	100.0	X
	4 largest companies	X	X	79.7	X
	8 largest companies	X	X	95.6	X
	20 largest companies	X	X	100.0	1 939.9
	50 largest companies	X	X	—	—
314999	All other miscellaneous textile product mills				
	All companies	2 228	5 388 401	100.0	X
	4 largest companies	X	X	15.6	X
	8 largest companies	X	X	24.0	X
	20 largest companies	X	X	35.3	X
	50 largest companies	X	X	50.7	101.1
315	Apparel manufacturing				
	All companies	12 550	41 917 182	100.0	X
	4 largest companies	X	X	17.3	X
	8 largest companies	X	X	21.3	X
	20 largest companies	X	X	28.7	X
	50 largest companies	X	X	38.7	105.7
3151	Apparel knitting mills				
	All companies	779	5 959 865	100.0	X
	4 largest companies	X	X	26.3	X
	8 largest companies	X	X	34.6	X
	20 largest companies	X	X	48.8	X
	50 largest companies	X	X	69.5	319.8
31511	Hosiery and sock mills				
	All companies	366	3 509 872	100.0	X
	4 largest companies	X	X	29.8	X
	8 largest companies	X	X	39.9	X
	20 largest companies	X	X	61.1	X
	50 largest companies	X	X	81.8	325.6
315111	Sheer hosiery mills				
	All companies	87	1 037 436	100.0	X
	4 largest companies	X	X	53.5	X
	8 largest companies	X	X	72.4	X
	20 largest companies	X	X	91.1	X
	50 largest companies	X	X	98.5	1 155.5
315119	Other hosiery and sock mills				
	All companies	282	2 472 436	100.0	X
	4 largest companies	X	X	26.3	X
	8 largest companies	X	X	39.3	X
	20 largest companies	X	X	66.1	X
	50 largest companies	X	X	84.7	312.0
31519	Other apparel knitting mills				
	All companies	415	2 449 993	100.0	X
	4 largest companies	X	X	37.0	X
	8 largest companies	X	X	46.8	X
	20 largest companies	X	X	65.4	X
	50 largest companies	X	X	82.2	582.9
315191	Outerwear knitting mills				
	All companies	386	1 606 511	100.0	X
	4 largest companies	X	X	24.0	X
	8 largest companies	X	X	36.1	X
	20 largest companies	X	X	58.1	X
	50 largest companies	X	X	77.4	244.4

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
315	Apparel manufacturing—Con.				
3151	Apparel knitting mills—Con.				
31519	Other apparel knitting mills—Con.				
315192	Underwear and nightwear knitting mills				
	All companies	32	843 482	100.0	X
	4 largest companies	X	X	83.5	X
	8 largest companies	X	X	97.1	X
	20 largest companies	X	X	99.8	X
	50 largest companies	X	X	100.0	2 815.5
3152	Cut and sew apparel manufacturing				
	All companies	10 440	33 075 950	100.0	X
	4 largest companies	X	X	18.8	X
	8 largest companies	X	X	23.8	X
	20 largest companies	X	X	32.6	X
	50 largest companies	X	X	43.9	142.2
31521	Cut and sew apparel contractors				
	All companies	7 170	3 447 203	100.0	X
	4 largest companies	X	X	5.3	X
	8 largest companies	X	X	8.3	X
	20 largest companies	X	X	13.9	X
	50 largest companies	X	X	22.6	15.5
315211	Men's and boys' cut and sew apparel contractors				
	All companies	967	804 095	100.0	X
	4 largest companies	X	X	13.9	X
	8 largest companies	X	X	20.5	X
	20 largest companies	X	X	32.2	X
	50 largest companies	X	X	47.8	91.2
315212	Women's, girls', and infants' cut and sew apparel contractors				
	All companies	6 214	2 643 108	100.0	X
	4 largest companies	X	X	5.9	X
	8 largest companies	X	X	9.2	X
	20 largest companies	X	X	14.8	X
	50 largest companies	X	X	24.1	19.0
31522	Men's and boys' cut and sew apparel manufacturing				
	All companies	792	11 293 680	100.0	X
	4 largest companies	X	X	44.9	X
	8 largest companies	X	X	52.2	X
	20 largest companies	X	X	64.2	X
	50 largest companies	X	X	77.2	776.5
315221	Men's and boys' cut and sew underwear and nightwear manufacturing				
	All companies	26	260 667	100.0	X
	4 largest companies	X	X	66.2	X
	8 largest companies	X	X	80.1	X
	20 largest companies	X	X	98.1	X
	50 largest companies	X	X	100.0	1 531.0
315222	Men's and boys' cut and sew suit, coat, and overcoat manufacturing				
	All companies	200	1 183 861	100.0	X
	4 largest companies	X	X	48.8	X
	8 largest companies	X	X	62.2	X
	20 largest companies	X	X	80.1	X
	50 largest companies	X	X	93.0	1 049.0
315223	Men's and boys' cut and sew shirt (except work shirt) manufacturing				
	All companies	180	1 641 007	100.0	X
	4 largest companies	X	X	37.5	X
	8 largest companies	X	X	53.2	X
	20 largest companies	X	X	72.7	X
	50 largest companies	X	X	89.1	481.3
315224	Men's and boys' cut and sew trouser, slack, and jean manufacturing				
	All companies	92	5 154 242	100.0	X
	4 largest companies	X	X	80.4	X
	8 largest companies	X	X	87.4	X
	20 largest companies	X	X	93.6	X
	50 largest companies	X	X	98.8	2 514.8
315225	Men's and boys' cut and sew work clothing manufacturing				
	All companies	105	2 012 753	100.0	X
	4 largest companies	X	X	55.0	X
	8 largest companies	X	X	69.1	X
	20 largest companies	X	X	87.0	X
	50 largest companies	X	X	97.5	1 192.0
315228	Men's and boys' cut and sew other outerwear manufacturing				
	All companies	216	1 041 150	100.0	X
	4 largest companies	X	X	36.8	X
	8 largest companies	X	X	49.4	X
	20 largest companies	X	X	68.0	X
	50 largest companies	X	X	86.3	453.2

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
315	Apparel manufacturing—Con.				
3152	Cut and sew apparel manufacturing—Con.				
31523	Women's and girls' cut and sew apparel manufacturing				
	All companies	1 930	16 716 075	100.0	X
	4 largest companies	X	X	13.2	X
	8 largest companies	X	X	20.8	X
	20 largest companies	X	X	33.4	X
	50 largest companies	X	X	49.9	84.1
315231	Women's and girls' cut and sew lingerie, loungewear, and nightwear manufacturing				
	All companies	120	2 208 475	100.0	X
	4 largest companies	X	X	54.8	X
	8 largest companies	X	X	69.8	X
	20 largest companies	X	X	85.9	X
	50 largest companies	X	X	96.3	1 417.1
315232	Women's and girls' cut and sew blouse and shirt manufacturing				
	All companies	352	4 241 523	100.0	X
	4 largest companies	X	X	20.7	X
	8 largest companies	X	X	33.1	X
	20 largest companies	X	X	57.4	X
	50 largest companies	X	X	81.4	225.2
315233	Women's and girls' cut and sew dress manufacturing				
	All companies	525	3 626 775	100.0	X
	4 largest companies	X	X	21.6	X
	8 largest companies	X	X	31.9	X
	20 largest companies	X	X	48.5	X
	50 largest companies	X	X	69.6	185.5
315234	Women's and girls' cut and sew suit, coat, tailored jacket, and skirt manufacturing				
	All companies	186	1 326 152	100.0	X
	4 largest companies	X	X	30.1	X
	8 largest companies	X	X	47.5	X
	20 largest companies	X	X	69.5	X
	50 largest companies	X	X	88.2	370.9
315239	Women's and girls' cut and sew other outerwear manufacturing				
	All companies	759	5 313 150	100.0	X
	4 largest companies	X	X	28.9	X
	8 largest companies	X	X	40.9	X
	20 largest companies	X	X	57.2	X
	50 largest companies	X	X	74.3	284.6
31529	Other cut and sew apparel manufacturing				
	All companies	607	1 618 992	100.0	X
	4 largest companies	X	X	22.9	X
	8 largest companies	X	X	32.9	X
	20 largest companies	X	X	46.6	X
	50 largest companies	X	X	66.8	208.2
315291	Infants' cut and sew apparel manufacturing				
	All companies	41	315 348	100.0	X
	4 largest companies	X	X	67.2	X
	8 largest companies	X	X	82.1	X
	20 largest companies	X	X	94.6	X
	50 largest companies	X	X	100.0	1 884.8
315292	Fur and leather apparel manufacturing				
	All companies	153	190 636	100.0	X
	4 largest companies	X	X	33.1	X
	8 largest companies	X	X	49.3	X
	20 largest companies	X	X	71.9	X
	50 largest companies	X	X	89.1	451.8
315299	All other cut and sew apparel manufacturing				
	All companies	413	1 113 008	100.0	X
	4 largest companies	X	X	26.3	X
	8 largest companies	X	X	35.8	X
	20 largest companies	X	X	51.9	X
	50 largest companies	X	X	74.1	284.0
3159	Apparel accessories and other apparel manufacturing				
	All companies	1 362	2 881 367	100.0	X
	4 largest companies	X	X	15.0	X
	8 largest companies	X	X	25.1	X
	20 largest companies	X	X	44.0	X
	50 largest companies	X	X	61.0	127.4
31599	Apparel accessories and other apparel manufacturing				
	All companies	1 362	2 881 367	100.0	X
	4 largest companies	X	X	15.0	X
	8 largest companies	X	X	25.1	X
	20 largest companies	X	X	44.0	X
	50 largest companies	X	X	61.0	127.4

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
315	Apparel manufacturing—Con.				
3159	Apparel accessories and other apparel manufacturing—Con.				
31599	Apparel accessories and other apparel manufacturing—Con.				
315991	Hat, cap, and millinery manufacturing				
	All companies	240	685 030	100.0	X
	4 largest companies	X	X	39.8	X
	8 largest companies	X	X	51.4	X
	20 largest companies	X	X	66.7	X
	50 largest companies	X	X	83.3	506.9
315992	Glove and mitten manufacturing				
	All companies	74	293 668	100.0	X
	4 largest companies	X	X	48.9	X
	8 largest companies	X	X	61.5	X
	20 largest companies	X	X	81.4	X
	50 largest companies	X	X	97.3	1 047.6
315993	Men's and boys' neckwear manufacturing				
	All companies	72	389 801	100.0	X
	4 largest companies	X	X	60.8	X
	8 largest companies	X	X	78.0	X
	20 largest companies	X	X	90.9	X
	50 largest companies	X	X	98.9	1 089.5
315999	Other apparel accessories and other apparel manufacturing				
	All companies	979	1 512 868	100.0	X
	4 largest companies	X	X	24.3	X
	8 largest companies	X	X	37.6	X
	20 largest companies	X	X	55.3	X
	50 largest companies	X	X	70.0	257.0
316	Leather and allied product manufacturing				
	All companies	1 459	5 906 231	100.0	X
	4 largest companies	X	X	19.1	X
	8 largest companies	X	X	29.3	X
	20 largest companies	X	X	47.2	X
	50 largest companies	X	X	64.8	163.6
3161	Leather and hide tanning and finishing				
	All companies	246	1 910 582	100.0	X
	4 largest companies	X	X	45.8	X
	8 largest companies	X	X	61.8	X
	20 largest companies	X	X	78.8	X
	50 largest companies	X	X	93.1	782.1
31611	Leather and hide tanning and finishing				
	All companies	246	1 910 582	100.0	X
	4 largest companies	X	X	45.8	X
	8 largest companies	X	X	61.8	X
	20 largest companies	X	X	78.8	X
	50 largest companies	X	X	93.1	782.1
316110	Leather and hide tanning and finishing				
	All companies	246	1 910 582	100.0	X
	4 largest companies	X	X	45.8	X
	8 largest companies	X	X	61.8	X
	20 largest companies	X	X	78.8	X
	50 largest companies	X	X	93.1	782.1
3162	Footwear manufacturing				
	All companies	320	2 302 650	100.0	X
	4 largest companies	X	X	32.0	X
	8 largest companies	X	X	49.4	X
	20 largest companies	X	X	73.1	X
	50 largest companies	X	X	90.5	408.9
31621	Footwear manufacturing				
	All companies	320	2 302 650	100.0	X
	4 largest companies	X	X	32.0	X
	8 largest companies	X	X	49.4	X
	20 largest companies	X	X	73.1	X
	50 largest companies	X	X	90.5	408.9
316211	Rubber and plastics footwear manufacturing				
	All companies	58	490 755	100.0	X
	4 largest companies	X	X	70.7	X
	8 largest companies	X	X	86.2	X
	20 largest companies	X	X	96.6	X
	50 largest companies	X	X	99.9	2 707.2
316212	House slipper manufacturing				
	All companies	12	144 592	100.0	X
	4 largest companies	X	X	96.8	X
	8 largest companies	X	X	99.1	X
	20 largest companies	X	X	100.0	D
	50 largest companies	X	X	—	—

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
316	Leather and allied product manufacturing—Con.				
3162	Footwear manufacturing—Con.				
31621	Footwear manufacturing—Con.				
316213	Men's footwear (except athletic) manufacturing				
	All companies	100	1 289 303	100.0	X
	4 largest companies	X	X	44.5	X
	8 largest companies	X	X	67.9	X
	20 largest companies	X	X	92.3	X
	50 largest companies	X	X	99.0	734.2
316214	Women's footwear (except athletic) manufacturing				
	All companies	79	243 619	100.0	X
	4 largest companies	X	X	64.2	X
	8 largest companies	X	X	78.0	X
	20 largest companies	X	X	92.1	X
	50 largest companies	X	X	99.2	1 556.1
316219	Other footwear manufacturing				
	All companies	75	134 381	100.0	X
	4 largest companies	X	X	44.1	X
	8 largest companies	X	X	66.0	X
	20 largest companies	X	X	89.0	X
	50 largest companies	X	X	98.5	703.4
3169	Other leather and allied product manufacturing				
	All companies	898	1 692 999	100.0	X
	4 largest companies	X	X	19.1	X
	8 largest companies	X	X	28.8	X
	20 largest companies	X	X	44.9	X
	50 largest companies	X	X	61.7	162.5
31699	Other leather and allied product manufacturing				
	All companies	898	1 692 999	100.0	X
	4 largest companies	X	X	19.1	X
	8 largest companies	X	X	28.8	X
	20 largest companies	X	X	44.9	X
	50 largest companies	X	X	61.7	162.5
316991	Luggage manufacturing				
	All companies	226	526 278	100.0	X
	4 largest companies	X	X	35.0	X
	8 largest companies	X	X	45.2	X
	20 largest companies	X	X	61.9	X
	50 largest companies	X	X	80.5	477.7
316992	Women's handbag and purse manufacturing				
	All companies	99	175 599	100.0	X
	4 largest companies	X	X	67.1	X
	8 largest companies	X	X	85.5	X
	20 largest companies	X	X	93.2	X
	50 largest companies	X	X	98.1	1 534.1
316993	Personal leather goods (except women's handbag and purse) manufacturing				
	All companies	164	347 025	100.0	X
	4 largest companies	X	X	54.8	X
	8 largest companies	X	X	64.8	X
	20 largest companies	X	X	77.8	X
	50 largest companies	X	X	90.9	1 499.9
316999	All other leather goods manufacturing				
	All companies	412	644 097	100.0	X
	4 largest companies	X	X	27.5	X
	8 largest companies	X	X	39.7	X
	20 largest companies	X	X	57.1	X
	50 largest companies	X	X	75.0	270.2
321	Wood product manufacturing				
	All companies	15 347	89 049 605	100.0	X
	4 largest companies	X	X	10.0	X
	8 largest companies	X	X	15.4	X
	20 largest companies	X	X	25.1	X
	50 largest companies	X	X	35.4	48.4
3211	Sawmills and wood preservation				
	All companies	3 858	25 928 957	100.0	X
	4 largest companies	X	X	14.8	X
	8 largest companies	X	X	21.2	X
	20 largest companies	X	X	31.0	X
	50 largest companies	X	X	42.4	90.0

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
321	Wood product manufacturing—Con.				
3211	Sawmills and wood preservation—Con.				
32111	Sawmills and wood preservation				
	All companies	3 858	25 928 957	100.0	X
	4 largest companies	X	X	14.8	X
	8 largest companies	X	X	21.2	X
	20 largest companies	X	X	31.0	X
	50 largest companies	X	X	42.4	90.0
321113	Sawmills				
	All companies	3 462	21 394 922	100.0	X
	4 largest companies	X	X	17.5	X
	8 largest companies	X	X	23.9	X
	20 largest companies	X	X	33.9	X
	50 largest companies	X	X	45.1	117.2
321114	Wood preservation				
	All companies	414	4 534 035	100.0	X
	4 largest companies	X	X	26.0	X
	8 largest companies	X	X	35.4	X
	20 largest companies	X	X	52.2	X
	50 largest companies	X	X	74.6	303.5
3212	Veneer, plywood, and engineered wood product manufacturing				
	All companies	1 524	20 195 136	100.0	X
	4 largest companies	X	X	27.1	X
	8 largest companies	X	X	38.6	X
	20 largest companies	X	X	50.7	X
	50 largest companies	X	X	61.9	257.5
32121	Veneer, plywood, and engineered wood product manufacturing				
	All companies	1 524	20 195 136	100.0	X
	4 largest companies	X	X	27.1	X
	8 largest companies	X	X	38.6	X
	20 largest companies	X	X	50.7	X
	50 largest companies	X	X	61.9	257.5
321211	Hardwood veneer and plywood manufacturing				
	All companies	304	3 082 173	100.0	X
	4 largest companies	X	X	33.1	X
	8 largest companies	X	X	44.8	X
	20 largest companies	X	X	61.5	X
	50 largest companies	X	X	77.4	468.2
321212	Softwood veneer and plywood manufacturing				
	All companies	85	4 742 951	100.0	X
	4 largest companies	X	X	57.3	X
	8 largest companies	X	X	72.2	X
	20 largest companies	X	X	88.6	X
	50 largest companies	X	X	99.2	1 198.0
321213	Engineered wood member (except truss) manufacturing				
	All companies	90	2 015 486	100.0	X
	4 largest companies	X	X	66.6	X
	8 largest companies	X	X	80.2	X
	20 largest companies	X	X	90.3	X
	50 largest companies	X	X	98.1	1 978.4
321214	Truss manufacturing				
	All companies	899	4 525 693	100.0	X
	4 largest companies	X	X	10.0	X
	8 largest companies	X	X	14.6	X
	20 largest companies	X	X	24.8	X
	50 largest companies	X	X	40.9	49.5
321219	Reconstituted wood product manufacturing				
	All companies	180	5 828 833	100.0	X
	4 largest companies	X	X	35.2	X
	8 largest companies	X	X	50.5	X
	20 largest companies	X	X	73.1	X
	50 largest companies	X	X	90.6	497.9
3219	Other wood product manufacturing				
	All companies	10 133	42 925 512	100.0	X
	4 largest companies	X	X	10.1	X
	8 largest companies	X	X	16.4	X
	20 largest companies	X	X	26.9	X
	50 largest companies	X	X	37.0	50.0
32191	Millwork				
	All companies	4 432	22 554 019	100.0	X
	4 largest companies	X	X	17.3	X
	8 largest companies	X	X	26.2	X
	20 largest companies	X	X	36.1	X
	50 largest companies	X	X	47.0	113.4

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321	Wood product manufacturing—Con.				
3219	Other wood product manufacturing—Con.				
32191	Millwork—Con.				
321911	Wood window and door manufacturing				
	All companies	1 328	10 948 678	100.0	X
	4 largest companies	X	X	34.9	X
	8 largest companies	X	X	44.7	X
	20 largest companies	X	X	57.4	X
	50 largest companies	X	X	70.2	376.1
321912	Cut stock, resawing lumber, and planing				
	All companies	1 129	5 736 643	100.0	X
	4 largest companies	X	X	16.8	X
	8 largest companies	X	X	23.6	X
	20 largest companies	X	X	36.9	X
	50 largest companies	X	X	54.6	132.0
321918	Other millwork (including flooring)				
	All companies	2 020	5 868 698	100.0	X
	4 largest companies	X	X	17.7	X
	8 largest companies	X	X	24.3	X
	20 largest companies	X	X	33.7	X
	50 largest companies	X	X	46.8	146.1
32192	Wood container and pallet manufacturing				
	All companies	2 792	5 054 000	100.0	X
	4 largest companies	X	X	6.9	X
	8 largest companies	X	X	10.2	X
	20 largest companies	X	X	17.0	X
	50 largest companies	X	X	26.8	23.8
321920	Wood container and pallet manufacturing				
	All companies	2 792	5 054 000	100.0	X
	4 largest companies	X	X	6.9	X
	8 largest companies	X	X	10.2	X
	20 largest companies	X	X	17.0	X
	50 largest companies	X	X	26.8	23.8
32199	All other wood product manufacturing				
	All companies	2 939	15 317 493	100.0	X
	4 largest companies	X	X	19.6	X
	8 largest companies	X	X	30.1	X
	20 largest companies	X	X	42.9	X
	50 largest companies	X	X	54.1	155.0
321991	Manufactured home (mobile home) manufacturing				
	All companies	241	6 726 900	100.0	X
	4 largest companies	X	X	44.6	X
	8 largest companies	X	X	63.7	X
	20 largest companies	X	X	81.1	X
	50 largest companies	X	X	92.5	685.3
321992	Prefabricated wood building manufacturing				
	All companies	671	3 740 620	100.0	X
	4 largest companies	X	X	22.0	X
	8 largest companies	X	X	29.3	X
	20 largest companies	X	X	41.2	X
	50 largest companies	X	X	59.5	177.7
321999	All other miscellaneous wood product manufacturing				
	All companies	2 031	4 849 973	100.0	X
	4 largest companies	X	X	17.6	X
	8 largest companies	X	X	22.4	X
	20 largest companies	X	X	31.3	X
	50 largest companies	X	X	44.5	139.4
322	Paper manufacturing				
	All companies	3 537	153 749 276	100.0	X
	4 largest companies	X	X	25.8	X
	8 largest companies	X	X	41.6	X
	20 largest companies	X	X	54.1	X
	50 largest companies	X	X	67.6	259.3
3221	Pulp, paper, and paperboard mills				
	All companies	269	69 940 981	100.0	X
	4 largest companies	X	X	40.0	X
	8 largest companies	X	X	60.4	X
	20 largest companies	X	X	74.9	X
	50 largest companies	X	X	88.6	558.5

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322	Paper manufacturing—Con.				
3221	Pulp, paper, and paperboard mills—Con.				
32211	Pulp mills				
	All companies	21	3 650 916	100.0	X
	4 largest companies	X	X	61.1	X
	8 largest companies	X	X	87.7	X
	20 largest companies	X	X	D	X
	50 largest companies	X	X	100.0	1 175.2
322110	Pulp mills				
	All companies	21	3 650 916	100.0	X
	4 largest companies	X	X	61.1	X
	8 largest companies	X	X	87.7	X
	20 largest companies	X	X	D	X
	50 largest companies	X	X	100.0	1 175.2
32212	Paper mills				
	All companies	187	45 155 817	100.0	X
	4 largest companies	X	X	49.6	X
	8 largest companies	X	X	66.0	X
	20 largest companies	X	X	81.4	X
	50 largest companies	X	X	93.6	720.6
322121	Paper (except newsprint) mills				
	All companies	174	42 190 901	100.0	X
	4 largest companies	X	X	53.1	X
	8 largest companies	X	X	69.5	X
	20 largest companies	X	X	84.5	X
	50 largest companies	X	X	95.6	810.2
322122	Newsprint mills				
	All companies	16	2 964 916	100.0	X
	4 largest companies	X	X	53.9	X
	8 largest companies	X	X	78.2	X
	20 largest companies	X	X	100.0	976.6
	50 largest companies	X	X	—	—
32213	Paperboard mills				
	All companies	80	21 134 248	100.0	X
	4 largest companies	X	X	48.5	X
	8 largest companies	X	X	67.6	X
	20 largest companies	X	X	87.5	X
	50 largest companies	X	X	98.8	748.5
322130	Paperboard mills				
	All companies	80	21 134 248	100.0	X
	4 largest companies	X	X	48.5	X
	8 largest companies	X	X	67.6	X
	20 largest companies	X	X	87.5	X
	50 largest companies	X	X	98.8	748.5
3222	Converted paper product manufacturing				
	All companies	3 348	83 808 295	100.0	X
	4 largest companies	X	X	17.7	X
	8 largest companies	X	X	27.8	X
	20 largest companies	X	X	43.8	X
	50 largest companies	X	X	58.4	139.8
32221	Paperboard container manufacturing				
	All companies	1 544	43 530 631	100.0	X
	4 largest companies	X	X	29.1	X
	8 largest companies	X	X	42.8	X
	20 largest companies	X	X	59.2	X
	50 largest companies	X	X	70.5	310.6
322211	Corrugated and solid fiber box manufacturing				
	All companies	959	29 468 238	100.0	X
	4 largest companies	X	X	36.8	X
	8 largest companies	X	X	53.0	X
	20 largest companies	X	X	66.4	X
	50 largest companies	X	X	74.7	454.7
322212	Folding paperboard box manufacturing				
	All companies	351	8 274 875	100.0	X
	4 largest companies	X	X	35.1	X
	8 largest companies	X	X	53.3	X
	20 largest companies	X	X	66.5	X
	50 largest companies	X	X	79.4	439.7
322213	Setup paperboard box manufacturing				
	All companies	114	615 322	100.0	X
	4 largest companies	X	X	21.7	X
	8 largest companies	X	X	34.2	X
	20 largest companies	X	X	60.9	X
	50 largest companies	X	X	87.5	260.9

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
322	Paper manufacturing—Con.				
3222	Converted paper product manufacturing—Con.				
32221	Paperboard container manufacturing—Con.				
322214	Fiber can, tube, drum, and similar products manufacturing				
	All companies	135	2 109 885	100.0	X
	4 largest companies	X	X	71.2	X
	8 largest companies	X	X	78.8	X
	20 largest companies	X	X	85.9	X
	50 largest companies	X	X	93.7	2 467.9
322215	Nonfolding sanitary food container manufacturing				
	All companies	37	3 062 311	100.0	X
	4 largest companies	X	X	66.6	X
	8 largest companies	X	X	85.4	X
	20 largest companies	X	X	98.8	X
	50 largest companies	X	X	100.0	1 289.4
32222	Paper bag and coated and treated paper manufacturing				
	All companies	745	18 327 576	100.0	X
	4 largest companies	X	X	26.9	X
	8 largest companies	X	X	35.8	X
	20 largest companies	X	X	50.9	X
	50 largest companies	X	X	66.9	273.3
322221	Coated and laminated packaging paper and plastics film manufacturing				
	All companies	109	1 231 508	100.0	X
	4 largest companies	X	X	24.1	X
	8 largest companies	X	X	41.3	X
	20 largest companies	X	X	72.6	X
	50 largest companies	X	X	93.6	325.9
322222	Coated and laminated paper manufacturing				
	All companies	459	11 920 200	100.0	X
	4 largest companies	X	X	40.1	X
	8 largest companies	X	X	49.6	X
	20 largest companies	X	X	63.6	X
	50 largest companies	X	X	78.8	568.9
322223	Plastics, foil, and coated paper bag manufacturing				
	All companies	41	564 387	100.0	X
	4 largest companies	X	X	40.5	X
	8 largest companies	X	X	62.4	X
	20 largest companies	X	X	93.9	X
	50 largest companies	X	X	100.0	676.0
322224	Uncoated paper and multiwall bag manufacturing				
	All companies	80	2 187 615	100.0	X
	4 largest companies	X	X	52.3	X
	8 largest companies	X	X	69.3	X
	20 largest companies	X	X	85.7	X
	50 largest companies	X	X	98.1	863.6
322225	Laminated aluminum foil manufacturing for flexible packaging uses				
	All companies	38	1 537 689	100.0	X
	4 largest companies	X	X	49.6	X
	8 largest companies	X	X	71.5	X
	20 largest companies	X	X	94.0	X
	50 largest companies	X	X	100.0	842.9
322226	Surface-coated paperboard manufacturing				
	All companies	49	886 177	100.0	X
	4 largest companies	X	X	43.1	X
	8 largest companies	X	X	65.2	X
	20 largest companies	X	X	93.1	X
	50 largest companies	X	X	100.0	700.5
32223	Stationery product manufacturing				
	All companies	525	7 977 650	100.0	X
	4 largest companies	X	X	28.9	X
	8 largest companies	X	X	44.7	X
	20 largest companies	X	X	64.3	X
	50 largest companies	X	X	79.2	330.0
322231	Die-cut paper and paperboard office supplies manufacturing				
	All companies	229	2 867 447	100.0	X
	4 largest companies	X	X	44.0	X
	8 largest companies	X	X	62.1	X
	20 largest companies	X	X	78.4	X
	50 largest companies	X	X	89.9	620.2
322232	Envelope manufacturing				
	All companies	166	3 362 461	100.0	X
	4 largest companies	X	X	51.1	X
	8 largest companies	X	X	65.7	X
	20 largest companies	X	X	79.2	X
	50 largest companies	X	X	91.8	829.9

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
322	Paper manufacturing—Con.				
3222	Converted paper product manufacturing—Con.				
32223	Stationery product manufacturing—Con.				
322233	Stationery, tablet, and related product manufacturing				
	All companies	140	1 747 742	100.0	X
	4 largest companies	X	X	51.3	X
	8 largest companies	X	X	65.3	X
	20 largest companies	X	X	83.6	X
	50 largest companies	X	X	94.6	976.5
32229	Other converted paper product manufacturing				
	All companies	616	13 972 438	100.0	X
	4 largest companies	X	X	38.5	X
	8 largest companies	X	X	51.7	X
	20 largest companies	X	X	66.6	X
	50 largest companies	X	X	79.6	549.5
322291	Sanitary paper product manufacturing				
	All companies	109	9 542 802	100.0	X
	4 largest companies	X	X	56.3	X
	8 largest companies	X	X	73.9	X
	20 largest companies	X	X	89.6	X
	50 largest companies	X	X	98.1	1 139.3
322299	All other converted paper product manufacturing				
	All companies	510	4 429 636	100.0	X
	4 largest companies	X	X	21.7	X
	8 largest companies	X	X	31.0	X
	20 largest companies	X	X	46.0	X
	50 largest companies	X	X	65.7	192.4
323	Printing and related support activities				
	All companies	35 738	95 631 792	100.0	X
	4 largest companies	X	X	10.4	X
	8 largest companies	X	X	14.9	X
	20 largest companies	X	X	22.9	X
	50 largest companies	X	X	31.1	45.2
3231	Printing and related support activities				
	All companies	35 738	95 631 792	100.0	X
	4 largest companies	X	X	10.4	X
	8 largest companies	X	X	14.9	X
	20 largest companies	X	X	22.9	X
	50 largest companies	X	X	31.1	45.2
32311	Printing				
	All companies	32 572	90 212 639	100.0	X
	4 largest companies	X	X	10.9	X
	8 largest companies	X	X	15.7	X
	20 largest companies	X	X	24.0	X
	50 largest companies	X	X	32.4	49.4
323110	Commercial lithographic printing				
	All companies	14 970	50 519 423	100.0	X
	4 largest companies	X	X	12.4	X
	8 largest companies	X	X	17.8	X
	20 largest companies	X	X	27.5	X
	50 largest companies	X	X	35.0	61.0
323111	Commercial gravure printing				
	All companies	337	3 546 727	100.0	X
	4 largest companies	X	X	63.9	X
	8 largest companies	X	X	71.7	X
	20 largest companies	X	X	85.0	X
	50 largest companies	X	X	94.3	1 306.5
323112	Commercial flexographic printing				
	All companies	838	5 409 512	100.0	X
	4 largest companies	X	X	13.4	X
	8 largest companies	X	X	20.8	X
	20 largest companies	X	X	35.0	X
	50 largest companies	X	X	53.0	87.9
323113	Commercial screen printing				
	All companies	4 385	6 823 601	100.0	X
	4 largest companies	X	X	7.5	X
	8 largest companies	X	X	11.8	X
	20 largest companies	X	X	20.5	X
	50 largest companies	X	X	32.5	30.7
323114	Quick printing				
	All companies	7 515	4 513 100	100.0	X
	4 largest companies	X	X	21.5	X
	8 largest companies	X	X	23.6	X
	20 largest companies	X	X	26.8	X
	50 largest companies	X	X	31.4	319.0

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323	Printing and related support activities—Con.				
3231	Printing and related support activities—Con.				
32311	Printing—Con.				
323115	Digital printing				
	All companies	1 033	2 386 632	100.0	X
	4 largest companies	X	X	19.4	X
	8 largest companies	X	X	27.7	X
	20 largest companies	X	X	41.0	X
	50 largest companies	X	X	54.6	155.0
323116	Manifold business forms printing				
	All companies	559	7 805 372	100.0	X
	4 largest companies	X	X	28.7	X
	8 largest companies	X	X	43.8	X
	20 largest companies	X	X	64.7	X
	50 largest companies	X	X	79.6	372.0
323117	Books printing				
	All companies	560	4 867 555	100.0	X
	4 largest companies	X	X	38.2	X
	8 largest companies	X	X	53.6	X
	20 largest companies	X	X	68.2	X
	50 largest companies	X	X	81.8	492.7
323118	Blankbook, looseleaf binders, and devices manufacturing				
	All companies	223	1 763 202	100.0	X
	4 largest companies	X	X	46.7	X
	8 largest companies	X	X	56.1	X
	20 largest companies	X	X	70.9	X
	50 largest companies	X	X	83.8	805.6
323119	Other commercial printing				
	All companies	2 393	2 577 515	100.0	X
	4 largest companies	X	X	9.1	X
	8 largest companies	X	X	14.5	X
	20 largest companies	X	X	23.4	X
	50 largest companies	X	X	35.7	41.8
32312	Support activities for printing				
	All companies	3 242	5 419 153	100.0	X
	4 largest companies	X	X	9.2	X
	8 largest companies	X	X	15.5	X
	20 largest companies	X	X	25.2	X
	50 largest companies	X	X	36.7	45.1
323121	Tradebinding and related work				
	All companies	1 211	2 064 978	100.0	X
	4 largest companies	X	X	14.6	X
	8 largest companies	X	X	21.0	X
	20 largest companies	X	X	31.1	X
	50 largest companies	X	X	44.4	82.7
323122	Prepress services				
	All companies	2 033	3 354 175	100.0	X
	4 largest companies	X	X	14.7	X
	8 largest companies	X	X	22.8	X
	20 largest companies	X	X	33.4	X
	50 largest companies	X	X	47.5	89.6
324	Petroleum and coal products manufacturing				
	All companies	1 106	215 513 706	100.0	X
	4 largest companies	X	X	38.1	X
	8 largest companies	X	X	58.2	X
	20 largest companies	X	X	81.9	X
	50 largest companies	X	X	93.1	543.4
3241	Petroleum and coal products manufacturing				
	All companies	1 106	215 513 706	100.0	X
	4 largest companies	X	X	38.1	X
	8 largest companies	X	X	58.2	X
	20 largest companies	X	X	81.9	X
	50 largest companies	X	X	93.1	543.4
32411	Petroleum refineries				
	All companies	88	193 528 006	100.0	X
	4 largest companies	X	X	41.2	X
	8 largest companies	X	X	63.5	X
	20 largest companies	X	X	89.3	X
	50 largest companies	X	X	99.3	639.7
324110	Petroleum refineries				
	All companies	88	193 528 006	100.0	X
	4 largest companies	X	X	41.2	X
	8 largest companies	X	X	63.5	X
	20 largest companies	X	X	89.3	X
	50 largest companies	X	X	99.3	639.7

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
324	Petroleum and coal products manufacturing—Con.				
3241	Petroleum and coal products manufacturing—Con.				
32412	Asphalt paving, roofing, and saturated materials manufacturing				
	All companies	628	13 644 376	100.0	X
	4 largest companies	X	X	27.1	X
	8 largest companies	X	X	42.3	X
	20 largest companies	X	X	55.9	X
	50 largest companies	X	X	69.3	278.4
324121	Asphalt paving mixture and block manufacturing				
	All companies	511	7 525 866	100.0	X
	4 largest companies	X	X	24.9	X
	8 largest companies	X	X	33.0	X
	20 largest companies	X	X	45.9	X
	50 largest companies	X	X	62.4	207.0
324122	Asphalt shingle and coating materials manufacturing				
	All companies	123	6 118 510	100.0	X
	4 largest companies	X	X	60.0	X
	8 largest companies	X	X	76.3	X
	20 largest companies	X	X	89.2	X
	50 largest companies	X	X	97.3	1 061.3
32419	Other petroleum and coal products manufacturing				
	All companies	420	8 341 324	100.0	X
	4 largest companies	X	X	32.3	X
	8 largest companies	X	X	46.4	X
	20 largest companies	X	X	65.4	X
	50 largest companies	X	X	81.2	395.9
324191	Petroleum lubricating oil and grease manufacturing				
	All companies	356	6 445 658	100.0	X
	4 largest companies	X	X	40.6	X
	8 largest companies	X	X	55.0	X
	20 largest companies	X	X	70.2	X
	50 largest companies	X	X	85.2	578.5
324199	All other petroleum and coal products manufacturing				
	All companies	66	1 895 666	100.0	X
	4 largest companies	X	X	45.5	X
	8 largest companies	X	X	67.1	X
	20 largest companies	X	X	89.3	X
	50 largest companies	X	X	99.6	773.6
325	Chemical manufacturing				
	All companies	9 659	462 438 453	100.0	X
	4 largest companies	X	X	13.7	X
	8 largest companies	X	X	21.8	X
	20 largest companies	X	X	36.8	X
	50 largest companies	X	X	54.3	99.9
3251	Basic chemical manufacturing				
	All companies	1 229	109 441 318	100.0	X
	4 largest companies	X	X	22.3	X
	8 largest companies	X	X	34.2	X
	20 largest companies	X	X	50.5	X
	50 largest companies	X	X	69.7	216.7
32511	Petrochemical manufacturing				
	All companies	43	20 348 099	100.0	X
	4 largest companies	X	X	84.7	X
	8 largest companies	X	X	93.9	X
	20 largest companies	X	X	99.7	X
	50 largest companies	X	X	100.0	2 661.6
325110	Petrochemical manufacturing				
	All companies	43	20 348 099	100.0	X
	4 largest companies	X	X	84.7	X
	8 largest companies	X	X	93.9	X
	20 largest companies	X	X	99.7	X
	50 largest companies	X	X	100.0	2 661.6
32512	Industrial gas manufacturing				
	All companies	103	5 867 733	100.0	X
	4 largest companies	X	X	63.8	X
	8 largest companies	X	X	81.9	X
	20 largest companies	X	X	96.8	X
	50 largest companies	X	X	99.4	1 218.4
325120	Industrial gas manufacturing				
	All companies	103	5 867 733	100.0	X
	4 largest companies	X	X	63.8	X
	8 largest companies	X	X	81.9	X
	20 largest companies	X	X	96.8	X
	50 largest companies	X	X	99.4	1 218.4

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
325	Chemical manufacturing—Con.				
3251	Basic chemical manufacturing—Con.				
32513	Synthetic dye and pigment manufacturing				
	All companies	159	6 335 562	100.0	X
	4 largest companies	X	X	43.0	X
	8 largest companies	X	X	58.2	X
	20 largest companies	X	X	77.5	X
	50 largest companies	X	X	94.9	657.6
325131	Inorganic dye and pigment manufacturing				
	All companies	62	3 519 393	100.0	X
	4 largest companies	X	X	69.3	X
	8 largest companies	X	X	81.7	X
	20 largest companies	X	X	96.4	X
	50 largest companies	X	X	99.9	1 704.1
325132	Synthetic organic dye and pigment manufacturing				
	All companies	98	2 816 169	100.0	X
	4 largest companies	X	X	44.4	X
	8 largest companies	X	X	59.5	X
	20 largest companies	X	X	83.5	X
	50 largest companies	X	X	98.0	658.2
32518	Other basic inorganic chemical manufacturing				
	All companies	423	19 979 652	100.0	X
	4 largest companies	X	X	18.0	X
	8 largest companies	X	X	30.6	X
	20 largest companies	X	X	53.3	X
	50 largest companies	X	X	79.6	192.1
325181	Alkalies and chlorine manufacturing				
	All companies	29	2 831 314	100.0	X
	4 largest companies	X	X	73.2	X
	8 largest companies	X	X	90.1	X
	20 largest companies	X	X	99.6	X
	50 largest companies	X	X	100.0	1 786.4
325182	Carbon black manufacturing				
	All companies	11	1 043 515	100.0	X
	4 largest companies	X	X	76.0	X
	8 largest companies	X	X	99.1	X
	20 largest companies	X	X	100.0	1 791.8
	50 largest companies	X	X	—	—
325188	All other basic inorganic chemical manufacturing				
	All companies	394	16 104 823	100.0	X
	4 largest companies	X	X	20.9	X
	8 largest companies	X	X	33.4	X
	20 largest companies	X	X	55.8	X
	50 largest companies	X	X	80.1	216.9
32519	Other basic organic chemical manufacturing				
	All companies	597	56 910 272	100.0	X
	4 largest companies	X	X	19.8	X
	8 largest companies	X	X	34.1	X
	20 largest companies	X	X	54.2	X
	50 largest companies	X	X	77.0	208.8
325191	Gum and wood chemical manufacturing				
	All companies	42	981 477	100.0	X
	4 largest companies	X	X	81.0	X
	8 largest companies	X	X	91.8	X
	20 largest companies	X	X	97.8	X
	50 largest companies	X	X	100.0	2 148.0
325192	Cyclic crude and intermediate manufacturing				
	All companies	30	4 604 193	100.0	X
	4 largest companies	X	X	74.5	X
	8 largest companies	X	X	91.8	X
	20 largest companies	X	X	99.4	X
	50 largest companies	X	X	100.0	2 442.8
325193	Ethyl alcohol manufacturing				
	All companies	64	2 288 305	100.0	X
	4 largest companies	X	X	46.1	X
	8 largest companies	X	X	62.3	X
	20 largest companies	X	X	83.8	X
	50 largest companies	X	X	99.5	802.2
325199	All other basic organic chemical manufacturing				
	All companies	481	49 036 297	100.0	X
	4 largest companies	X	X	22.0	X
	8 largest companies	X	X	36.1	X
	20 largest companies	X	X	56.6	X
	50 largest companies	X	X	79.7	238.3

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
325	Chemical manufacturing—Con.				
3252	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing				
	All companies	627	60 270 849	100.0	X
	4 largest companies	X	X	29.8	X
	8 largest companies	X	X	41.2	X
	20 largest companies	X	X	60.5	X
	50 largest companies	X	X	84.1	346.1
32521	Resin and synthetic rubber manufacturing				
	All companies	559	52 321 610	100.0	X
	4 largest companies	X	X	30.3	X
	8 largest companies	X	X	42.7	X
	20 largest companies	X	X	63.8	X
	50 largest companies	X	X	85.6	379.8
325211	Plastics material and resin manufacturing				
	All companies	445	46 846 851	100.0	X
	4 largest companies	X	X	32.4	X
	8 largest companies	X	X	45.8	X
	20 largest companies	X	X	67.9	X
	50 largest companies	X	X	87.8	442.5
325212	Synthetic rubber manufacturing				
	All companies	133	5 474 759	100.0	X
	4 largest companies	X	X	43.0	X
	8 largest companies	X	X	65.9	X
	20 largest companies	X	X	92.9	X
	50 largest companies	X	X	98.1	743.5
32522	Artificial and synthetic fibers and filaments manufacturing				
	All companies	77	7 949 239	100.0	X
	4 largest companies	X	X	53.5	X
	8 largest companies	X	X	76.9	X
	20 largest companies	X	X	94.2	X
	50 largest companies	X	X	99.6	1 134.4
325221	Cellulosic organic fiber manufacturing				
	All companies	8	470 179	100.0	X
	4 largest companies	X	X	92.9	X
	8 largest companies	X	X	100.0	D
	20 largest companies	X	X	—	—
	50 largest companies	X	X	—	—
325222	Noncellulosic organic fiber manufacturing				
	All companies	69	7 479 060	100.0	X
	4 largest companies	X	X	56.9	X
	8 largest companies	X	X	81.7	X
	20 largest companies	X	X	95.7	X
	50 largest companies	X	X	99.8	1 262.2
3253	Pesticide, fertilizer, and other agricultural chemical manufacturing				
	All companies	704	19 306 831	100.0	X
	4 largest companies	X	X	36.0	X
	8 largest companies	X	X	51.3	X
	20 largest companies	X	X	72.1	X
	50 largest companies	X	X	85.2	515.7
32531	Fertilizer manufacturing				
	All companies	502	10 219 830	100.0	X
	4 largest companies	X	X	39.5	X
	8 largest companies	X	X	56.6	X
	20 largest companies	X	X	75.1	X
	50 largest companies	X	X	87.7	532.3
325311	Nitrogenous fertilizer manufacturing				
	All companies	116	3 291 075	100.0	X
	4 largest companies	X	X	53.9	X
	8 largest companies	X	X	78.8	X
	20 largest companies	X	X	94.6	X
	50 largest companies	X	X	98.2	976.9
325312	Phosphatic fertilizer manufacturing				
	All companies	33	3 955 155	100.0	X
	4 largest companies	X	X	77.8	X
	8 largest companies	X	X	93.0	X
	20 largest companies	X	X	99.7	X
	50 largest companies	X	X	100.0	1 853.0
325314	Fertilizer (mixing only) manufacturing				
	All companies	367	2 973 600	100.0	X
	4 largest companies	X	X	27.2	X
	8 largest companies	X	X	39.0	X
	20 largest companies	X	X	58.1	X
	50 largest companies	X	X	76.7	382.9

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
325	Chemical manufacturing—Con.				
3253	Pesticide, fertilizer, and other agricultural chemical manufacturing—Con.				
32532	Pesticide and other agricultural chemical manufacturing				
	All companies	206	9 087 001	100.0	X
	4 largest companies	X	X	64.5	X
	8 largest companies	X	X	77.2	X
	20 largest companies	X	X	87.9	X
	50 largest companies	X	X	95.1	1 652.8
325320	Pesticide and other agricultural chemical manufacturing				
	All companies	206	9 087 001	100.0	X
	4 largest companies	X	X	64.5	X
	8 largest companies	X	X	77.2	X
	20 largest companies	X	X	87.9	X
	50 largest companies	X	X	95.1	1 652.8
3254	Pharmaceutical and medicine manufacturing				
	All companies	1 444	142 977 563	100.0	X
	4 largest companies	X	X	34.0	X
	8 largest companies	X	X	49.1	X
	20 largest companies	X	X	70.5	X
	50 largest companies	X	X	83.7	506.0
32541	Pharmaceutical and medicine manufacturing				
	All companies	1 444	142 977 563	100.0	X
	4 largest companies	X	X	34.0	X
	8 largest companies	X	X	49.1	X
	20 largest companies	X	X	70.5	X
	50 largest companies	X	X	83.7	506.0
325411	Medicinal and botanical manufacturing				
	All companies	343	12 242 919	100.0	X
	4 largest companies	X	X	64.2	X
	8 largest companies	X	X	72.5	X
	20 largest companies	X	X	83.1	X
	50 largest companies	X	X	91.8	2 703.6
325412	Pharmaceutical preparation manufacturing				
	All companies	731	114 665 643	100.0	X
	4 largest companies	X	X	36.0	X
	8 largest companies	X	X	53.3	X
	20 largest companies	X	X	75.8	X
	50 largest companies	X	X	88.9	529.9
325413	In-vitro diagnostic substance manufacturing				
	All companies	197	7 810 480	100.0	X
	4 largest companies	X	X	55.5	X
	8 largest companies	X	X	70.9	X
	20 largest companies	X	X	85.4	X
	50 largest companies	X	X	94.1	985.5
325414	Biological product (except diagnostic) manufacturing				
	All companies	233	8 258 521	100.0	X
	4 largest companies	X	X	42.0	X
	8 largest companies	X	X	66.0	X
	20 largest companies	X	X	82.3	X
	50 largest companies	X	X	93.2	634.7
3255	Paint, coating, and adhesive manufacturing				
	All companies	1 597	27 381 892	100.0	X
	4 largest companies	X	X	30.3	X
	8 largest companies	X	X	43.6	X
	20 largest companies	X	X	58.4	X
	50 largest companies	X	X	71.5	321.4
32551	Paint and coating manufacturing				
	All companies	1 149	19 917 828	100.0	X
	4 largest companies	X	X	37.3	X
	8 largest companies	X	X	54.5	X
	20 largest companies	X	X	69.9	X
	50 largest companies	X	X	78.6	505.0
325510	Paint and coating manufacturing				
	All companies	1 149	19 917 828	100.0	X
	4 largest companies	X	X	37.3	X
	8 largest companies	X	X	54.5	X
	20 largest companies	X	X	69.9	X
	50 largest companies	X	X	78.6	505.0
32552	Adhesive manufacturing				
	All companies	466	7 464 064	100.0	X
	4 largest companies	X	X	24.2	X
	8 largest companies	X	X	35.0	X
	20 largest companies	X	X	56.2	X
	50 largest companies	X	X	75.8	252.9

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
325	Chemical manufacturing—Con.				
3255	Paint, coating, and adhesive manufacturing—Con.				
32552	Adhesive manufacturing—Con.				
325520	Adhesive manufacturing				
	All companies	466	7 464 064	100.0	X
	4 largest companies	X	X	24.2	X
	8 largest companies	X	X	35.0	X
	20 largest companies	X	X	56.2	X
	50 largest companies	X	X	75.8	252.9
3256	Soap, cleaning compound, and toilet preparation manufacturing				
	All companies	2 142	63 996 830	100.0	X
	4 largest companies	X	X	38.8	X
	8 largest companies	X	X	50.0	X
	20 largest companies	X	X	65.8	X
	50 largest companies	X	X	77.4	663.9
32561	Soap and cleaning compound manufacturing				
	All companies	1 387	30 801 670	100.0	X
	4 largest companies	X	X	44.6	X
	8 largest companies	X	X	56.6	X
	20 largest companies	X	X	70.0	X
	50 largest companies	X	X	79.5	757.3
325611	Soap and other detergent manufacturing				
	All companies	699	16 596 184	100.0	X
	4 largest companies	X	X	60.6	X
	8 largest companies	X	X	72.4	X
	20 largest companies	X	X	81.2	X
	50 largest companies	X	X	87.8	2 006.2
325612	Polish and other sanitation good manufacturing				
	All companies	561	8 780 796	100.0	X
	4 largest companies	X	X	59.5	X
	8 largest companies	X	X	68.7	X
	20 largest companies	X	X	77.1	X
	50 largest companies	X	X	86.0	1 453.2
325613	Surface active agent manufacturing				
	All companies	142	5 424 690	100.0	X
	4 largest companies	X	X	53.4	X
	8 largest companies	X	X	66.7	X
	20 largest companies	X	X	82.9	X
	50 largest companies	X	X	95.4	1 424.4
32562	Toilet preparation manufacturing				
	All companies	765	33 195 160	100.0	X
	4 largest companies	X	X	47.7	X
	8 largest companies	X	X	61.5	X
	20 largest companies	X	X	76.3	X
	50 largest companies	X	X	87.0	806.5
325620	Toilet preparation manufacturing				
	All companies	765	33 195 160	100.0	X
	4 largest companies	X	X	47.7	X
	8 largest companies	X	X	61.5	X
	20 largest companies	X	X	76.3	X
	50 largest companies	X	X	87.0	806.5
3259	Other chemical product and preparation manufacturing				
	All companies	2 304	39 063 170	100.0	X
	4 largest companies	X	X	30.4	X
	8 largest companies	X	X	37.5	X
	20 largest companies	X	X	47.9	X
	50 largest companies	X	X	61.7	513.6
32591	Printing ink manufacturing				
	All companies	229	4 369 801	100.0	X
	4 largest companies	X	X	54.0	X
	8 largest companies	X	X	64.0	X
	20 largest companies	X	X	77.2	X
	50 largest companies	X	X	89.7	1 177.4
325910	Printing ink manufacturing				
	All companies	229	4 369 801	100.0	X
	4 largest companies	X	X	54.0	X
	8 largest companies	X	X	64.0	X
	20 largest companies	X	X	77.2	X
	50 largest companies	X	X	89.7	1 177.4

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
325	Chemical manufacturing—Con.				
3259	Other chemical product and preparation manufacturing—Con.				
32592	Explosives manufacturing				
	All companies	57	1 027 797	100.0	X
	4 largest companies	X	X	54.2	X
	8 largest companies	X	X	77.8	X
	20 largest companies	X	X	93.4	X
	50 largest companies	X	X	99.9	991.3
325920	Explosives manufacturing				
	All companies	57	1 027 797	100.0	X
	4 largest companies	X	X	54.2	X
	8 largest companies	X	X	77.8	X
	20 largest companies	X	X	93.4	X
	50 largest companies	X	X	99.9	991.3
32599	All other chemical product and preparation manufacturing				
	All companies	2 028	33 665 572	100.0	X
	4 largest companies	X	X	33.9	X
	8 largest companies	X	X	40.7	X
	20 largest companies	X	X	50.9	X
	50 largest companies	X	X	65.1	671.8
325991	Custom compounding of purchased resins				
	All companies	651	7 385 935	100.0	X
	4 largest companies	X	X	23.5	X
	8 largest companies	X	X	35.1	X
	20 largest companies	X	X	55.8	X
	50 largest companies	X	X	72.3	231.4
325992	Photographic film, paper, plate, and chemical manufacturing				
	All companies	382	12 948 530	100.0	X
	4 largest companies	X	X	78.9	X
	8 largest companies	X	X	83.9	X
	20 largest companies	X	X	90.6	X
	50 largest companies	X	X	95.7	D
325998	All other miscellaneous chemical product and preparation manufacturing				
	All companies	1 016	13 331 107	100.0	X
	4 largest companies	X	X	20.8	X
	8 largest companies	X	X	29.3	X
	20 largest companies	X	X	44.4	X
	50 largest companies	X	X	61.9	188.3
326	Plastics and rubber products manufacturing				
	All companies	12 318	174 658 909	100.0	X
	4 largest companies	X	X	7.6	X
	8 largest companies	X	X	11.8	X
	20 largest companies	X	X	20.8	X
	50 largest companies	X	X	32.2	32.0
3261	Plastics product manufacturing				
	All companies	10 489	141 893 790	100.0	X
	4 largest companies	X	X	5.1	X
	8 largest companies	X	X	9.4	X
	20 largest companies	X	X	18.3	X
	50 largest companies	X	X	29.9	22.6
32611	Plastics packaging materials and unlaminated film and sheet manufacturing				
	All companies	1 281	28 112 288	100.0	X
	4 largest companies	X	X	16.8	X
	8 largest companies	X	X	27.5	X
	20 largest companies	X	X	45.5	X
	50 largest companies	X	X	61.8	141.7
326111	Plastics bag manufacturing				
	All companies	375	7 337 433	100.0	X
	4 largest companies	X	X	23.1	X
	8 largest companies	X	X	36.4	X
	20 largest companies	X	X	57.2	X
	50 largest companies	X	X	77.7	239.8
326112	Plastics packaging film and sheet (including laminated) manufacturing				
	All companies	212	6 463 106	100.0	X
	4 largest companies	X	X	53.8	X
	8 largest companies	X	X	62.0	X
	20 largest companies	X	X	72.6	X
	50 largest companies	X	X	84.9	862.8
326113	Unlaminated plastics film and sheet (except packaging) manufacturing				
	All companies	744	14 311 749	100.0	X
	4 largest companies	X	X	20.6	X
	8 largest companies	X	X	33.3	X
	20 largest companies	X	X	51.0	X
	50 largest companies	X	X	68.0	191.8

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
326	Plastics and rubber products manufacturing—Con.				
3261	Plastics product manufacturing—Con.				
32612	Plastics pipe, pipe fitting, and unlaminated profile shape manufacturing				
	All companies	858	10 945 116	100.0	X
	4 largest companies	X	X	19.4	X
	8 largest companies	X	X	29.1	X
	20 largest companies	X	X	46.7	X
	50 largest companies	X	X	66.4	161.1
326121	Unlaminated plastics profile shape manufacturing				
	All companies	555	5 493 752	100.0	X
	4 largest companies	X	X	34.1	X
	8 largest companies	X	X	44.7	X
	20 largest companies	X	X	61.0	X
	50 largest companies	X	X	75.5	376.4
326122	Plastics pipe and pipe fitting manufacturing				
	All companies	310	5 451 364	100.0	X
	4 largest companies	X	X	23.6	X
	8 largest companies	X	X	36.5	X
	20 largest companies	X	X	60.9	X
	50 largest companies	X	X	79.9	262.2
32613	Laminated plastics plate, sheet, (except packaging), and shape manufacturing				
	All companies	280	2 279 873	100.0	X
	4 largest companies	X	X	40.1	X
	8 largest companies	X	X	51.8	X
	20 largest companies	X	X	70.1	X
	50 largest companies	X	X	86.0	736.0
326130	Laminated plastics plate, sheet, (except packaging), and shape manufacturing				
	All companies	280	2 279 873	100.0	X
	4 largest companies	X	X	40.1	X
	8 largest companies	X	X	51.8	X
	20 largest companies	X	X	70.1	X
	50 largest companies	X	X	86.0	736.0
32614	Polystyrene foam product manufacturing				
	All companies	394	6 453 491	100.0	X
	4 largest companies	X	X	42.9	X
	8 largest companies	X	X	54.0	X
	20 largest companies	X	X	69.9	X
	50 largest companies	X	X	83.0	719.0
326140	Polystyrene foam product manufacturing				
	All companies	394	6 453 491	100.0	X
	4 largest companies	X	X	42.9	X
	8 largest companies	X	X	54.0	X
	20 largest companies	X	X	69.9	X
	50 largest companies	X	X	83.0	719.0
32615	Urethane and other foam product (except polystyrene) manufacturing				
	All companies	424	7 111 947	100.0	X
	4 largest companies	X	X	35.6	X
	8 largest companies	X	X	48.6	X
	20 largest companies	X	X	65.1	X
	50 largest companies	X	X	79.4	466.8
326150	Urethane and other foam product (except polystyrene) manufacturing				
	All companies	424	7 111 947	100.0	X
	4 largest companies	X	X	35.6	X
	8 largest companies	X	X	48.6	X
	20 largest companies	X	X	65.1	X
	50 largest companies	X	X	79.4	466.8
32616	Plastics bottle manufacturing				
	All companies	184	7 928 313	100.0	X
	4 largest companies	X	X	42.3	X
	8 largest companies	X	X	63.6	X
	20 largest companies	X	X	83.0	X
	50 largest companies	X	X	93.5	628.1
326160	Plastics bottle manufacturing				
	All companies	184	7 928 313	100.0	X
	4 largest companies	X	X	42.3	X
	8 largest companies	X	X	63.6	X
	20 largest companies	X	X	83.0	X
	50 largest companies	X	X	93.5	628.1
32619	Other plastics product manufacturing				
	All companies	7 312	79 062 762	100.0	X
	4 largest companies	X	X	6.0	X
	8 largest companies	X	X	10.3	X
	20 largest companies	X	X	17.9	X
	50 largest companies	X	X	29.2	23.3

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
326	Plastics and rubber products manufacturing—Con.				
3261	Plastics product manufacturing—Con.				
32619	Other plastics product manufacturing—Con.				
326191	Plastics plumbing fixture manufacturing				
	All companies	505	3 156 529	100.0	X
	4 largest companies	X	X	37.4	X
	8 largest companies	X	X	48.1	X
	20 largest companies	X	X	59.6	X
	50 largest companies	X	X	72.7	451.8
326192	Resilient floor covering manufacturing				
	All companies	48	1 642 382	100.0	X
	4 largest companies	X	X	84.6	X
	8 largest companies	X	X	93.6	X
	20 largest companies	X	X	98.5	X
	50 largest companies	X	X	100.0	D
326199	All other plastics product manufacturing				
	All companies	6 775	74 263 851	100.0	X
	4 largest companies	X	X	6.3	X
	8 largest companies	X	X	10.0	X
	20 largest companies	X	X	17.8	X
	50 largest companies	X	X	29.1	23.5
3262	Rubber product manufacturing				
	All companies	1 907	32 765 119	100.0	X
	4 largest companies	X	X	39.8	X
	8 largest companies	X	X	49.3	X
	20 largest companies	X	X	59.7	X
	50 largest companies	X	X	70.9	487.8
32621	Tire manufacturing				
	All companies	545	14 743 481	100.0	X
	4 largest companies	X	X	72.7	X
	8 largest companies	X	X	87.4	X
	20 largest companies	X	X	92.4	X
	50 largest companies	X	X	95.9	1 630.9
326211	Tire manufacturing (except retreading)				
	All companies	112	13 478 983	100.0	X
	4 largest companies	X	X	77.2	X
	8 largest companies	X	X	92.7	X
	20 largest companies	X	X	97.9	X
	50 largest companies	X	X	99.7	1 806.6
326212	Tire retreading				
	All companies	440	1 264 498	100.0	X
	4 largest companies	X	X	34.1	X
	8 largest companies	X	X	44.1	X
	20 largest companies	X	X	58.8	X
	50 largest companies	X	X	72.7	574.7
32622	Rubber and plastics hoses and belting manufacturing				
	All companies	187	4 039 105	100.0	X
	4 largest companies	X	X	44.3	X
	8 largest companies	X	X	57.3	X
	20 largest companies	X	X	77.9	X
	50 largest companies	X	X	91.9	675.3
326220	Rubber and plastics hoses and belting manufacturing				
	All companies	187	4 039 105	100.0	X
	4 largest companies	X	X	44.3	X
	8 largest companies	X	X	57.3	X
	20 largest companies	X	X	77.9	X
	50 largest companies	X	X	91.9	675.3
32629	Other rubber product manufacturing				
	All companies	1 202	13 982 533	100.0	X
	4 largest companies	X	X	13.9	X
	8 largest companies	X	X	23.2	X
	20 largest companies	X	X	40.4	X
	50 largest companies	X	X	57.8	108.8
326291	Rubber product manufacturing for mechanical use				
	All companies	494	7 298 545	100.0	X
	4 largest companies	X	X	22.1	X
	8 largest companies	X	X	34.1	X
	20 largest companies	X	X	56.3	X
	50 largest companies	X	X	76.4	232.4
326299	All other rubber product manufacturing				
	All companies	729	6 683 988	100.0	X
	4 largest companies	X	X	20.1	X
	8 largest companies	X	X	30.0	X
	20 largest companies	X	X	44.3	X
	50 largest companies	X	X	60.5	161.8

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
327	Nonmetallic mineral product manufacturing				
	All companies	11 514	95 062 097	100.0	X
	4 largest companies	X	X	7.0	X
	8 largest companies	X	X	13.2	X
	20 largest companies	X	X	27.2	X
	50 largest companies	X	X	42.2	46.7
3271	Clay product and refractory manufacturing				
	All companies	1 423	8 300 253	100.0	X
	4 largest companies	X	X	15.8	X
	8 largest companies	X	X	25.7	X
	20 largest companies	X	X	45.9	X
	50 largest companies	X	X	65.9	139.0
32711	Pottery, ceramics, and plumbing fixture manufacturing				
	All companies	909	3 325 350	100.0	X
	4 largest companies	X	X	26.8	X
	8 largest companies	X	X	41.7	X
	20 largest companies	X	X	62.2	X
	50 largest companies	X	X	79.8	329.6
327111	Vitreous china and earthenware plumbing fixture and accessories mfg				
	All companies	37	1 136 525	100.0	X
	4 largest companies	X	X	73.0	X
	8 largest companies	X	X	94.9	X
	20 largest companies	X	X	99.7	X
	50 largest companies	X	X	100.0	1 924.9
327112	Vitreous china, fine earthenware, and other pottery product manufacturing				
	All companies	753	1 006 769	100.0	X
	4 largest companies	X	X	31.0	X
	8 largest companies	X	X	44.0	X
	20 largest companies	X	X	60.8	X
	50 largest companies	X	X	78.6	354.9
327113	Porcelain electrical supply manufacturing				
	All companies	122	1 182 056	100.0	X
	4 largest companies	X	X	36.8	X
	8 largest companies	X	X	51.8	X
	20 largest companies	X	X	76.7	X
	50 largest companies	X	X	94.1	523.9
32712	Clay building material and refractories manufacturing				
	All companies	520	4 974 903	100.0	X
	4 largest companies	X	X	22.7	X
	8 largest companies	X	X	36.2	X
	20 largest companies	X	X	58.5	X
	50 largest companies	X	X	75.5	232.5
327121	Brick and structural clay tile manufacturing				
	All companies	106	1 848 490	100.0	X
	4 largest companies	X	X	46.5	X
	8 largest companies	X	X	62.3	X
	20 largest companies	X	X	79.9	X
	50 largest companies	X	X	96.1	667.5
327122	Ceramic wall and floor tile manufacturing				
	All companies	188	978 394	100.0	X
	4 largest companies	X	X	62.2	X
	8 largest companies	X	X	79.7	X
	20 largest companies	X	X	89.0	X
	50 largest companies	X	X	94.6	1 519.3
327123	Other structural clay product manufacturing				
	All companies	46	195 277	100.0	X
	4 largest companies	X	X	45.7	X
	8 largest companies	X	X	70.2	X
	20 largest companies	X	X	94.9	X
	50 largest companies	X	X	100.0	764.0
327124	Clay refractory manufacturing				
	All companies	111	869 625	100.0	X
	4 largest companies	X	X	40.5	X
	8 largest companies	X	X	51.0	X
	20 largest companies	X	X	70.2	X
	50 largest companies	X	X	92.4	631.3
327125	Nonclay refractory manufacturing				
	All companies	87	1 083 117	100.0	X
	4 largest companies	X	X	45.9	X
	8 largest companies	X	X	67.3	X
	20 largest companies	X	X	86.1	X
	50 largest companies	X	X	97.9	708.0

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
327	Nonmetallic mineral product manufacturing—Con.				
3272	Glass and glass product manufacturing				
	All companies	1 960	22 434 247	100.0	X
	4 largest companies	X	X	24.5	X
	8 largest companies	X	X	40.1	X
	20 largest companies	X	X	63.2	X
	50 largest companies	X	X	81.5	278.0
32721	Glass and glass product manufacturing				
	All companies	1 960	22 434 247	100.0	X
	4 largest companies	X	X	24.5	X
	8 largest companies	X	X	40.1	X
	20 largest companies	X	X	63.2	X
	50 largest companies	X	X	81.5	278.0
327211	Flat glass manufacturing				
	All companies	13	2 750 510	100.0	X
	4 largest companies	X	X	74.0	X
	8 largest companies	X	X	99.1	X
	20 largest companies	X	X	100.0	1 632.7
	50 largest companies	X	X	—	—
327212	Other pressed and blown glass and glassware manufacturing				
	All companies	479	4 725 931	100.0	X
	4 largest companies	X	X	34.9	X
	8 largest companies	X	X	59.9	X
	20 largest companies	X	X	87.7	X
	50 largest companies	X	X	94.4	551.5
327213	Glass container manufacturing				
	All companies	22	4 359 939	100.0	X
	4 largest companies	X	X	88.3	X
	8 largest companies	X	X	96.1	X
	20 largest companies	X	X	D	X
	50 largest companies	X	X	100.0	2 582.1
327215	Glass product manufacturing made of purchased glass				
	All companies	1 468	10 597 867	100.0	X
	4 largest companies	X	X	22.7	X
	8 largest companies	X	X	38.3	X
	20 largest companies	X	X	60.6	X
	50 largest companies	X	X	75.9	252.1
3273	Cement and concrete product manufacturing				
	All companies	5 431	44 535 011	100.0	X
	4 largest companies	X	X	11.9	X
	8 largest companies	X	X	20.3	X
	20 largest companies	X	X	32.0	X
	50 largest companies	X	X	43.6	70.5
32731	Cement manufacturing				
	All companies	131	7 407 574	100.0	X
	4 largest companies	X	X	38.7	X
	8 largest companies	X	X	59.7	X
	20 largest companies	X	X	85.2	X
	50 largest companies	X	X	97.4	568.5
327310	Cement manufacturing				
	All companies	131	7 407 574	100.0	X
	4 largest companies	X	X	38.7	X
	8 largest companies	X	X	59.7	X
	20 largest companies	X	X	85.2	X
	50 largest companies	X	X	97.4	568.5
32732	Ready-mix concrete manufacturing				
	All companies	2 614	21 619 989	100.0	X
	4 largest companies	X	X	11.1	X
	8 largest companies	X	X	17.1	X
	20 largest companies	X	X	28.2	X
	50 largest companies	X	X	42.2	63.1
327320	Ready-mix concrete manufacturing				
	All companies	2 614	21 619 989	100.0	X
	4 largest companies	X	X	11.1	X
	8 largest companies	X	X	17.1	X
	20 largest companies	X	X	28.2	X
	50 largest companies	X	X	42.2	63.1
32733	Concrete pipe, brick, and block manufacturing				
	All companies	837	6 688 411	100.0	X
	4 largest companies	X	X	26.2	X
	8 largest companies	X	X	33.3	X
	20 largest companies	X	X	43.6	X
	50 largest companies	X	X	56.4	213.3

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327	Nonmetallic mineral product manufacturing—Con.				
3273	Cement and concrete product manufacturing—Con.				
32733	Concrete pipe, brick, and block manufacturing—Con.				
327331	Concrete block and brick manufacturing				
	All companies	635	4 105 946	100.0	X
	4 largest companies	X	X	22.6	X
	8 largest companies	X	X	29.7	X
	20 largest companies	X	X	41.0	X
	50 largest companies	X	X	56.3	194.8
327332	Concrete pipe manufacturing				
	All companies	214	2 582 465	100.0	X
	4 largest companies	X	X	40.2	X
	8 largest companies	X	X	50.3	X
	20 largest companies	X	X	66.2	X
	50 largest companies	X	X	81.0	577.7
32739	Other concrete product manufacturing				
	All companies	1 996	8 819 037	100.0	X
	4 largest companies	X	X	15.4	X
	8 largest companies	X	X	22.5	X
	20 largest companies	X	X	34.0	X
	50 largest companies	X	X	47.6	96.9
327390	Other concrete product manufacturing				
	All companies	1 996	8 819 037	100.0	X
	4 largest companies	X	X	15.4	X
	8 largest companies	X	X	22.5	X
	20 largest companies	X	X	34.0	X
	50 largest companies	X	X	47.6	96.9
3274	Lime and gypsum product manufacturing				
	All companies	260	5 070 045	100.0	X
	4 largest companies	X	X	56.8	X
	8 largest companies	X	X	71.0	X
	20 largest companies	X	X	88.6	X
	50 largest companies	X	X	95.2	1 036.7
32741	Lime manufacturing				
	All companies	41	1 015 520	100.0	X
	4 largest companies	X	X	66.3	X
	8 largest companies	X	X	81.0	X
	20 largest companies	X	X	96.2	X
	50 largest companies	X	X	100.0	1 264.5
327410	Lime manufacturing				
	All companies	41	1 015 520	100.0	X
	4 largest companies	X	X	66.3	X
	8 largest companies	X	X	81.0	X
	20 largest companies	X	X	96.2	X
	50 largest companies	X	X	100.0	1 264.5
32742	Gypsum product manufacturing				
	All companies	219	4 054 525	100.0	X
	4 largest companies	X	X	71.0	X
	8 largest companies	X	X	84.4	X
	20 largest companies	X	X	93.5	X
	50 largest companies	X	X	96.7	1 541.9
327420	Gypsum product manufacturing				
	All companies	219	4 054 525	100.0	X
	4 largest companies	X	X	71.0	X
	8 largest companies	X	X	84.4	X
	20 largest companies	X	X	93.5	X
	50 largest companies	X	X	96.7	1 541.9
3279	Other nonmetallic mineral product manufacturing				
	All companies	2 550	14 722 541	100.0	X
	4 largest companies	X	X	28.5	X
	8 largest companies	X	X	39.2	X
	20 largest companies	X	X	50.4	X
	50 largest companies	X	X	60.6	250.2
32791	Abrasive product manufacturing				
	All companies	312	3 577 578	100.0	X
	4 largest companies	X	X	53.3	X
	8 largest companies	X	X	60.3	X
	20 largest companies	X	X	72.3	X
	50 largest companies	X	X	83.9	1 245.4
327910	Abrasive product manufacturing				
	All companies	312	3 577 578	100.0	X
	4 largest companies	X	X	53.3	X
	8 largest companies	X	X	60.3	X
	20 largest companies	X	X	72.3	X
	50 largest companies	X	X	83.9	1 245.4

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
327	Nonmetallic mineral product manufacturing—Con.				
3279	Other nonmetallic mineral product manufacturing—Con.				
32799	All other nonmetallic mineral product manufacturing				
	All companies	2 245	11 144 963	100.0	X
	4 largest companies	X	X	27.1	X
	8 largest companies	X	X	39.6	X
	20 largest companies	X	X	51.1	X
	50 largest companies	X	X	61.9	263.7
327991	Cut stone and stone product manufacturing				
	All companies	1 521	2 236 759	100.0	X
	4 largest companies	X	X	10.3	X
	8 largest companies	X	X	13.6	X
	20 largest companies	X	X	21.3	X
	50 largest companies	X	X	33.3	59.4
327992	Ground or treated mineral and earth manufacturing				
	All companies	185	2 044 083	100.0	X
	4 largest companies	X	X	44.5	X
	8 largest companies	X	X	54.9	X
	20 largest companies	X	X	71.5	X
	50 largest companies	X	X	88.3	725.9
327993	Mineral wool manufacturing				
	All companies	197	4 936 657	100.0	X
	4 largest companies	X	X	59.5	X
	8 largest companies	X	X	74.4	X
	20 largest companies	X	X	86.9	X
	50 largest companies	X	X	94.9	1 092.6
327999	All other miscellaneous nonmetallic mineral product manufacturing				
	All companies	357	1 927 464	100.0	X
	4 largest companies	X	X	29.7	X
	8 largest companies	X	X	39.4	X
	20 largest companies	X	X	57.9	X
	50 largest companies	X	X	74.9	467.3
331	Primary metal manufacturing				
	All companies	4 150	139 420 726	100.0	X
	4 largest companies	X	X	20.0	X
	8 largest companies	X	X	29.1	X
	20 largest companies	X	X	39.6	X
	50 largest companies	X	X	55.3	149.6
3311	Iron and steel mills and ferroalloy manufacturing				
	All companies	302	47 848 579	100.0	X
	4 largest companies	X	X	43.7	X
	8 largest companies	X	X	57.5	X
	20 largest companies	X	X	76.4	X
	50 largest companies	X	X	92.0	635.1
33111	Iron and steel mills and ferroalloy manufacturing				
	All companies	302	47 848 579	100.0	X
	4 largest companies	X	X	43.7	X
	8 largest companies	X	X	57.5	X
	20 largest companies	X	X	76.4	X
	50 largest companies	X	X	92.0	635.1
331111	Iron and steel mills				
	All companies	285	47 035 279	100.0	X
	4 largest companies	X	X	44.4	X
	8 largest companies	X	X	58.5	X
	20 largest companies	X	X	77.7	X
	50 largest companies	X	X	93.0	656.7
331112	Electrometallurgical ferroalloy product manufacturing				
	All companies	19	813 300	100.0	X
	4 largest companies	X	X	75.4	X
	8 largest companies	X	X	92.3	X
	20 largest companies	X	X	100.0	2 195.9
	50 largest companies	X	X	—	—
3312	Steel product manufacturing from purchased steel				
	All companies	512	14 668 938	100.0	X
	4 largest companies	X	X	14.3	X
	8 largest companies	X	X	24.3	X
	20 largest companies	X	X	41.7	X
	50 largest companies	X	X	62.4	121.0
33121	Iron and steel pipe and tube manufacturing from purchased steel				
	All companies	133	6 113 542	100.0	X
	4 largest companies	X	X	25.9	X
	8 largest companies	X	X	39.2	X
	20 largest companies	X	X	61.4	X
	50 largest companies	X	X	86.3	278.6

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331	Primary metal manufacturing—Con.				
3312	Steel product manufacturing from purchased steel—Con.				
33121	Iron and steel pipe and tube manufacturing from purchased steel—Con.				
331210	Iron and steel pipe and tube manufacturing from purchased steel				
	All companies	133	6 113 542	100.0	X
	4 largest companies	X	X	25.9	X
	8 largest companies	X	X	39.2	X
	20 largest companies	X	X	61.4	X
	50 largest companies	X	X	86.3	278.6
33122	Rolling and drawing of purchased steel				
	All companies	383	8 555 396	100.0	X
	4 largest companies	X	X	21.3	X
	8 largest companies	X	X	32.5	X
	20 largest companies	X	X	52.4	X
	50 largest companies	X	X	74.7	209.3
331221	Rolled steel shape manufacturing				
	All companies	121	4 577 315	100.0	X
	4 largest companies	X	X	34.4	X
	8 largest companies	X	X	50.6	X
	20 largest companies	X	X	73.4	X
	50 largest companies	X	X	92.8	490.5
331222	Steel wire drawing				
	All companies	270	3 978 081	100.0	X
	4 largest companies	X	X	29.9	X
	8 largest companies	X	X	41.8	X
	20 largest companies	X	X	60.8	X
	50 largest companies	X	X	84.6	325.6
3313	Alumina and aluminum production and processing				
	All companies	435	28 273 349	100.0	X
	4 largest companies	X	X	50.9	X
	8 largest companies	X	X	61.3	X
	20 largest companies	X	X	76.5	X
	50 largest companies	X	X	86.9	1 185.4
33131	Alumina and aluminum production and processing				
	All companies	435	28 273 349	100.0	X
	4 largest companies	X	X	50.9	X
	8 largest companies	X	X	61.3	X
	20 largest companies	X	X	76.5	X
	50 largest companies	X	X	86.9	1 185.4
331311	Alumina refining				
	All companies	8	830 110	100.0	X
	4 largest companies	X	X	97.4	X
	8 largest companies	X	X	100.0	D
	20 largest companies	X	X	—	—
	50 largest companies	X	X	—	—
331312	Primary aluminum production				
	All companies	26	4 748 435	100.0	X
	4 largest companies	X	X	85.3	X
	8 largest companies	X	X	97.9	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	100.0	D
331314	Secondary smelting and alloying of aluminum				
	All companies	124	3 657 943	100.0	X
	4 largest companies	X	X	45.2	X
	8 largest companies	X	X	57.6	X
	20 largest companies	X	X	79.1	X
	50 largest companies	X	X	96.0	693.9
331315	Aluminum sheet, plate, and foil manufacturing				
	All companies	79	12 009 684	100.0	X
	4 largest companies	X	X	70.8	X
	8 largest companies	X	X	86.8	X
	20 largest companies	X	X	97.3	X
	50 largest companies	X	X	99.7	1 856.1
331316	Aluminum extruded product manufacturing				
	All companies	134	5 753 639	100.0	X
	4 largest companies	X	X	44.6	X
	8 largest companies	X	X	58.8	X
	20 largest companies	X	X	75.2	X
	50 largest companies	X	X	91.8	845.5
331319	Other aluminum rolling and drawing				
	All companies	88	1 273 538	100.0	X
	4 largest companies	X	X	43.2	X
	8 largest companies	X	X	60.1	X
	20 largest companies	X	X	85.3	X
	50 largest companies	X	X	97.7	622.5

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
331	Primary metal manufacturing—Con.				
3314	Nonferrous metal (except aluminum) production and processing				
	All companies	819	22 064 424	100.0	X
	4 largest companies	X	X	21.1	X
	8 largest companies	X	X	34.8	X
	20 largest companies	X	X	53.9	X
	50 largest companies	X	X	72.2	213.4
33141	Nonferrous metal (except aluminum) smelting and refining				
	All companies	164	4 958 460	100.0	X
	4 largest companies	X	X	57.8	X
	8 largest companies	X	X	69.8	X
	20 largest companies	X	X	86.3	X
	50 largest companies	X	X	97.1	1 064.3
331411	Primary smelting and refining of copper				
	All companies	10	2 615 052	100.0	X
	4 largest companies	X	X	99.2	X
	8 largest companies	X	X	D	X
	20 largest companies	X	X	100.0	D
	50 largest companies	X	X	—	—
331419	Primary smelting and refining of nonferrous metal (except copper and aluminum)				
	All companies	155	2 343 408	100.0	X
	4 largest companies	X	X	31.9	X
	8 largest companies	X	X	49.5	X
	20 largest companies	X	X	76.6	X
	50 largest companies	X	X	95.3	437.0
33142	Copper rolling, drawing, extruding, and alloying				
	All companies	193	10 216 754	100.0	X
	4 largest companies	X	X	35.3	X
	8 largest companies	X	X	56.8	X
	20 largest companies	X	X	78.2	X
	50 largest companies	X	X	92.3	495.1
331421	Copper rolling, drawing, and extruding				
	All companies	92	6 304 396	100.0	X
	4 largest companies	X	X	45.1	X
	8 largest companies	X	X	74.0	X
	20 largest companies	X	X	92.1	X
	50 largest companies	X	X	99.4	765.8
331422	Copper wire (except mechanical) drawing				
	All companies	80	3 301 420	100.0	X
	4 largest companies	X	X	45.5	X
	8 largest companies	X	X	67.6	X
	20 largest companies	X	X	86.1	X
	50 largest companies	X	X	98.7	718.3
331423	Secondary smelting, refining, and alloying of copper				
	All companies	30	610 938	100.0	X
	4 largest companies	X	X	55.0	X
	8 largest companies	X	X	75.6	X
	20 largest companies	X	X	97.9	X
	50 largest companies	X	X	100.0	1 061.0
33149	Nonferrous metal (except copper and aluminum) rolling, drawing, extruding, and alloying				
	All companies	489	6 889 210	100.0	X
	4 largest companies	X	X	24.4	X
	8 largest companies	X	X	34.4	X
	20 largest companies	X	X	51.8	X
	50 largest companies	X	X	73.2	261.9
331491	Nonferrous metal (except copper and aluminum) rolling, drawing, and extruding				
	All companies	288	4 183 733	100.0	X
	4 largest companies	X	X	38.7	X
	8 largest companies	X	X	49.8	X
	20 largest companies	X	X	68.7	X
	50 largest companies	X	X	87.7	557.4
331492	Secondary smelting, refining, and alloying of nonferrous metal (except copper and aluminum)				
	All companies	213	2 705 477	100.0	X
	4 largest companies	X	X	23.8	X
	8 largest companies	X	X	36.3	X
	20 largest companies	X	X	58.7	X
	50 largest companies	X	X	83.6	247.5

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
331	Primary metal manufacturing—Con.				
3315	Foundries				
	All companies	2 203	26 565 436	100.0	X
	4 largest companies	X	X	15.2	X
	8 largest companies	X	X	24.7	X
	20 largest companies	X	X	40.7	X
	50 largest companies	X	X	56.5	118.2
33151	Ferrous metal foundries				
	All companies	872	15 015 893	100.0	X
	4 largest companies	X	X	22.1	X
	8 largest companies	X	X	34.7	X
	20 largest companies	X	X	56.0	X
	50 largest companies	X	X	71.7	220.4
331511	Iron foundries				
	All companies	531	10 305 694	100.0	X
	4 largest companies	X	X	29.2	X
	8 largest companies	X	X	45.0	X
	20 largest companies	X	X	66.2	X
	50 largest companies	X	X	80.8	350.1
331512	Steel investment foundries				
	All companies	130	2 093 556	100.0	X
	4 largest companies	X	X	59.2	X
	8 largest companies	X	X	67.8	X
	20 largest companies	X	X	78.4	X
	50 largest companies	X	X	90.6	1 662.0
331513	Steel foundries (except investment)				
	All companies	229	2 616 643	100.0	X
	4 largest companies	X	X	34.7	X
	8 largest companies	X	X	47.5	X
	20 largest companies	X	X	70.3	X
	50 largest companies	X	X	88.0	488.1
33152	Nonferrous metal foundries				
	All companies	1 360	11 549 543	100.0	X
	4 largest companies	X	X	15.1	X
	8 largest companies	X	X	24.6	X
	20 largest companies	X	X	41.9	X
	50 largest companies	X	X	58.2	115.9
331521	Aluminum die-casting foundries				
	All companies	255	4 398 948	100.0	X
	4 largest companies	X	X	29.6	X
	8 largest companies	X	X	45.8	X
	20 largest companies	X	X	66.1	X
	50 largest companies	X	X	81.4	344.8
331522	Nonferrous (except aluminum) die-casting foundries				
	All companies	219	1 991 723	100.0	X
	4 largest companies	X	X	24.3	X
	8 largest companies	X	X	37.2	X
	20 largest companies	X	X	60.5	X
	50 largest companies	X	X	83.4	265.9
331524	Aluminum foundries (except die-casting)				
	All companies	505	3 752 414	100.0	X
	4 largest companies	X	X	25.0	X
	8 largest companies	X	X	40.5	X
	20 largest companies	X	X	60.1	X
	50 largest companies	X	X	76.5	267.4
331525	Copper foundries (except die-casting)				
	All companies	278	709 787	100.0	X
	4 largest companies	X	X	13.2	X
	8 largest companies	X	X	21.1	X
	20 largest companies	X	X	38.2	X
	50 largest companies	X	X	64.3	109.4
331528	Other nonferrous foundries (except die-casting)				
	All companies	139	696 671	100.0	X
	4 largest companies	X	X	56.9	X
	8 largest companies	X	X	65.5	X
	20 largest companies	X	X	77.7	X
	50 largest companies	X	X	91.6	1 434.7
332	Fabricated metal product manufacturing				
	All companies	58 008	246 993 376	100.0	X
	4 largest companies	X	X	3.7	X
	8 largest companies	X	X	6.5	X
	20 largest companies	X	X	12.2	X
	50 largest companies	X	X	19.7	10.2

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
332	Fabricated metal product manufacturing—Con.				
3321	Forging and stamping				
	All companies	2 623	21 354 820	100.0	X
	4 largest companies	X	X	8.5	X
	8 largest companies	X	X	13.3	X
	20 largest companies	X	X	22.2	X
	50 largest companies	X	X	33.9	36.0
33211	Forging and stamping				
	All companies	2 623	21 354 820	100.0	X
	4 largest companies	X	X	8.5	X
	8 largest companies	X	X	13.3	X
	20 largest companies	X	X	22.2	X
	50 largest companies	X	X	33.9	36.0
332111	Iron and steel forging				
	All companies	343	4 398 931	100.0	X
	4 largest companies	X	X	20.3	X
	8 largest companies	X	X	30.4	X
	20 largest companies	X	X	49.3	X
	50 largest companies	X	X	72.1	184.1
332112	Nonferrous forging				
	All companies	64	1 748 081	100.0	X
	4 largest companies	X	X	41.6	X
	8 largest companies	X	X	58.6	X
	20 largest companies	X	X	86.7	X
	50 largest companies	X	X	99.6	795.2
332114	Custom roll forming				
	All companies	371	4 099 807	100.0	X
	4 largest companies	X	X	30.3	X
	8 largest companies	X	X	39.6	X
	20 largest companies	X	X	55.7	X
	50 largest companies	X	X	73.4	376.9
332115	Crown and closure manufacturing				
	All companies	54	907 968	100.0	X
	4 largest companies	X	X	71.5	X
	8 largest companies	X	X	85.6	X
	20 largest companies	X	X	95.2	X
	50 largest companies	X	X	99.9	1 577.8
332116	Metal stamping				
	All companies	1 694	8 941 526	100.0	X
	4 largest companies	X	X	7.8	X
	8 largest companies	X	X	11.7	X
	20 largest companies	X	X	19.8	X
	50 largest companies	X	X	32.3	31.2
332117	Powder metallurgy part manufacturing				
	All companies	119	1 258 507	100.0	X
	4 largest companies	X	X	35.9	X
	8 largest companies	X	X	50.5	X
	20 largest companies	X	X	74.9	X
	50 largest companies	X	X	93.7	528.7
3322	Cutlery and handtool manufacturing				
	All companies	1 397	11 051 011	100.0	X
	4 largest companies	X	X	20.0	X
	8 largest companies	X	X	31.1	X
	20 largest companies	X	X	47.1	X
	50 largest companies	X	X	65.8	174.3
33221	Cutlery and handtool manufacturing				
	All companies	1 397	11 051 011	100.0	X
	4 largest companies	X	X	20.0	X
	8 largest companies	X	X	31.1	X
	20 largest companies	X	X	47.1	X
	50 largest companies	X	X	65.8	174.3
332211	Cutlery and flatware (except precious) manufacturing				
	All companies	126	1 768 341	100.0	X
	4 largest companies	X	X	70.2	X
	8 largest companies	X	X	82.4	X
	20 largest companies	X	X	93.3	X
	50 largest companies	X	X	98.5	1 946.1
332212	Hand and edge tool manufacturing				
	All companies	1 077	6 417 265	100.0	X
	4 largest companies	X	X	21.7	X
	8 largest companies	X	X	32.4	X
	20 largest companies	X	X	48.4	X
	50 largest companies	X	X	67.2	186.6

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
332	Fabricated metal product manufacturing—Con.				
3322	Cutlery and handtool manufacturing—Con.				
33221	Cutlery and handtool manufacturing—Con.				
332213	Saw blade and handsaw manufacturing				
	All companies	139	1 331 892	100.0	X
	4 largest companies	X	X	48.1	X
	8 largest companies	X	X	63.8	X
	20 largest companies	X	X	86.3	X
	50 largest companies	X	X	95.2	1 012.6
332214	Kitchen utensil, pot, and pan manufacturing				
	All companies	69	1 533 513	100.0	X
	4 largest companies	X	X	55.8	X
	8 largest companies	X	X	75.9	X
	20 largest companies	X	X	92.5	X
	50 largest companies	X	X	99.6	1 391.8
3323	Architectural and structural metals manufacturing				
	All companies	12 740	60 019 666	100.0	X
	4 largest companies	X	X	4.4	X
	8 largest companies	X	X	7.5	X
	20 largest companies	X	X	14.0	X
	50 largest companies	X	X	23.5	14.1
33231	Plate work and fabricated structural product manufacturing				
	All companies	5 236	28 137 797	100.0	X
	4 largest companies	X	X	8.0	X
	8 largest companies	X	X	12.1	X
	20 largest companies	X	X	20.9	X
	50 largest companies	X	X	31.7	32.1
332311	Prefabricated metal building and component manufacturing				
	All companies	678	5 154 699	100.0	X
	4 largest companies	X	X	27.8	X
	8 largest companies	X	X	37.3	X
	20 largest companies	X	X	52.9	X
	50 largest companies	X	X	68.7	322.4
332312	Fabricated structural metal manufacturing				
	All companies	3 569	19 772 142	100.0	X
	4 largest companies	X	X	8.9	X
	8 largest companies	X	X	14.0	X
	20 largest companies	X	X	23.6	X
	50 largest companies	X	X	35.4	39.8
332313	Plate work manufacturing				
	All companies	1 010	3 210 956	100.0	X
	4 largest companies	X	X	12.3	X
	8 largest companies	X	X	18.9	X
	20 largest companies	X	X	31.6	X
	50 largest companies	X	X	46.0	72.1
33232	Ornamental and architectural metal products manufacturing				
	All companies	7 555	31 881 869	100.0	X
	4 largest companies	X	X	6.4	X
	8 largest companies	X	X	10.3	X
	20 largest companies	X	X	18.7	X
	50 largest companies	X	X	29.8	24.6
332321	Metal window and door manufacturing				
	All companies	1 158	11 213 520	100.0	X
	4 largest companies	X	X	14.4	X
	8 largest companies	X	X	24.0	X
	20 largest companies	X	X	40.3	X
	50 largest companies	X	X	60.2	113.9
332322	Sheet metal work manufacturing				
	All companies	4 139	15 310 853	100.0	X
	4 largest companies	X	X	6.1	X
	8 largest companies	X	X	10.6	X
	20 largest companies	X	X	18.6	X
	50 largest companies	X	X	30.3	24.6
332323	Ornamental and architectural metal work manufacturing				
	All companies	2 290	5 357 496	100.0	X
	4 largest companies	X	X	14.9	X
	8 largest companies	X	X	20.0	X
	20 largest companies	X	X	28.7	X
	50 largest companies	X	X	40.9	84.0

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
332	Fabricated metal product manufacturing—Con.				
3324	Boiler, tank, and shipping container manufacturing				
	All companies	1 319	22 983 749	100.0	X
	4 largest companies	X	X	35.5	X
	8 largest companies	X	X	47.6	X
	20 largest companies	X	X	58.9	X
	50 largest companies	X	X	69.4	393.3
33241	Power boiler and heat exchanger manufacturing				
	All companies	293	3 579 486	100.0	X
	4 largest companies	X	X	24.2	X
	8 largest companies	X	X	35.0	X
	20 largest companies	X	X	52.3	X
	50 largest companies	X	X	73.4	233.1
332410	Power boiler and heat exchanger manufacturing				
	All companies	293	3 579 486	100.0	X
	4 largest companies	X	X	24.2	X
	8 largest companies	X	X	35.0	X
	20 largest companies	X	X	52.3	X
	50 largest companies	X	X	73.4	233.1
33242	Metal tank (heavy gauge) manufacturing				
	All companies	593	4 711 618	100.0	X
	4 largest companies	X	X	17.6	X
	8 largest companies	X	X	27.8	X
	20 largest companies	X	X	43.3	X
	50 largest companies	X	X	60.0	135.8
332420	Metal tank (heavy gauge) manufacturing				
	All companies	593	4 711 618	100.0	X
	4 largest companies	X	X	17.6	X
	8 largest companies	X	X	27.8	X
	20 largest companies	X	X	43.3	X
	50 largest companies	X	X	60.0	135.8
33243	Metal can, box, and other metal container (light gauge) manufacturing				
	All companies	448	14 692 645	100.0	X
	4 largest companies	X	X	55.5	X
	8 largest companies	X	X	74.5	X
	20 largest companies	X	X	83.9	X
	50 largest companies	X	X	91.7	938.3
332431	Metal can manufacturing				
	All companies	82	11 485 940	100.0	X
	4 largest companies	X	X	70.8	X
	8 largest companies	X	X	92.6	X
	20 largest companies	X	X	97.9	X
	50 largest companies	X	X	99.8	1 497.3
332439	Other metal container manufacturing				
	All companies	372	3 206 705	100.0	X
	4 largest companies	X	X	29.9	X
	8 largest companies	X	X	39.6	X
	20 largest companies	X	X	59.2	X
	50 largest companies	X	X	78.1	330.2
3325	Hardware manufacturing				
	All companies	807	10 414 354	100.0	X
	4 largest companies	X	X	19.3	X
	8 largest companies	X	X	31.3	X
	20 largest companies	X	X	52.2	X
	50 largest companies	X	X	72.7	187.4
33251	Hardware manufacturing				
	All companies	807	10 414 354	100.0	X
	4 largest companies	X	X	19.3	X
	8 largest companies	X	X	31.3	X
	20 largest companies	X	X	52.2	X
	50 largest companies	X	X	72.7	187.4
332510	Hardware manufacturing				
	All companies	807	10 414 354	100.0	X
	4 largest companies	X	X	19.3	X
	8 largest companies	X	X	31.3	X
	20 largest companies	X	X	52.2	X
	50 largest companies	X	X	72.7	187.4
3326	Spring and wire product manufacturing				
	All companies	1 963	8 948 976	100.0	X
	4 largest companies	X	X	17.4	X
	8 largest companies	X	X	24.0	X
	20 largest companies	X	X	33.8	X
	50 largest companies	X	X	46.6	139.5

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
332	Fabricated metal product manufacturing—Con.				
3326	Spring and wire product manufacturing—Con.				
33261	Spring and wire product manufacturing				
	All companies	1 963	8 948 976	100.0	X
	4 largest companies	X	X	17.4	X
	8 largest companies	X	X	24.0	X
	20 largest companies	X	X	33.8	X
	50 largest companies	X	X	46.6	139.5
332611	Spring (heavy gauge) manufacturing				
	All companies	114	736 878	100.0	X
	4 largest companies	X	X	44.8	X
	8 largest companies	X	X	57.1	X
	20 largest companies	X	X	76.7	X
	50 largest companies	X	X	94.8	636.5
332612	Spring (light gauge) manufacturing				
	All companies	282	2 433 737	100.0	X
	4 largest companies	X	X	46.7	X
	8 largest companies	X	X	55.9	X
	20 largest companies	X	X	68.5	X
	50 largest companies	X	X	83.4	1 121.3
332618	Other fabricated wire product manufacturing				
	All companies	1 573	5 778 361	100.0	X
	4 largest companies	X	X	14.8	X
	8 largest companies	X	X	20.8	X
	20 largest companies	X	X	31.5	X
	50 largest companies	X	X	45.7	87.1
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing				
	All companies	25 783	42 692 762	100.0	X
	4 largest companies	X	X	4.8	X
	8 largest companies	X	X	6.9	X
	20 largest companies	X	X	10.3	X
	50 largest companies	X	X	15.5	9.2
33271	Machine shops				
	All companies	22 180	26 266 034	100.0	X
	4 largest companies	X	X	2.2	X
	8 largest companies	X	X	3.8	X
	20 largest companies	X	X	7.2	X
	50 largest companies	X	X	11.4	3.5
332710	Machine shops				
	All companies	22 180	26 266 034	100.0	X
	4 largest companies	X	X	2.2	X
	8 largest companies	X	X	3.8	X
	20 largest companies	X	X	7.2	X
	50 largest companies	X	X	11.4	3.5
33272	Turned product and screw, nut, and bolt manufacturing				
	All companies	3 640	16 426 728	100.0	X
	4 largest companies	X	X	11.7	X
	8 largest companies	X	X	16.7	X
	20 largest companies	X	X	24.0	X
	50 largest companies	X	X	33.5	52.0
332721	Precision turned product manufacturing				
	All companies	2 823	8 672 816	100.0	X
	4 largest companies	X	X	4.1	X
	8 largest companies	X	X	6.9	X
	20 largest companies	X	X	13.0	X
	50 largest companies	X	X	23.0	13.1
332722	Bolt, nut, screw, rivet, and washer manufacturing				
	All companies	836	7 753 912	100.0	X
	4 largest companies	X	X	23.7	X
	8 largest companies	X	X	33.2	X
	20 largest companies	X	X	47.4	X
	50 largest companies	X	X	62.9	205.9
3328	Coating, engraving, heat treating, and allied activities				
	All companies	5 791	18 945 393	100.0	X
	4 largest companies	X	X	11.7	X
	8 largest companies	X	X	18.7	X
	20 largest companies	X	X	29.8	X
	50 largest companies	X	X	41.3	63.4
33281	Coating, engraving, heat treating, and allied activities				
	All companies	5 791	18 945 393	100.0	X
	4 largest companies	X	X	11.7	X
	8 largest companies	X	X	18.7	X
	20 largest companies	X	X	29.8	X
	50 largest companies	X	X	41.3	63.4

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
332	Fabricated metal product manufacturing—Con.				
3328	Coating, engraving, heat treating, and allied activities—Con.				
33281	Coating, engraving, heat treating, and allied activities—Con.				
332811	Metal heat treating				
	All companies	659	3 476 859	100.0	X
	4 largest companies	X	X	31.7	X
	8 largest companies	X	X	43.6	X
	20 largest companies	X	X	56.8	X
	50 largest companies	X	X	69.1	440.2
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers				
	All companies	2 252	9 832 912	100.0	X
	4 largest companies	X	X	19.5	X
	8 largest companies	X	X	30.8	X
	20 largest companies	X	X	47.8	X
	50 largest companies	X	X	61.0	166.1
332813	Electroplating, plating, polishing, anodizing, and coloring				
	All companies	2 930	5 635 622	100.0	X
	4 largest companies	X	X	7.4	X
	8 largest companies	X	X	11.0	X
	20 largest companies	X	X	18.7	X
	50 largest companies	X	X	29.7	28.2
3329	Other fabricated metal product manufacturing				
	All companies	6 315	50 582 645	100.0	X
	4 largest companies	X	X	10.9	X
	8 largest companies	X	X	16.9	X
	20 largest companies	X	X	27.8	X
	50 largest companies	X	X	43.5	58.0
33291	Metal valve manufacturing				
	All companies	1 070	21 564 138	100.0	X
	4 largest companies	X	X	20.2	X
	8 largest companies	X	X	31.0	X
	20 largest companies	X	X	46.9	X
	50 largest companies	X	X	66.0	171.1
332911	Industrial valve manufacturing				
	All companies	395	8 881 609	100.0	X
	4 largest companies	X	X	25.4	X
	8 largest companies	X	X	36.7	X
	20 largest companies	X	X	59.3	X
	50 largest companies	X	X	81.8	315.7
332912	Fluid power valve and hose fitting manufacturing				
	All companies	335	6 460 531	100.0	X
	4 largest companies	X	X	43.7	X
	8 largest companies	X	X	56.0	X
	20 largest companies	X	X	71.0	X
	50 largest companies	X	X	85.7	594.7
332913	Plumbing fixture fitting and trim manufacturing				
	All companies	135	3 526 844	100.0	X
	4 largest companies	X	X	58.7	X
	8 largest companies	X	X	73.5	X
	20 largest companies	X	X	87.1	X
	50 largest companies	X	X	96.7	1 485.3
332919	Other metal valve and pipe fitting manufacturing				
	All companies	238	2 695 154	100.0	X
	4 largest companies	X	X	19.8	X
	8 largest companies	X	X	34.5	X
	20 largest companies	X	X	56.8	X
	50 largest companies	X	X	80.6	217.4
33299	All other fabricated metal product manufacturing				
	All companies	5 289	29 018 507	100.0	X
	4 largest companies	X	X	12.1	X
	8 largest companies	X	X	17.5	X
	20 largest companies	X	X	30.1	X
	50 largest companies	X	X	44.7	71.5
332991	Ball and roller bearing manufacturing				
	All companies	125	5 732 895	100.0	X
	4 largest companies	X	X	51.8	X
	8 largest companies	X	X	68.7	X
	20 largest companies	X	X	89.9	X
	50 largest companies	X	X	98.2	1 045.4
332992	Small arms ammunition manufacturing				
	All companies	109	1 099 908	100.0	X
	4 largest companies	X	X	83.0	X
	8 largest companies	X	X	89.0	X
	20 largest companies	X	X	95.3	X
	50 largest companies	X	X	98.7	1 900.9

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332	Fabricated metal product manufacturing—Con.				
3329	Other fabricated metal product manufacturing—Con.				
33299	All other fabricated metal product manufacturing—Con.				
332993	Ammunition (except small arms) manufacturing				
	All companies	49	1 157 921	100.0	X
	4 largest companies	X	X	52.9	X
	8 largest companies	X	X	78.0	X
	20 largest companies	X	X	98.6	X
	50 largest companies	X	X	100.0	953.1
332994	Small arms manufacturing				
	All companies	179	1 611 067	100.0	X
	4 largest companies	X	X	43.3	X
	8 largest companies	X	X	59.7	X
	20 largest companies	X	X	85.5	X
	50 largest companies	X	X	95.1	637.0
332995	Other ordnance and accessories manufacturing				
	All companies	58	1 247 366	100.0	X
	4 largest companies	X	X	77.9	X
	8 largest companies	X	X	90.3	X
	20 largest companies	X	X	97.1	X
	50 largest companies	X	X	99.9	2 833.5
332996	Fabricated pipe and pipe fitting manufacturing				
	All companies	733	3 857 321	100.0	X
	4 largest companies	X	X	23.2	X
	8 largest companies	X	X	29.9	X
	20 largest companies	X	X	42.2	X
	50 largest companies	X	X	58.5	194.7
332997	Industrial pattern manufacturing				
	All companies	534	538 782	100.0	X
	4 largest companies	X	X	23.3	X
	8 largest companies	X	X	29.4	X
	20 largest companies	X	X	41.8	X
	50 largest companies	X	X	60.7	296.2
332998	Enameled iron and metal sanitary ware manufacturing				
	All companies	73	1 369 355	100.0	X
	4 largest companies	X	X	63.1	X
	8 largest companies	X	X	80.4	X
	20 largest companies	X	X	96.5	X
	50 largest companies	X	X	99.6	1 175.2
332999	All other miscellaneous fabricated metal product manufacturing				
	All companies	3 454	12 403 892	100.0	X
	4 largest companies	X	X	9.5	X
	8 largest companies	X	X	15.2	X
	20 largest companies	X	X	25.2	X
	50 largest companies	X	X	36.9	46.2
333	Machinery manufacturing				
	All companies	25 526	255 285 673	100.0	X
	4 largest companies	X	X	14.4	X
	8 largest companies	X	X	19.4	X
	20 largest companies	X	X	27.8	X
	50 largest companies	X	X	38.3	71.3
3331	Agriculture, construction, and mining machinery manufacturing				
	All companies	2 666	48 412 815	100.0	X
	4 largest companies	X	X	36.4	X
	8 largest companies	X	X	44.9	X
	20 largest companies	X	X	57.1	X
	50 largest companies	X	X	70.0	521.2
33311	Agricultural implement manufacturing				
	All companies	1 260	21 864 765	100.0	X
	4 largest companies	X	X	50.7	X
	8 largest companies	X	X	62.3	X
	20 largest companies	X	X	73.4	X
	50 largest companies	X	X	83.1	1 138.3
333111	Farm machinery and equipment manufacturing				
	All companies	1 138	14 783 379	100.0	X
	4 largest companies	X	X	57.6	X
	8 largest companies	X	X	64.7	X
	20 largest companies	X	X	73.2	X
	50 largest companies	X	X	81.5	1 656.8
333112	Lawn and garden tractor and home lawn and garden equipment manufacturing				
	All companies	129	7 081 386	100.0	X
	4 largest companies	X	X	61.6	X
	8 largest companies	X	X	77.5	X
	20 largest companies	X	X	93.0	X
	50 largest companies	X	X	98.6	1 117.8

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
333	Machinery manufacturing—Con.				
3331	Agriculture, construction, and mining machinery manufacturing—Con.				
33312	Construction machinery manufacturing				
	All companies	719	19 064 464	100.0	X
	4 largest companies	X	X	46.6	X
	8 largest companies	X	X	57.9	X
	20 largest companies	X	X	72.2	X
	50 largest companies	X	X	84.6	917.9
333120	Construction machinery manufacturing				
	All companies	719	19 064 464	100.0	X
	4 largest companies	X	X	46.6	X
	8 largest companies	X	X	57.9	X
	20 largest companies	X	X	72.2	X
	50 largest companies	X	X	84.6	917.9
33313	Mining and oil and gas field machinery manufacturing				
	All companies	708	7 483 586	100.0	X
	4 largest companies	X	X	22.4	X
	8 largest companies	X	X	36.9	X
	20 largest companies	X	X	56.2	X
	50 largest companies	X	X	70.8	219.9
333131	Mining machinery and equipment manufacturing				
	All companies	246	1 924 054	100.0	X
	4 largest companies	X	X	40.6	X
	8 largest companies	X	X	50.4	X
	20 largest companies	X	X	66.8	X
	50 largest companies	X	X	84.5	663.7
333132	Oil and gas field machinery and equipment manufacturing				
	All companies	467	5 559 532	100.0	X
	4 largest companies	X	X	25.3	X
	8 largest companies	X	X	42.5	X
	20 largest companies	X	X	62.9	X
	50 largest companies	X	X	78.7	286.1
3332	Industrial machinery manufacturing				
	All companies	4 139	33 037 247	100.0	X
	4 largest companies	X	X	22.2	X
	8 largest companies	X	X	26.2	X
	20 largest companies	X	X	33.9	X
	50 largest companies	X	X	45.4	285.8
33321	Sawmill and woodworking machinery manufacturing				
	All companies	290	1 031 410	100.0	X
	4 largest companies	X	X	28.9	X
	8 largest companies	X	X	41.9	X
	20 largest companies	X	X	58.6	X
	50 largest companies	X	X	76.7	308.2
333210	Sawmill and woodworking machinery manufacturing				
	All companies	290	1 031 410	100.0	X
	4 largest companies	X	X	28.9	X
	8 largest companies	X	X	41.9	X
	20 largest companies	X	X	58.6	X
	50 largest companies	X	X	76.7	308.2
33322	Plastics and rubber industry machinery manufacturing				
	All companies	538	3 046 474	100.0	X
	4 largest companies	X	X	23.3	X
	8 largest companies	X	X	34.1	X
	20 largest companies	X	X	49.7	X
	50 largest companies	X	X	70.2	225.9
333220	Plastics and rubber industry machinery manufacturing				
	All companies	538	3 046 474	100.0	X
	4 largest companies	X	X	23.3	X
	8 largest companies	X	X	34.1	X
	20 largest companies	X	X	49.7	X
	50 largest companies	X	X	70.2	225.9
33329	Other industrial machinery manufacturing				
	All companies	3 325	28 959 363	100.0	X
	4 largest companies	X	X	25.3	X
	8 largest companies	X	X	29.7	X
	20 largest companies	X	X	38.1	X
	50 largest companies	X	X	50.2	370.3
333291	Paper industry machinery manufacturing				
	All companies	272	1 849 285	100.0	X
	4 largest companies	X	X	30.0	X
	8 largest companies	X	X	47.2	X
	20 largest companies	X	X	64.6	X
	50 largest companies	X	X	80.4	336.6

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
333	Machinery manufacturing—Con.				
3332	Industrial machinery manufacturing—Con.				
33329	Other industrial machinery manufacturing—Con.				
333292	Textile machinery manufacturing				
	All companies	395	952 664	100.0	X
	4 largest companies	X	X	20.7	X
	8 largest companies	X	X	31.4	X
	20 largest companies	X	X	51.7	X
	50 largest companies	X	X	71.6	205.7
333293	Printing machinery and equipment manufacturing				
	All companies	468	3 044 054	100.0	X
	4 largest companies	X	X	24.0	X
	8 largest companies	X	X	36.5	X
	20 largest companies	X	X	54.8	X
	50 largest companies	X	X	72.3	235.0
333294	Food product machinery manufacturing				
	All companies	534	3 003 589	100.0	X
	4 largest companies	X	X	18.2	X
	8 largest companies	X	X	27.7	X
	20 largest companies	X	X	42.8	X
	50 largest companies	X	X	62.0	150.6
333295	Semiconductor machinery manufacturing				
	All companies	262	12 234 067	100.0	X
	4 largest companies	X	X	59.9	X
	8 largest companies	X	X	68.9	X
	20 largest companies	X	X	81.5	X
	50 largest companies	X	X	92.2	2 023.9
333298	All other industrial machinery manufacturing				
	All companies	1 414	7 875 704	100.0	X
	4 largest companies	X	X	11.2	X
	8 largest companies	X	X	18.9	X
	20 largest companies	X	X	31.2	X
	50 largest companies	X	X	47.0	69.3
3333	Commercial and service industry machinery manufacturing				
	All companies	2 215	20 559 584	100.0	X
	4 largest companies	X	X	15.7	X
	8 largest companies	X	X	23.3	X
	20 largest companies	X	X	35.7	X
	50 largest companies	X	X	52.2	112.8
33331	Commercial and service industry machinery manufacturing				
	All companies	2 215	20 559 584	100.0	X
	4 largest companies	X	X	15.7	X
	8 largest companies	X	X	23.3	X
	20 largest companies	X	X	35.7	X
	50 largest companies	X	X	52.2	112.8
333311	Automatic vending machine manufacturing				
	All companies	106	1 626 594	100.0	X
	4 largest companies	X	X	44.0	X
	8 largest companies	X	X	68.3	X
	20 largest companies	X	X	89.9	X
	50 largest companies	X	X	98.1	712.1
333312	Commercial laundry, drycleaning, and pressing machine manufacturing				
	All companies	57	483 422	100.0	X
	4 largest companies	X	X	45.2	X
	8 largest companies	X	X	68.5	X
	20 largest companies	X	X	92.8	X
	50 largest companies	X	X	99.9	757.7
333313	Office machinery manufacturing				
	All companies	92	2 587 057	100.0	X
	4 largest companies	X	X	75.0	X
	8 largest companies	X	X	85.9	X
	20 largest companies	X	X	94.1	X
	50 largest companies	X	X	98.7	D
333314	Optical instrument and lens manufacturing				
	All companies	423	2 809 917	100.0	X
	4 largest companies	X	X	30.8	X
	8 largest companies	X	X	42.3	X
	20 largest companies	X	X	57.9	X
	50 largest companies	X	X	75.3	327.1
333315	Photographic and photocopying equipment manufacturing				
	All companies	283	1 959 900	100.0	X
	4 largest companies	X	X	41.3	X
	8 largest companies	X	X	57.6	X
	20 largest companies	X	X	77.9	X
	50 largest companies	X	X	88.5	728.8

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
333	Machinery manufacturing—Con.				
3333	Commercial and service industry machinery manufacturing—Con.				
33331	Commercial and service industry machinery manufacturing—Con.				
333319	Other commercial and service industry machinery manufacturing				
	All companies	1 264	11 092 694	100.0	X
	4 largest companies	X	X	19.0	X
	8 largest companies	X	X	28.8	X
	20 largest companies	X	X	44.3	X
	50 largest companies	X	X	60.0	147.8
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing				
	All companies	1 531	32 184 808	100.0	X
	4 largest companies	X	X	29.4	X
	8 largest companies	X	X	41.5	X
	20 largest companies	X	X	55.8	X
	50 largest companies	X	X	69.0	298.4
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing				
	All companies	1 531	32 184 808	100.0	X
	4 largest companies	X	X	29.4	X
	8 largest companies	X	X	41.5	X
	20 largest companies	X	X	55.8	X
	50 largest companies	X	X	69.0	298.4
333411	Air purification equipment manufacturing				
	All companies	327	2 218 697	100.0	X
	4 largest companies	X	X	28.3	X
	8 largest companies	X	X	41.4	X
	20 largest companies	X	X	59.3	X
	50 largest companies	X	X	77.9	291.9
333412	Industrial and commercial fan and blower manufacturing				
	All companies	132	1 881 794	100.0	X
	4 largest companies	X	X	26.8	X
	8 largest companies	X	X	43.7	X
	20 largest companies	X	X	69.3	X
	50 largest companies	X	X	88.8	330.7
333414	Heating equipment (except warm air furnaces) manufacturing				
	All companies	391	4 016 955	100.0	X
	4 largest companies	X	X	23.9	X
	8 largest companies	X	X	38.5	X
	20 largest companies	X	X	57.6	X
	50 largest companies	X	X	77.7	252.9
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing				
	All companies	705	24 067 362	100.0	X
	4 largest companies	X	X	39.1	X
	8 largest companies	X	X	54.9	X
	20 largest companies	X	X	71.2	X
	50 largest companies	X	X	83.1	513.4
3335	Metalworking machinery manufacturing				
	All companies	8 772	24 885 182	100.0	X
	4 largest companies	X	X	5.9	X
	8 largest companies	X	X	9.5	X
	20 largest companies	X	X	16.1	X
	50 largest companies	X	X	24.9	18.8
33351	Metalworking machinery manufacturing				
	All companies	8 772	24 885 182	100.0	X
	4 largest companies	X	X	5.9	X
	8 largest companies	X	X	9.5	X
	20 largest companies	X	X	16.1	X
	50 largest companies	X	X	24.9	18.8
333511	Industrial mold manufacturing				
	All companies	2 399	5 391 383	100.0	X
	4 largest companies	X	X	7.3	X
	8 largest companies	X	X	12.1	X
	20 largest companies	X	X	20.0	X
	50 largest companies	X	X	30.9	30.3
333512	Machine tool (metal cutting types) manufacturing				
	All companies	342	3 106 018	100.0	X
	4 largest companies	X	X	30.0	X
	8 largest companies	X	X	44.2	X
	20 largest companies	X	X	57.8	X
	50 largest companies	X	X	73.1	312.2

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
333	Machinery manufacturing—Con.				
3335	Metalworking machinery manufacturing—Con.				
33351	Metalworking machinery manufacturing—Con.				
333513	Machine tool (metal forming types) manufacturing				
	All companies	173	1 165 067	100.0	X
	4 largest companies	X	X	18.7	X
	8 largest companies	X	X	31.0	X
	20 largest companies	X	X	52.8	X
	50 largest companies	X	X	75.7	188.5
333514	Special die and tool, die set, jig, and fixture manufacturing				
	All companies	3 660	6 970 527	100.0	X
	4 largest companies	X	X	7.0	X
	8 largest companies	X	X	10.7	X
	20 largest companies	X	X	17.1	X
	50 largest companies	X	X	27.2	23.3
333515	Cutting tool and machine tool accessory manufacturing				
	All companies	1 805	4 862 358	100.0	X
	4 largest companies	X	X	20.1	X
	8 largest companies	X	X	25.8	X
	20 largest companies	X	X	37.0	X
	50 largest companies	X	X	52.2	175.4
333516	Rolling mill machinery and equipment manufacturing				
	All companies	71	508 048	100.0	X
	4 largest companies	X	X	48.6	X
	8 largest companies	X	X	67.1	X
	20 largest companies	X	X	86.1	X
	50 largest companies	X	X	98.6	743.9
333518	Other metalworking machinery manufacturing				
	All companies	415	2 881 781	100.0	X
	4 largest companies	X	X	22.6	X
	8 largest companies	X	X	33.6	X
	20 largest companies	X	X	48.2	X
	50 largest companies	X	X	66.7	203.3
3336	Engine, turbine, and power transmission equipment manufacturing				
	All companies	751	38 473 891	100.0	X
	4 largest companies	X	X	53.4	X
	8 largest companies	X	X	66.1	X
	20 largest companies	X	X	77.0	X
	50 largest companies	X	X	87.8	1 118.7
33361	Engine, turbine, and power transmission equipment manufacturing				
	All companies	751	38 473 891	100.0	X
	4 largest companies	X	X	53.4	X
	8 largest companies	X	X	66.1	X
	20 largest companies	X	X	77.0	X
	50 largest companies	X	X	87.8	1 118.7
333611	Turbine and turbine generator set units manufacturing				
	All companies	93	14 966 426	100.0	X
	4 largest companies	X	X	88.4	X
	8 largest companies	X	X	92.4	X
	20 largest companies	X	X	97.0	X
	50 largest companies	X	X	99.6	D
333612	Speed changer, industrial high-speed drive, and gear manufacturing				
	All companies	210	2 036 388	100.0	X
	4 largest companies	X	X	27.2	X
	8 largest companies	X	X	42.1	X
	20 largest companies	X	X	65.5	X
	50 largest companies	X	X	83.9	306.9
333613	Mechanical power transmission equipment manufacturing				
	All companies	203	2 838 584	100.0	X
	4 largest companies	X	X	24.7	X
	8 largest companies	X	X	42.1	X
	20 largest companies	X	X	69.2	X
	50 largest companies	X	X	88.6	313.8
333618	Other engine equipment manufacturing				
	All companies	267	18 632 493	100.0	X
	4 largest companies	X	X	51.0	X
	8 largest companies	X	X	71.9	X
	20 largest companies	X	X	87.6	X
	50 largest companies	X	X	96.0	869.4

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
333	Machinery manufacturing—Con.				
3339	Other general purpose machinery manufacturing				
	All companies	5 909	57 732 146	100.0	X
	4 largest companies	X	X	7.9	X
	8 largest companies	X	X	14.0	X
	20 largest companies	X	X	25.5	X
	50 largest companies	X	X	42.4	46.5
33391	Pump and compressor manufacturing				
	All companies	684	12 691 176	100.0	X
	4 largest companies	X	X	21.7	X
	8 largest companies	X	X	31.6	X
	20 largest companies	X	X	51.2	X
	50 largest companies	X	X	73.6	197.5
333911	Pump and pumping equipment manufacturing				
	All companies	399	6 962 635	100.0	X
	4 largest companies	X	X	27.7	X
	8 largest companies	X	X	41.0	X
	20 largest companies	X	X	62.8	X
	50 largest companies	X	X	82.4	321.6
333912	Air and gas compressor manufacturing				
	All companies	276	4 795 611	100.0	X
	4 largest companies	X	X	33.0	X
	8 largest companies	X	X	47.1	X
	20 largest companies	X	X	70.3	X
	50 largest companies	X	X	87.4	459.1
333913	Measuring and dispensing pump manufacturing				
	All companies	29	932 930	100.0	X
	4 largest companies	X	X	66.4	X
	8 largest companies	X	X	86.2	X
	20 largest companies	X	X	99.4	X
	50 largest companies	X	X	100.0	1 527.4
33392	Material handling equipment manufacturing				
	All companies	1 623	16 056 903	100.0	X
	4 largest companies	X	X	17.2	X
	8 largest companies	X	X	28.4	X
	20 largest companies	X	X	44.5	X
	50 largest companies	X	X	58.8	141.0
333921	Elevator and moving stairway manufacturing				
	All companies	167	1 944 521	100.0	X
	4 largest companies	X	X	57.6	X
	8 largest companies	X	X	68.9	X
	20 largest companies	X	X	81.0	X
	50 largest companies	X	X	92.6	921.9
333922	Conveyor and conveying equipment manufacturing				
	All companies	794	5 843 342	100.0	X
	4 largest companies	X	X	23.8	X
	8 largest companies	X	X	30.2	X
	20 largest companies	X	X	42.5	X
	50 largest companies	X	X	57.2	327.6
333923	Overhead traveling crane, hoist, and monorail system manufacturing				
	All companies	275	3 062 631	100.0	X
	4 largest companies	X	X	49.3	X
	8 largest companies	X	X	60.0	X
	20 largest companies	X	X	71.9	X
	50 largest companies	X	X	84.2	867.4
333924	Industrial truck, tractor, trailer, and stacker machinery manufacturing				
	All companies	402	5 206 409	100.0	X
	4 largest companies	X	X	38.0	X
	8 largest companies	X	X	53.6	X
	20 largest companies	X	X	72.0	X
	50 largest companies	X	X	84.0	472.1
33399	All other general purpose machinery manufacturing				
	All companies	3 665	28 984 067	100.0	X
	4 largest companies	X	X	12.9	X
	8 largest companies	X	X	20.2	X
	20 largest companies	X	X	34.9	X
	50 largest companies	X	X	49.9	83.3
333991	Power-driven handtool manufacturing				
	All companies	109	3 576 065	100.0	X
	4 largest companies	X	X	56.3	X
	8 largest companies	X	X	74.7	X
	20 largest companies	X	X	94.3	X
	50 largest companies	X	X	98.3	1 188.6

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333	Machinery manufacturing—Con.				
3339	Other general purpose machinery manufacturing—Con.				
33399	All other general purpose machinery manufacturing—Con.				
333992	Welding and soldering equipment manufacturing				
	All companies	203	3 811 846	100.0	X
	4 largest companies	X	X	54.7	X
	8 largest companies	X	X	72.1	X
	20 largest companies	X	X	81.5	X
	50 largest companies	X	X	91.7	929.7
333993	Packaging machinery manufacturing				
	All companies	625	4 227 241	100.0	X
	4 largest companies	X	X	22.8	X
	8 largest companies	X	X	32.8	X
	20 largest companies	X	X	48.6	X
	50 largest companies	X	X	66.2	194.7
333994	Industrial process furnace and oven manufacturing				
	All companies	331	1 632 897	100.0	X
	4 largest companies	X	X	18.6	X
	8 largest companies	X	X	27.1	X
	20 largest companies	X	X	43.2	X
	50 largest companies	X	X	64.9	147.3
333995	Fluid power cylinder and actuator manufacturing				
	All companies	258	3 171 589	100.0	X
	4 largest companies	X	X	47.4	X
	8 largest companies	X	X	56.3	X
	20 largest companies	X	X	72.0	X
	50 largest companies	X	X	86.8	709.9
333996	Fluid power pump and motor manufacturing				
	All companies	141	2 581 010	100.0	X
	4 largest companies	X	X	68.5	X
	8 largest companies	X	X	78.6	X
	20 largest companies	X	X	90.7	X
	50 largest companies	X	X	96.7	1 219.8
333997	Scale and balance (except laboratory) manufacturing				
	All companies	105	692 467	100.0	X
	4 largest companies	X	X	47.3	X
	8 largest companies	X	X	64.6	X
	20 largest companies	X	X	81.6	X
	50 largest companies	X	X	94.9	870.6
333999	All other miscellaneous general purpose machinery manufacturing				
	All companies	1 933	9 290 952	100.0	X
	4 largest companies	X	X	16.4	X
	8 largest companies	X	X	25.0	X
	20 largest companies	X	X	37.1	X
	50 largest companies	X	X	52.0	109.2
334	Computer and electronic product manufacturing				
	All companies	13 910	357 563 640	100.0	X
	4 largest companies	X	X	18.0	X
	8 largest companies	X	X	25.7	X
	20 largest companies	X	X	39.7	X
	50 largest companies	X	X	55.8	135.0
3341	Computer and peripheral equipment manufacturing				
	All companies	1 517	73 786 456	100.0	X
	4 largest companies	X	X	49.5	X
	8 largest companies	X	X	65.2	X
	20 largest companies	X	X	80.0	X
	50 largest companies	X	X	88.3	1 183.3
33411	Computer and peripheral equipment manufacturing				
	All companies	1 517	73 786 456	100.0	X
	4 largest companies	X	X	49.5	X
	8 largest companies	X	X	65.2	X
	20 largest companies	X	X	80.0	X
	50 largest companies	X	X	88.3	1 183.3
334111	Electronic computer manufacturing				
	All companies	465	47 730 226	100.0	X
	4 largest companies	X	X	75.5	X
	8 largest companies	X	X	89.2	X
	20 largest companies	X	X	95.0	X
	50 largest companies	X	X	97.7	2 662.4
334112	Computer storage device manufacturing				
	All companies	157	9 458 043	100.0	X
	4 largest companies	X	X	65.6	X
	8 largest companies	X	X	79.3	X
	20 largest companies	X	X	92.7	X
	50 largest companies	X	X	98.2	1 725.8

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
334	Computer and electronic product manufacturing—Con.				
3341	Computer and peripheral equipment manufacturing—Con.				
33411	Computer and peripheral equipment manufacturing—Con.				
334113	Computer terminal manufacturing				
	All companies	70	407 507	100.0	X
	4 largest companies	X	X	61.9	X
	8 largest companies	X	X	77.8	X
	20 largest companies	X	X	91.3	X
	50 largest companies	X	X	99.2	1 486.1
334119	Other computer peripheral equipment manufacturing				
	All companies	838	16 190 680	100.0	X
	4 largest companies	X	X	43.1	X
	8 largest companies	X	X	55.0	X
	20 largest companies	X	X	69.2	X
	50 largest companies	X	X	81.0	646.5
3342	Communications equipment manufacturing				
	All companies	1 828	65 100 494	100.0	X
	4 largest companies	X	X	33.6	X
	8 largest companies	X	X	45.5	X
	20 largest companies	X	X	61.2	X
	50 largest companies	X	X	73.9	398.9
33421	Telephone apparatus manufacturing				
	All companies	456	27 276 210	100.0	X
	4 largest companies	X	X	55.6	X
	8 largest companies	X	X	65.7	X
	20 largest companies	X	X	77.6	X
	50 largest companies	X	X	86.8	1 398.5
334210	Telephone apparatus manufacturing				
	All companies	456	27 276 210	100.0	X
	4 largest companies	X	X	55.6	X
	8 largest companies	X	X	65.7	X
	20 largest companies	X	X	77.6	X
	50 largest companies	X	X	86.8	1 398.5
33422	Radio and television broadcasting and wireless communications equipment manufacturing				
	All companies	934	32 278 221	100.0	X
	4 largest companies	X	X	42.8	X
	8 largest companies	X	X	54.7	X
	20 largest companies	X	X	69.4	X
	50 largest companies	X	X	80.5	583.6
334220	Radio and television broadcasting and wireless communications equipment manufacturing				
	All companies	934	32 278 221	100.0	X
	4 largest companies	X	X	42.8	X
	8 largest companies	X	X	54.7	X
	20 largest companies	X	X	69.4	X
	50 largest companies	X	X	80.5	583.6
33429	Other communications equipment manufacturing				
	All companies	470	5 546 063	100.0	X
	4 largest companies	X	X	43.8	X
	8 largest companies	X	X	54.2	X
	20 largest companies	X	X	67.5	X
	50 largest companies	X	X	80.4	624.5
334290	Other communications equipment manufacturing				
	All companies	470	5 546 063	100.0	X
	4 largest companies	X	X	43.8	X
	8 largest companies	X	X	54.2	X
	20 largest companies	X	X	67.5	X
	50 largest companies	X	X	80.4	624.5
3343	Audio and video equipment manufacturing				
	All companies	544	8 649 260	100.0	X
	4 largest companies	X	X	43.2	X
	8 largest companies	X	X	59.4	X
	20 largest companies	X	X	78.2	X
	50 largest companies	X	X	88.8	646.9
33431	Audio and video equipment manufacturing				
	All companies	544	8 649 260	100.0	X
	4 largest companies	X	X	43.2	X
	8 largest companies	X	X	59.4	X
	20 largest companies	X	X	78.2	X
	50 largest companies	X	X	88.8	646.9

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
334	Computer and electronic product manufacturing—Con.				
3343	Audio and video equipment manufacturing—Con.				
33431	Audio and video equipment manufacturing—Con.				
334310	Audio and video equipment manufacturing				
	All companies	544	8 649 260	100.0	X
	4 largest companies	X	X	43.2	X
	8 largest companies	X	X	59.4	X
	20 largest companies	X	X	78.2	X
	50 largest companies	X	X	88.8	646.9
3344	Semiconductor and other electronic component manufacturing				
	All companies	4 798	110 278 304	100.0	X
	4 largest companies	X	X	35.2	X
	8 largest companies	X	X	42.0	X
	20 largest companies	X	X	53.3	X
	50 largest companies	X	X	65.7	495.0
33441	Semiconductor and other electronic component manufacturing				
	All companies	4 798	110 278 304	100.0	X
	4 largest companies	X	X	35.2	X
	8 largest companies	X	X	42.0	X
	20 largest companies	X	X	53.3	X
	50 largest companies	X	X	65.7	495.0
334411	Electron tube manufacturing				
	All companies	90	2 426 460	100.0	X
	4 largest companies	X	X	60.0	X
	8 largest companies	X	X	84.0	X
	20 largest companies	X	X	95.0	X
	50 largest companies	X	X	99.2	1 139.0
334412	Bare printed circuit board manufacturing				
	All companies	891	6 409 568	100.0	X
	4 largest companies	X	X	20.1	X
	8 largest companies	X	X	34.6	X
	20 largest companies	X	X	51.3	X
	50 largest companies	X	X	65.3	189.7
334413	Semiconductor and related device manufacturing				
	All companies	904	61 434 888	100.0	X
	4 largest companies	X	X	56.5	X
	8 largest companies	X	X	64.1	X
	20 largest companies	X	X	77.5	X
	50 largest companies	X	X	89.7	1 417.1
334414	Electronic capacitor manufacturing				
	All companies	84	1 640 150	100.0	X
	4 largest companies	X	X	58.9	X
	8 largest companies	X	X	74.9	X
	20 largest companies	X	X	92.2	X
	50 largest companies	X	X	99.0	1 056.2
334415	Electronic resistor manufacturing				
	All companies	58	625 683	100.0	X
	4 largest companies	X	X	40.9	X
	8 largest companies	X	X	58.6	X
	20 largest companies	X	X	86.4	X
	50 largest companies	X	X	99.6	739.6
334416	Electronic coil, transformer, and other inductor manufacturing				
	All companies	332	1 135 121	100.0	X
	4 largest companies	X	X	28.5	X
	8 largest companies	X	X	36.7	X
	20 largest companies	X	X	49.8	X
	50 largest companies	X	X	69.1	325.2
334417	Electronic connector manufacturing				
	All companies	280	3 548 502	100.0	X
	4 largest companies	X	X	39.8	X
	8 largest companies	X	X	53.9	X
	20 largest companies	X	X	70.3	X
	50 largest companies	X	X	85.2	711.3
334418	Printed circuit assembly (electronic assembly) manufacturing				
	All companies	790	23 478 376	100.0	X
	4 largest companies	X	X	35.6	X
	8 largest companies	X	X	53.1	X
	20 largest companies	X	X	67.3	X
	50 largest companies	X	X	77.4	453.0
334419	Other electronic component manufacturing				
	All companies	1 526	9 579 556	100.0	X
	4 largest companies	X	X	10.7	X
	8 largest companies	X	X	17.0	X
	20 largest companies	X	X	29.2	X
	50 largest companies	X	X	46.6	65.0

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
334	Computer and electronic product manufacturing—Con.				
3345	Navigational, measuring, electromedical, and control instruments manufacturing				
	All companies	4 624	92 199 405	100.0	X
	4 largest companies	X	X	21.7	X
	8 largest companies	X	X	31.6	X
	20 largest companies	X	X	48.0	X
	50 largest companies	X	X	64.2	192.9
33451	Navigational, measuring, electromedical, and control instruments manufacturing				
	All companies	4 624	92 199 405	100.0	X
	4 largest companies	X	X	21.7	X
	8 largest companies	X	X	31.6	X
	20 largest companies	X	X	48.0	X
	50 largest companies	X	X	64.2	192.9
334510	Electromedical and electrotherapeutic apparatus manufacturing				
	All companies	485	15 680 811	100.0	X
	4 largest companies	X	X	38.7	X
	8 largest companies	X	X	52.8	X
	20 largest companies	X	X	68.1	X
	50 largest companies	X	X	83.1	476.3
334511	Search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing				
	All companies	504	32 258 082	100.0	X
	4 largest companies	X	X	58.9	X
	8 largest companies	X	X	77.0	X
	20 largest companies	X	X	89.7	X
	50 largest companies	X	X	95.7	1 135.9
334512	Automatic environmental control manufacturing for residential, commercial, and appliance use				
	All companies	312	2 912 971	100.0	X
	4 largest companies	X	X	48.8	X
	8 largest companies	X	X	63.2	X
	20 largest companies	X	X	78.7	X
	50 largest companies	X	X	88.2	718.5
334513	Instruments and related products manufacturing for measuring, displaying, and controlling industrial process variables				
	All companies	909	7 040 184	100.0	X
	4 largest companies	X	X	24.8	X
	8 largest companies	X	X	33.1	X
	20 largest companies	X	X	47.9	X
	50 largest companies	X	X	64.9	238.1
334514	Totalizing fluid meter and counting device manufacturing				
	All companies	220	4 820 321	100.0	X
	4 largest companies	X	X	53.7	X
	8 largest companies	X	X	66.5	X
	20 largest companies	X	X	84.8	X
	50 largest companies	X	X	94.6	1 416.2
334515	Instrument manufacturing for measuring and testing electricity and electrical signals				
	All companies	733	9 903 743	100.0	X
	4 largest companies	X	X	36.1	X
	8 largest companies	X	X	49.5	X
	20 largest companies	X	X	63.2	X
	50 largest companies	X	X	77.9	460.7
334516	Analytical laboratory instrument manufacturing				
	All companies	526	8 187 465	100.0	X
	4 largest companies	X	X	37.2	X
	8 largest companies	X	X	51.1	X
	20 largest companies	X	X	68.3	X
	50 largest companies	X	X	82.8	475.6
334517	Irradiation apparatus manufacturing				
	All companies	154	4 736 157	100.0	X
	4 largest companies	X	X	53.5	X
	8 largest companies	X	X	75.2	X
	20 largest companies	X	X	88.2	X
	50 largest companies	X	X	96.6	946.4
334518	Watch, clock, and part manufacturing				
	All companies	123	677 031	100.0	X
	4 largest companies	X	X	46.7	X
	8 largest companies	X	X	60.4	X
	20 largest companies	X	X	82.9	X
	50 largest companies	X	X	97.1	874.6
334519	Other measuring and controlling device manufacturing				
	All companies	793	5 982 640	100.0	X
	4 largest companies	X	X	20.1	X
	8 largest companies	X	X	32.4	X
	20 largest companies	X	X	49.4	X
	50 largest companies	X	X	66.4	187.2

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
334	Computer and electronic product manufacturing—Con.				
3346	Manufacturing and reproducing magnetic and optical media				
	All companies	893	7 549 721	100.0	X
	4 largest companies	X	X	39.4	X
	8 largest companies	X	X	51.9	X
	20 largest companies	X	X	66.6	X
	50 largest companies	X	X	79.6	465.3
33461	Manufacturing and reproducing magnetic and optical media				
	All companies	893	7 549 721	100.0	X
	4 largest companies	X	X	39.4	X
	8 largest companies	X	X	51.9	X
	20 largest companies	X	X	66.6	X
	50 largest companies	X	X	79.6	465.3
334611	Software reproducing				
	All companies	189	477 921	100.0	X
	4 largest companies	X	X	32.4	X
	8 largest companies	X	X	49.6	X
	20 largest companies	X	X	68.4	X
	50 largest companies	X	X	84.3	390.7
334612	Prerecorded compact disc (except software), tape, and record reproducing				
	All companies	538	4 480 372	100.0	X
	4 largest companies	X	X	38.8	X
	8 largest companies	X	X	52.4	X
	20 largest companies	X	X	69.5	X
	50 largest companies	X	X	83.4	532.1
334613	Magnetic and optical recording media manufacturing				
	All companies	169	2 591 428	100.0	X
	4 largest companies	X	X	76.8	X
	8 largest companies	X	X	84.7	X
	20 largest companies	X	X	92.3	X
	50 largest companies	X	X	96.9	2 076.9
335	Electrical equipment, appliance, and component manufacturing				
	All companies	5 498	102 812 274	100.0	X
	4 largest companies	X	X	16.5	X
	8 largest companies	X	X	25.7	X
	20 largest companies	X	X	38.3	X
	50 largest companies	X	X	51.7	113.9
3351	Electric lighting equipment manufacturing				
	All companies	1 130	12 402 230	100.0	X
	4 largest companies	X	X	29.5	X
	8 largest companies	X	X	45.2	X
	20 largest companies	X	X	58.2	X
	50 largest companies	X	X	70.4	312.4
33511	Electric lamp bulb and part manufacturing				
	All companies	57	2 626 825	100.0	X
	4 largest companies	X	X	88.5	X
	8 largest companies	X	X	94.1	X
	20 largest companies	X	X	98.2	X
	50 largest companies	X	X	99.9	2 757.6
335110	Electric lamp bulb and part manufacturing				
	All companies	57	2 626 825	100.0	X
	4 largest companies	X	X	88.5	X
	8 largest companies	X	X	94.1	X
	20 largest companies	X	X	98.2	X
	50 largest companies	X	X	99.9	2 757.6
33512	Lighting fixture manufacturing				
	All companies	1 077	9 775 405	100.0	X
	4 largest companies	X	X	29.1	X
	8 largest companies	X	X	38.6	X
	20 largest companies	X	X	51.9	X
	50 largest companies	X	X	65.7	266.2
335121	Residential electric lighting fixture manufacturing				
	All companies	470	2 192 319	100.0	X
	4 largest companies	X	X	30.2	X
	8 largest companies	X	X	40.9	X
	20 largest companies	X	X	57.3	X
	50 largest companies	X	X	74.6	355.7
335122	Commercial, industrial, and institutional electric lighting fixture manufacturing				
	All companies	324	3 739 195	100.0	X
	4 largest companies	X	X	48.7	X
	8 largest companies	X	X	58.5	X
	20 largest companies	X	X	69.0	X
	50 largest companies	X	X	82.9	712.8

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
335	Electrical equipment, appliance, and component manufacturing—Con.				
3351	Electric lighting equipment manufacturing—Con.				
33512	Lighting fixture manufacturing—Con.				
335129	Other lighting equipment manufacturing				
	All companies	300	3 843 891	100.0	X
	4 largest companies	X	X	28.2	X
	8 largest companies	X	X	43.7	X
	20 largest companies	X	X	63.5	X
	50 largest companies	X	X	82.8	321.9
3352	Household appliance manufacturing				
	All companies	251	22 269 541	100.0	X
	4 largest companies	X	X	62.2	X
	8 largest companies	X	X	70.8	X
	20 largest companies	X	X	84.7	X
	50 largest companies	X	X	95.9	1 131.9
33521	Small electrical appliance manufacturing				
	All companies	117	4 623 636	100.0	X
	4 largest companies	X	X	46.8	X
	8 largest companies	X	X	65.3	X
	20 largest companies	X	X	90.5	X
	50 largest companies	X	X	99.1	748.8
335211	Electric housewares and household fan manufacturing				
	All companies	88	2 461 244	100.0	X
	4 largest companies	X	X	54.0	X
	8 largest companies	X	X	74.0	X
	20 largest companies	X	X	93.7	X
	50 largest companies	X	X	99.6	1 024.5
335212	Household vacuum cleaner manufacturing				
	All companies	29	2 162 392	100.0	X
	4 largest companies	X	X	77.9	X
	8 largest companies	X	X	96.1	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	100.0	2 096.3
33522	Major appliance manufacturing				
	All companies	139	17 645 905	100.0	X
	4 largest companies	X	X	69.5	X
	8 largest companies	X	X	78.9	X
	20 largest companies	X	X	92.5	X
	50 largest companies	X	X	99.0	1 427.3
335221	Household cooking appliance manufacturing				
	All companies	92	4 327 308	100.0	X
	4 largest companies	X	X	48.3	X
	8 largest companies	X	X	77.0	X
	20 largest companies	X	X	94.5	X
	50 largest companies	X	X	99.4	856.5
335222	Household refrigerator and home freezer manufacturing				
	All companies	18	5 491 267	100.0	X
	4 largest companies	X	X	84.5	X
	8 largest companies	X	X	95.4	X
	20 largest companies	X	X	100.0	1 988.5
	50 largest companies	X	X	—	—
335224	Household laundry equipment manufacturing				
	All companies	13	4 404 679	100.0	X
	4 largest companies	X	X	93.4	X
	8 largest companies	X	X	99.9	X
	20 largest companies	X	X	100.0	D
	50 largest companies	X	X	—	—
335228	Other major household appliance manufacturing				
	All companies	32	3 422 651	100.0	X
	4 largest companies	X	X	52.9	X
	8 largest companies	X	X	83.7	X
	20 largest companies	X	X	99.4	X
	50 largest companies	X	X	100.0	1 050.6
3353	Electrical equipment manufacturing				
	All companies	2 188	31 394 150	100.0	X
	4 largest companies	X	X	26.4	X
	8 largest companies	X	X	39.7	X
	20 largest companies	X	X	54.1	X
	50 largest companies	X	X	68.0	250.8

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
335	Electrical equipment, appliance, and component manufacturing—Con.				
3353	Electrical equipment manufacturing—Con.				
33531	Electrical equipment manufacturing				
	All companies	2 188	31 394 150	100.0	X
	4 largest companies	X	X	26.4	X
	8 largest companies	X	X	39.7	X
	20 largest companies	X	X	54.1	X
	50 largest companies	X	X	68.0	250.8
335311	Power, distribution, and specialty transformer manufacturing				
	All companies	259	4 123 277	100.0	X
	4 largest companies	X	X	38.6	X
	8 largest companies	X	X	55.1	X
	20 largest companies	X	X	73.9	X
	50 largest companies	X	X	89.1	535.5
335312	Motor and generator manufacturing				
	All companies	478	9 151 586	100.0	X
	4 largest companies	X	X	26.8	X
	8 largest companies	X	X	41.2	X
	20 largest companies	X	X	67.4	X
	50 largest companies	X	X	83.4	316.5
335313	Switchgear and switchboard apparatus manufacturing				
	All companies	450	8 325 928	100.0	X
	4 largest companies	X	X	50.8	X
	8 largest companies	X	X	65.7	X
	20 largest companies	X	X	78.5	X
	50 largest companies	X	X	87.7	818.7
335314	Relay and industrial control manufacturing				
	All companies	1 058	9 793 359	100.0	X
	4 largest companies	X	X	39.2	X
	8 largest companies	X	X	49.3	X
	20 largest companies	X	X	60.1	X
	50 largest companies	X	X	72.1	612.4
3359	Other electrical equipment and component manufacturing				
	All companies	2 008	36 746 353	100.0	X
	4 largest companies	X	X	10.8	X
	8 largest companies	X	X	18.9	X
	20 largest companies	X	X	34.1	X
	50 largest companies	X	X	54.8	81.0
33591	Battery manufacturing				
	All companies	125	6 420 666	100.0	X
	4 largest companies	X	X	51.5	X
	8 largest companies	X	X	75.4	X
	20 largest companies	X	X	92.5	X
	50 largest companies	X	X	98.5	901.9
335911	Storage battery manufacturing				
	All companies	94	3 530 324	100.0	X
	4 largest companies	X	X	61.8	X
	8 largest companies	X	X	82.0	X
	20 largest companies	X	X	92.8	X
	50 largest companies	X	X	98.9	1 252.8
335912	Primary battery manufacturing				
	All companies	33	2 890 342	100.0	X
	4 largest companies	X	X	87.3	X
	8 largest companies	X	X	97.5	X
	20 largest companies	X	X	99.8	X
	50 largest companies	X	X	100.0	2 572.9
33592	Communication and energy wire and cable manufacturing				
	All companies	340	11 279 591	100.0	X
	4 largest companies	X	X	24.7	X
	8 largest companies	X	X	39.8	X
	20 largest companies	X	X	67.3	X
	50 largest companies	X	X	86.4	295.0
335921	Fiber optic cable manufacturing				
	All companies	91	1 491 944	100.0	X
	4 largest companies	X	X	61.8	X
	8 largest companies	X	X	77.7	X
	20 largest companies	X	X	88.3	X
	50 largest companies	X	X	97.0	1 155.8
335929	Other communication and energy wire manufacturing				
	All companies	259	9 787 647	100.0	X
	4 largest companies	X	X	27.9	X
	8 largest companies	X	X	43.1	X
	20 largest companies	X	X	70.3	X
	50 largest companies	X	X	88.4	336.4

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335	Electrical equipment, appliance, and component manufacturing—Con.				
3359	Other electrical equipment and component manufacturing—Con.				
33593	Wiring device manufacturing				
	All companies	517	10 380 949	100.0	X
	4 largest companies	X	X	20.1	X
	8 largest companies	X	X	32.7	X
	20 largest companies	X	X	57.7	X
	50 largest companies	X	X	80.7	222.8
335931	Current-carrying wiring device manufacturing				
	All companies	396	6 521 552	100.0	X
	4 largest companies	X	X	24.1	X
	8 largest companies	X	X	40.3	X
	20 largest companies	X	X	65.0	X
	50 largest companies	X	X	83.1	292.4
335932	Noncurrent-carrying wiring device manufacturing				
	All companies	132	3 859 397	100.0	X
	4 largest companies	X	X	32.9	X
	8 largest companies	X	X	53.7	X
	20 largest companies	X	X	85.9	X
	50 largest companies	X	X	97.8	489.5
33599	All other electrical equipment and component manufacturing				
	All companies	1 050	8 665 147	100.0	X
	4 largest companies	X	X	12.7	X
	8 largest companies	X	X	21.5	X
	20 largest companies	X	X	39.8	X
	50 largest companies	X	X	58.9	102.2
335991	Carbon and graphite product manufacturing				
	All companies	107	1 757 785	100.0	X
	4 largest companies	X	X	41.3	X
	8 largest companies	X	X	63.5	X
	20 largest companies	X	X	82.3	X
	50 largest companies	X	X	96.5	605.8
335999	All other miscellaneous electrical equipment and component manufacturing				
	All companies	943	6 907 362	100.0	X
	4 largest companies	X	X	15.9	X
	8 largest companies	X	X	25.6	X
	20 largest companies	X	X	42.7	X
	50 largest companies	X	X	61.0	125.5
336	Transportation equipment manufacturing				
	All companies	10 518	636 690 679	100.0	X
	4 largest companies	X	X	42.1	X
	8 largest companies	X	X	52.0	X
	20 largest companies	X	X	65.8	X
	50 largest companies	X	X	76.3	574.7
3361	Motor vehicle manufacturing				
	All companies	308	240 767 121	100.0	X
	4 largest companies	X	X	81.2	X
	8 largest companies	X	X	91.4	X
	20 largest companies	X	X	98.4	X
	50 largest companies	X	X	99.6	2 323.5
33611	Automobile and light duty motor vehicle manufacturing				
	All companies	228	225 196 693	100.0	X
	4 largest companies	X	X	84.9	X
	8 largest companies	X	X	95.8	X
	20 largest companies	X	X	99.6	X
	50 largest companies	X	X	99.8	2 599.5
336111	Automobile manufacturing				
	All companies	164	88 127 061	100.0	X
	4 largest companies	X	X	75.5	X
	8 largest companies	X	X	94.2	X
	20 largest companies	X	X	99.3	X
	50 largest companies	X	X	99.8	1 910.9
336112	Light truck and utility vehicle manufacturing				
	All companies	69	137 069 632	100.0	X
	4 largest companies	X	X	95.7	X
	8 largest companies	X	X	99.8	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	99.9	D
33612	Heavy duty truck manufacturing				
	All companies	81	15 570 428	100.0	X
	4 largest companies	X	X	69.5	X
	8 largest companies	X	X	86.8	X
	20 largest companies	X	X	97.0	X
	50 largest companies	X	X	99.8	1 512.5

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
336	Transportation equipment manufacturing—Con.				
3361	Motor vehicle manufacturing—Con.				
33612	Heavy duty truck manufacturing—Con.				
336120	Heavy duty truck manufacturing				
	All companies	81	15 570 428	100.0	X
	4 largest companies	X	X	69.5	X
	8 largest companies	X	X	86.8	X
	20 largest companies	X	X	97.0	X
	50 largest companies	X	X	99.8	1 512.5
3362	Motor vehicle body and trailer manufacturing				
	All companies	1 915	24 274 000	100.0	X
	4 largest companies	X	X	20.1	X
	8 largest companies	X	X	30.8	X
	20 largest companies	X	X	48.2	X
	50 largest companies	X	X	62.9	169.0
33621	Motor vehicle body and trailer manufacturing				
	All companies	1 915	24 274 000	100.0	X
	4 largest companies	X	X	20.1	X
	8 largest companies	X	X	30.8	X
	20 largest companies	X	X	48.2	X
	50 largest companies	X	X	62.9	169.0
336211	Motor vehicle body manufacturing				
	All companies	760	7 950 963	100.0	X
	4 largest companies	X	X	26.3	X
	8 largest companies	X	X	38.4	X
	20 largest companies	X	X	54.8	X
	50 largest companies	X	X	70.0	256.8
336212	Truck trailer manufacturing				
	All companies	363	4 009 684	100.0	X
	4 largest companies	X	X	40.5	X
	8 largest companies	X	X	49.1	X
	20 largest companies	X	X	64.3	X
	50 largest companies	X	X	81.4	548.8
336213	Motor home manufacturing				
	All companies	83	5 628 656	100.0	X
	4 largest companies	X	X	57.7	X
	8 largest companies	X	X	77.6	X
	20 largest companies	X	X	95.3	X
	50 largest companies	X	X	99.6	1 046.3
336214	Travel trailer and camper manufacturing				
	All companies	733	6 684 697	100.0	X
	4 largest companies	X	X	38.0	X
	8 largest companies	X	X	45.8	X
	20 largest companies	X	X	58.4	X
	50 largest companies	X	X	72.1	455.3
3363	Motor vehicle parts manufacturing				
	All companies	4 565	204 483 897	100.0	X
	4 largest companies	X	X	28.6	X
	8 largest companies	X	X	41.4	X
	20 largest companies	X	X	56.6	X
	50 largest companies	X	X	67.7	283.0
33631	Motor vehicle gasoline engine and engine parts manufacturing				
	All companies	940	34 452 486	100.0	X
	4 largest companies	X	X	50.5	X
	8 largest companies	X	X	66.6	X
	20 largest companies	X	X	81.1	X
	50 largest companies	X	X	91.1	816.3
336311	Carburetor, piston, piston ring, and valve manufacturing				
	All companies	113	2 004 438	100.0	X
	4 largest companies	X	X	64.7	X
	8 largest companies	X	X	83.0	X
	20 largest companies	X	X	92.1	X
	50 largest companies	X	X	98.2	1 194.1
336312	Gasoline engine and engine parts manufacturing				
	All companies	835	32 448 048	100.0	X
	4 largest companies	X	X	53.7	X
	8 largest companies	X	X	70.8	X
	20 largest companies	X	X	83.1	X
	50 largest companies	X	X	92.2	911.8

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
336	Transportation equipment manufacturing—Con.				
3363	Motor vehicle parts manufacturing—Con.				
33632	Motor vehicle electrical and electronic equipment manufacturing				
	All companies	786	25 818 446	100.0	X
	4 largest companies	X	X	42.5	X
	8 largest companies	X	X	55.4	X
	20 largest companies	X	X	70.1	X
	50 largest companies	X	X	84.2	788.2
336321	Vehicular lighting equipment manufacturing				
	All companies	91	3 284 903	100.0	X
	4 largest companies	X	X	50.7	X
	8 largest companies	X	X	73.8	X
	20 largest companies	X	X	92.0	X
	50 largest companies	X	X	99.1	901.1
336322	Other motor vehicle electrical and electronic equipment manufacturing				
	All companies	702	22 533 543	100.0	X
	4 largest companies	X	X	45.9	X
	8 largest companies	X	X	60.6	X
	20 largest companies	X	X	74.9	X
	50 largest companies	X	X	86.5	988.7
33633	Motor vehicle steering and suspension component (except spring) manufacturing				
	All companies	199	10 493 720	100.0	X
	4 largest companies	X	X	46.2	X
	8 largest companies	X	X	60.0	X
	20 largest companies	X	X	80.8	X
	50 largest companies	X	X	96.4	965.6
336330	Motor vehicle steering and suspension component (except spring) manufacturing				
	All companies	199	10 493 720	100.0	X
	4 largest companies	X	X	46.2	X
	8 largest companies	X	X	60.0	X
	20 largest companies	X	X	80.8	X
	50 largest companies	X	X	96.4	965.6
33634	Motor vehicle brake system manufacturing				
	All companies	210	13 550 927	100.0	X
	4 largest companies	X	X	51.4	X
	8 largest companies	X	X	64.3	X
	20 largest companies	X	X	82.8	X
	50 largest companies	X	X	95.5	807.7
336340	Motor vehicle brake system manufacturing				
	All companies	210	13 550 927	100.0	X
	4 largest companies	X	X	51.4	X
	8 largest companies	X	X	64.3	X
	20 largest companies	X	X	82.8	X
	50 largest companies	X	X	95.5	807.7
33635	Motor vehicle transmission and power train parts manufacturing				
	All companies	434	35 063 362	100.0	X
	4 largest companies	X	X	54.3	X
	8 largest companies	X	X	72.1	X
	20 largest companies	X	X	87.3	X
	50 largest companies	X	X	95.3	909.5
336350	Motor vehicle transmission and power train parts manufacturing				
	All companies	434	35 063 362	100.0	X
	4 largest companies	X	X	54.3	X
	8 largest companies	X	X	72.1	X
	20 largest companies	X	X	87.3	X
	50 largest companies	X	X	95.3	909.5
33636	Motor vehicle seating and interior trim manufacturing				
	All companies	294	16 711 277	100.0	X
	4 largest companies	X	X	67.6	X
	8 largest companies	X	X	76.3	X
	20 largest companies	X	X	84.6	X
	50 largest companies	X	X	94.0	1 795.4
336360	Motor vehicle seating and interior trim manufacturing				
	All companies	294	16 711 277	100.0	X
	4 largest companies	X	X	67.6	X
	8 largest companies	X	X	76.3	X
	20 largest companies	X	X	84.6	X
	50 largest companies	X	X	94.0	1 795.4
33637	Motor vehicle metal stamping				
	All companies	673	25 670 747	100.0	X
	4 largest companies	X	X	43.9	X
	8 largest companies	X	X	51.2	X
	20 largest companies	X	X	60.3	X
	50 largest companies	X	X	72.6	670.3

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Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
336	Transportation equipment manufacturing—Con.				
3363	Motor vehicle parts manufacturing—Con.				
33637	Motor vehicle metal stamping—Con.				
336370	Motor vehicle metal stamping				
	All companies	673	25 670 747	100.0	X
	4 largest companies	X	X	43.9	X
	8 largest companies	X	X	51.2	X
	20 largest companies	X	X	60.3	X
	50 largest companies	X	X	72.6	670.3
33639	Other motor vehicle parts manufacturing				
	All companies	1 257	42 722 932	100.0	X
	4 largest companies	X	X	24.1	X
	8 largest companies	X	X	33.6	X
	20 largest companies	X	X	50.3	X
	50 largest companies	X	X	69.5	215.9
336391	Motor vehicle air-conditioning manufacturing				
	All companies	75	6 825 527	100.0	X
	4 largest companies	X	X	68.1	X
	8 largest companies	X	X	89.4	X
	20 largest companies	X	X	98.5	X
	50 largest companies	X	X	99.9	1 419.9
336399	All other motor vehicle parts manufacturing				
	All companies	1 188	35 897 405	100.0	X
	4 largest companies	X	X	20.2	X
	8 largest companies	X	X	31.0	X
	20 largest companies	X	X	48.5	X
	50 largest companies	X	X	67.6	173.7
3364	Aerospace product and parts manufacturing				
	All companies	1 260	124 686 207	100.0	X
	4 largest companies	X	X	62.0	X
	8 largest companies	X	X	77.5	X
	20 largest companies	X	X	89.4	X
	50 largest companies	X	X	93.8	1 518.4
33641	Aerospace product and parts manufacturing				
	All companies	1 260	124 686 207	100.0	X
	4 largest companies	X	X	62.0	X
	8 largest companies	X	X	77.5	X
	20 largest companies	X	X	89.4	X
	50 largest companies	X	X	93.8	1 518.4
336411	Aircraft manufacturing				
	All companies	184	64 307 364	100.0	X
	4 largest companies	X	X	80.7	X
	8 largest companies	X	X	93.6	X
	20 largest companies	X	X	98.2	X
	50 largest companies	X	X	99.7	D
336412	Aircraft engine and engine parts manufacturing				
	All companies	296	23 532 038	100.0	X
	4 largest companies	X	X	76.9	X
	8 largest companies	X	X	82.4	X
	20 largest companies	X	X	89.5	X
	50 largest companies	X	X	94.9	2 527.7
336413	Other aircraft parts and auxiliary equipment manufacturing				
	All companies	760	20 799 465	100.0	X
	4 largest companies	X	X	53.6	X
	8 largest companies	X	X	69.2	X
	20 largest companies	X	X	79.5	X
	50 largest companies	X	X	88.0	892.6
336414	Guided missile and space vehicle manufacturing				
	All companies	13	12 518 301	100.0	X
	4 largest companies	X	X	96.0	X
	8 largest companies	X	X	99.9	X
	20 largest companies	X	X	100.0	D
	50 largest companies	X	X	—	—
336415	Guided missile and space vehicle propulsion unit and propulsion unit parts manufacturing				
	All companies	16	2 601 373	100.0	X
	4 largest companies	X	X	90.1	X
	8 largest companies	X	X	99.2	X
	20 largest companies	X	X	100.0	2 761.2
	50 largest companies	X	X	—	—
336419	Other guided missile and space vehicle parts and auxiliary equipment manufacturing				
	All companies	51	927 666	100.0	X
	4 largest companies	X	X	60.3	X
	8 largest companies	X	X	75.1	X
	20 largest companies	X	X	95.3	X
	50 largest companies	X	X	D	2 220.5

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
336	Transportation equipment manufacturing—Con.				
3365	Railroad rolling stock manufacturing				
	All companies	147	7 883 598	100.0	X
	4 largest companies	X	X	55.0	X
	8 largest companies	X	X	72.0	X
	20 largest companies	X	X	89.7	X
	50 largest companies	X	X	97.4	1 093.8
33651	Railroad rolling stock manufacturing				
	All companies	147	7 883 598	100.0	X
	4 largest companies	X	X	55.0	X
	8 largest companies	X	X	72.0	X
	20 largest companies	X	X	89.7	X
	50 largest companies	X	X	97.4	1 093.8
336510	Railroad rolling stock manufacturing				
	All companies	147	7 883 598	100.0	X
	4 largest companies	X	X	55.0	X
	8 largest companies	X	X	72.0	X
	20 largest companies	X	X	89.7	X
	50 largest companies	X	X	97.4	1 093.8
3366	Ship and boat building				
	All companies	1 649	21 246 707	100.0	X
	4 largest companies	X	X	50.8	X
	8 largest companies	X	X	56.4	X
	20 largest companies	X	X	64.8	X
	50 largest companies	X	X	75.6	883.9
33661	Ship and boat building				
	All companies	1 649	21 246 707	100.0	X
	4 largest companies	X	X	50.8	X
	8 largest companies	X	X	56.4	X
	20 largest companies	X	X	64.8	X
	50 largest companies	X	X	75.6	883.9
336611	Ship building and repairing				
	All companies	586	12 775 074	100.0	X
	4 largest companies	X	X	69.2	X
	8 largest companies	X	X	74.4	X
	20 largest companies	X	X	82.6	X
	50 largest companies	X	X	89.7	2 202.7
336612	Boat building				
	All companies	1 065	8 471 633	100.0	X
	4 largest companies	X	X	37.2	X
	8 largest companies	X	X	44.2	X
	20 largest companies	X	X	58.3	X
	50 largest companies	X	X	73.7	558.8
3369	Other transportation equipment manufacturing				
	All companies	799	13 349 149	100.0	X
	4 largest companies	X	X	47.2	X
	8 largest companies	X	X	65.0	X
	20 largest companies	X	X	80.3	X
	50 largest companies	X	X	88.6	742.1
33699	Other transportation equipment manufacturing				
	All companies	799	13 349 149	100.0	X
	4 largest companies	X	X	47.2	X
	8 largest companies	X	X	65.0	X
	20 largest companies	X	X	80.3	X
	50 largest companies	X	X	88.6	742.1
336991	Motorcycle, bicycle, and parts manufacturing				
	All companies	348	4 923 158	100.0	X
	4 largest companies	X	X	71.7	X
	8 largest companies	X	X	78.1	X
	20 largest companies	X	X	86.5	X
	50 largest companies	X	X	93.0	2 041.1
336992	Military armored vehicle, tank, and tank component manufacturing				
	All companies	31	1 455 918	100.0	X
	4 largest companies	X	X	88.3	X
	8 largest companies	X	X	93.2	X
	20 largest companies	X	X	99.2	X
	50 largest companies	X	X	100.0	D
336999	All other transportation equipment manufacturing				
	All companies	424	6 970 073	100.0	X
	4 largest companies	X	X	58.6	X
	8 largest companies	X	X	78.5	X
	20 largest companies	X	X	86.9	X
	50 largest companies	X	X	93.8	1 261.0

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
337	Furniture and related product manufacturing				
	All companies	21 523	75 823 941	100.0	X
	4 largest companies	X	X	11.0	X
	8 largest companies	X	X	18.0	X
	20 largest companies	X	X	28.6	X
	50 largest companies	X	X	39.6	57.2
3371	Household and institutional furniture and kitchen cabinet manufacturing				
	All companies	16 475	44 547 928	100.0	X
	4 largest companies	X	X	17.0	X
	8 largest companies	X	X	23.2	X
	20 largest companies	X	X	32.4	X
	50 largest companies	X	X	43.3	97.4
33711	Wood kitchen cabinet and countertop manufacturing				
	All companies	9 452	14 325 411	100.0	X
	4 largest companies	X	X	29.2	X
	8 largest companies	X	X	35.1	X
	20 largest companies	X	X	43.0	X
	50 largest companies	X	X	50.0	317.5
337110	Wood kitchen cabinet and countertop manufacturing				
	All companies	9 452	14 325 411	100.0	X
	4 largest companies	X	X	29.2	X
	8 largest companies	X	X	35.1	X
	20 largest companies	X	X	43.0	X
	50 largest companies	X	X	50.0	317.5
33712	Household and institutional furniture manufacturing				
	All companies	7 034	30 222 517	100.0	X
	4 largest companies	X	X	19.1	X
	8 largest companies	X	X	26.1	X
	20 largest companies	X	X	37.1	X
	50 largest companies	X	X	49.0	141.9
337121	Upholstered household furniture manufacturing				
	All companies	1 679	10 555 276	100.0	X
	4 largest companies	X	X	34.7	X
	8 largest companies	X	X	42.2	X
	20 largest companies	X	X	53.6	X
	50 largest companies	X	X	66.9	421.2
337122	Nonupholstered wood household furniture manufacturing				
	All companies	3 975	11 555 811	100.0	X
	4 largest companies	X	X	23.9	X
	8 largest companies	X	X	34.5	X
	20 largest companies	X	X	49.9	X
	50 largest companies	X	X	62.0	217.9
337124	Metal household furniture manufacturing				
	All companies	353	1 980 832	100.0	X
	4 largest companies	X	X	27.6	X
	8 largest companies	X	X	41.6	X
	20 largest companies	X	X	64.2	X
	50 largest companies	X	X	83.8	308.2
337125	Household furniture (except wood and metal) manufacturing				
	All companies	178	1 041 395	100.0	X
	4 largest companies	X	X	64.4	X
	8 largest companies	X	X	76.0	X
	20 largest companies	X	X	86.8	X
	50 largest companies	X	X	95.5	2 649.2
337127	Institutional furniture manufacturing				
	All companies	693	4 650 890	100.0	X
	4 largest companies	X	X	20.9	X
	8 largest companies	X	X	28.7	X
	20 largest companies	X	X	43.1	X
	50 largest companies	X	X	63.7	170.4
337129	Wood television, radio, and sewing machine cabinet manufacturing				
	All companies	201	438 313	100.0	X
	4 largest companies	X	X	64.4	X
	8 largest companies	X	X	75.4	X
	20 largest companies	X	X	84.6	X
	50 largest companies	X	X	93.1	1 533.2
3372	Office furniture (including fixtures) manufacturing				
	All companies	4 129	23 369 273	100.0	X
	4 largest companies	X	X	24.2	X
	8 largest companies	X	X	32.4	X
	20 largest companies	X	X	41.4	X
	50 largest companies	X	X	50.4	178.7

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NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
337	Furniture and related product manufacturing—Con.				
3372	Office furniture (including fixtures) manufacturing—Con.				
33721	Office furniture (including fixtures) manufacturing				
	All companies	4 129	23 369 273	100.0	X
	4 largest companies	X	X	24.2	X
	8 largest companies	X	X	32.4	X
	20 largest companies	X	X	41.4	X
	50 largest companies	X	X	50.4	178.7
337211	Wood office furniture manufacturing				
	All companies	546	2 873 712	100.0	X
	4 largest companies	X	X	34.1	X
	8 largest companies	X	X	43.3	X
	20 largest companies	X	X	55.8	X
	50 largest companies	X	X	71.6	424.3
337212	Custom architectural woodwork and millwork manufacturing				
	All companies	1 552	4 144 553	100.0	X
	4 largest companies	X	X	10.1	X
	8 largest companies	X	X	14.9	X
	20 largest companies	X	X	23.0	X
	50 largest companies	X	X	35.6	44.6
337214	Office furniture (except wood) manufacturing				
	All companies	261	7 765 762	100.0	X
	4 largest companies	X	X	61.8	X
	8 largest companies	X	X	80.0	X
	20 largest companies	X	X	88.4	X
	50 largest companies	X	X	94.8	1 139.9
337215	Showcase, partition, shelving, and locker manufacturing				
	All companies	1 800	8 585 246	100.0	X
	4 largest companies	X	X	13.7	X
	8 largest companies	X	X	20.5	X
	20 largest companies	X	X	31.5	X
	50 largest companies	X	X	44.7	77.5
3379	Other furniture related product manufacturing				
	All companies	974	7 906 740	100.0	X
	4 largest companies	X	X	32.2	X
	8 largest companies	X	X	44.5	X
	20 largest companies	X	X	56.1	X
	50 largest companies	X	X	68.1	350.3
33791	Mattress manufacturing				
	All companies	513	5 113 367	100.0	X
	4 largest companies	X	X	43.6	X
	8 largest companies	X	X	52.0	X
	20 largest companies	X	X	64.1	X
	50 largest companies	X	X	76.2	654.1
337910	Mattress manufacturing				
	All companies	513	5 113 367	100.0	X
	4 largest companies	X	X	43.6	X
	8 largest companies	X	X	52.0	X
	20 largest companies	X	X	64.1	X
	50 largest companies	X	X	76.2	654.1
33792	Blind and shade manufacturing				
	All companies	461	2 793 373	100.0	X
	4 largest companies	X	X	44.3	X
	8 largest companies	X	X	53.3	X
	20 largest companies	X	X	66.2	X
	50 largest companies	X	X	81.2	631.4
337920	Blind and shade manufacturing				
	All companies	461	2 793 373	100.0	X
	4 largest companies	X	X	44.3	X
	8 largest companies	X	X	53.3	X
	20 largest companies	X	X	66.2	X
	50 largest companies	X	X	81.2	631.4
339	Miscellaneous manufacturing				
	All companies	31 245	125 289 959	100.0	X
	4 largest companies	X	X	9.3	X
	8 largest companies	X	X	13.8	X
	20 largest companies	X	X	21.8	X
	50 largest companies	X	X	32.7	41.6
3391	Medical equipment and supplies manufacturing				
	All companies	11 418	61 772 266	100.0	X
	4 largest companies	X	X	18.4	X
	8 largest companies	X	X	26.6	X
	20 largest companies	X	X	40.2	X
	50 largest companies	X	X	54.9	148.8

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
339	Miscellaneous manufacturing—Con.				
3391	Medical equipment and supplies manufacturing—Con.				
33911	Medical equipment and supplies manufacturing				
	All companies	11 418	61 772 266	100.0	X
	4 largest companies	X	X	18.4	X
	8 largest companies	X	X	26.6	X
	20 largest companies	X	X	40.2	X
	50 largest companies	X	X	54.9	148.8
339111	Laboratory apparatus and furniture manufacturing				
	All companies	404	4 935 776	100.0	X
	4 largest companies	X	X	32.5	X
	8 largest companies	X	X	45.5	X
	20 largest companies	X	X	64.1	X
	50 largest companies	X	X	79.3	384.2
339112	Surgical and medical instrument manufacturing				
	All companies	1 212	21 776 613	100.0	X
	4 largest companies	X	X	28.7	X
	8 largest companies	X	X	41.5	X
	20 largest companies	X	X	56.9	X
	50 largest companies	X	X	72.5	294.6
339113	Surgical appliance and supplies manufacturing				
	All companies	1 617	23 853 321	100.0	X
	4 largest companies	X	X	27.3	X
	8 largest companies	X	X	38.0	X
	20 largest companies	X	X	56.4	X
	50 largest companies	X	X	73.2	279.1
339114	Dental equipment and supplies manufacturing				
	All companies	849	3 203 243	100.0	X
	4 largest companies	X	X	34.7	X
	8 largest companies	X	X	49.1	X
	20 largest companies	X	X	67.8	X
	50 largest companies	X	X	79.3	414.5
339115	Ophthalmic goods manufacturing				
	All companies	491	4 650 640	100.0	X
	4 largest companies	X	X	41.4	X
	8 largest companies	X	X	56.1	X
	20 largest companies	X	X	77.7	X
	50 largest companies	X	X	86.8	629.1
339116	Dental laboratories				
	All companies	6 923	3 352 673	100.0	X
	4 largest companies	X	X	12.7	X
	8 largest companies	X	X	17.8	X
	20 largest companies	X	X	23.2	X
	50 largest companies	X	X	30.0	54.2
3399	Other miscellaneous manufacturing				
	All companies	19 848	63 517 693	100.0	X
	4 largest companies	X	X	5.6	X
	8 largest companies	X	X	9.6	X
	20 largest companies	X	X	17.5	X
	50 largest companies	X	X	26.5	20.6
33991	Jewelry and silverware manufacturing				
	All companies	3 015	8 886 556	100.0	X
	4 largest companies	X	X	15.5	X
	8 largest companies	X	X	23.1	X
	20 largest companies	X	X	37.3	X
	50 largest companies	X	X	52.8	117.2
339911	Jewelry (except costume) manufacturing				
	All companies	1 923	6 404 377	100.0	X
	4 largest companies	X	X	21.5	X
	8 largest companies	X	X	30.8	X
	20 largest companies	X	X	45.3	X
	50 largest companies	X	X	60.0	195.3
339912	Silverware and hollowware manufacturing				
	All companies	158	575 623	100.0	X
	4 largest companies	X	X	61.9	X
	8 largest companies	X	X	71.1	X
	20 largest companies	X	X	83.2	X
	50 largest companies	X	X	94.1	1 383.1
339913	Jewelers' material and lapidary work manufacturing				
	All companies	290	1 028 634	100.0	X
	4 largest companies	X	X	37.7	X
	8 largest companies	X	X	54.1	X
	20 largest companies	X	X	77.6	X
	50 largest companies	X	X	91.4	562.5

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
339	Miscellaneous manufacturing—Con.				
3399	Other miscellaneous manufacturing—Con.				
33991	Jewelry and silverware manufacturing—Con.				
339914	Costume jewelry and novelty manufacturing				
	All companies	650	877 922	100.0	X
	4 largest companies	X	X	22.5	X
	8 largest companies	X	X	33.3	X
	20 largest companies	X	X	49.6	X
	50 largest companies	X	X	67.7	208.8
33992	Sporting and athletic goods manufacturing				
	All companies	2 157	11 841 594	100.0	X
	4 largest companies	X	X	22.5	X
	8 largest companies	X	X	32.4	X
	20 largest companies	X	X	45.7	X
	50 largest companies	X	X	61.6	182.2
339920	Sporting and athletic goods manufacturing				
	All companies	2 157	11 841 594	100.0	X
	4 largest companies	X	X	22.5	X
	8 largest companies	X	X	32.4	X
	20 largest companies	X	X	45.7	X
	50 largest companies	X	X	61.6	182.2
33993	Doll, toy, and game manufacturing				
	All companies	865	4 048 149	100.0	X
	4 largest companies	X	X	35.6	X
	8 largest companies	X	X	44.5	X
	20 largest companies	X	X	58.6	X
	50 largest companies	X	X	74.5	419.4
339931	Doll and stuffed toy manufacturing				
	All companies	134	328 138	100.0	X
	4 largest companies	X	X	42.8	X
	8 largest companies	X	X	61.0	X
	20 largest companies	X	X	79.6	X
	50 largest companies	X	X	93.8	622.2
339932	Game, toy, and children's vehicle manufacturing				
	All companies	732	3 720 011	100.0	X
	4 largest companies	X	X	38.8	X
	8 largest companies	X	X	48.4	X
	20 largest companies	X	X	63.3	X
	50 largest companies	X	X	77.7	492.5
33994	Office supplies (except paper) manufacturing				
	All companies	771	4 213 709	100.0	X
	4 largest companies	X	X	40.8	X
	8 largest companies	X	X	50.8	X
	20 largest companies	X	X	64.7	X
	50 largest companies	X	X	77.7	510.8
339941	Pen and mechanical pencil manufacturing				
	All companies	87	1 507 692	100.0	X
	4 largest companies	X	X	74.1	X
	8 largest companies	X	X	80.8	X
	20 largest companies	X	X	91.5	X
	50 largest companies	X	X	98.9	2 159.0
339942	Lead pencil and art good manufacturing				
	All companies	138	1 517 353	100.0	X
	4 largest companies	X	X	58.3	X
	8 largest companies	X	X	73.1	X
	20 largest companies	X	X	86.5	X
	50 largest companies	X	X	95.6	1 276.1
339943	Marking device manufacturing				
	All companies	476	594 474	100.0	X
	4 largest companies	X	X	21.7	X
	8 largest companies	X	X	32.9	X
	20 largest companies	X	X	51.0	X
	50 largest companies	X	X	68.4	199.0
339944	Carbon paper and inked ribbon manufacturing				
	All companies	72	594 190	100.0	X
	4 largest companies	X	X	51.6	X
	8 largest companies	X	X	69.1	X
	20 largest companies	X	X	88.4	X
	50 largest companies	X	X	98.9	910.1

See footnotes at end of table.

Table 2. Share of Value of Shipments Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Total value of shipments ² (\$1,000)	Total value of shipments (percent)	Herfindahl-Hirschman index for 50 largest companies ³
339	Miscellaneous manufacturing—Con.				
3399	Other miscellaneous manufacturing—Con.				
33995	Sign manufacturing				
	All companies	6 125	9 654 698	100.0	X
	4 largest companies	X	X	5.2	X
	8 largest companies	X	X	8.9	X
	20 largest companies	X	X	16.4	X
	50 largest companies	X	X	27.3	19.1
339950	Sign manufacturing				
	All companies	6 125	9 654 698	100.0	X
	4 largest companies	X	X	5.2	X
	8 largest companies	X	X	8.9	X
	20 largest companies	X	X	16.4	X
	50 largest companies	X	X	27.3	19.1
33999	All other miscellaneous manufacturing				
	All companies	6 950	24 872 987	100.0	X
	4 largest companies	X	X	9.3	X
	8 largest companies	X	X	15.4	X
	20 largest companies	X	X	25.0	X
	50 largest companies	X	X	36.5	44.2
339991	Gasket, packing, and sealing device manufacturing				
	All companies	526	5 313 558	100.0	X
	4 largest companies	X	X	30.8	X
	8 largest companies	X	X	43.8	X
	20 largest companies	X	X	58.6	X
	50 largest companies	X	X	73.1	322.4
339992	Musical instrument manufacturing				
	All companies	563	1 801 203	100.0	X
	4 largest companies	X	X	36.6	X
	8 largest companies	X	X	50.8	X
	20 largest companies	X	X	69.0	X
	50 largest companies	X	X	83.7	473.9
339993	Fastener, button, needle, and pin manufacturing				
	All companies	180	669 359	100.0	X
	4 largest companies	X	X	50.5	X
	8 largest companies	X	X	62.1	X
	20 largest companies	X	X	77.2	X
	50 largest companies	X	X	91.9	1 277.0
339994	Broom, brush, and mop manufacturing				
	All companies	269	2 214 378	100.0	X
	4 largest companies	X	X	27.3	X
	8 largest companies	X	X	44.0	X
	20 largest companies	X	X	63.7	X
	50 largest companies	X	X	82.4	320.9
339995	Burial casket manufacturing				
	All companies	148	1 201 488	100.0	X
	4 largest companies	X	X	73.2	X
	8 largest companies	X	X	81.0	X
	20 largest companies	X	X	88.9	X
	50 largest companies	X	X	95.1	D
339999	All other miscellaneous manufacturing				
	All companies	5 270	13 673 001	100.0	X
	4 largest companies	X	X	11.4	X
	8 largest companies	X	X	17.1	X
	20 largest companies	X	X	25.4	X
	50 largest companies	X	X	34.9	56.6

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²For most industries, data are value of shipments. For industries 311411, 311412, 311421, 311422, 311711, 311712, 311941, 311999, 312210, 312221, and 312229, value of production is shown. For industry 336611, value of work done is shown.

³The Herfindahl-Hirschman index is calculated by summing the squares of the individual company percentages for the 50 largest companies or the universe, whichever is lower.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing				
	All companies	23 334	203 473 601	100.0	X
	4 largest companies	X	X	14.8	X
	8 largest companies	X	X	25.4	X
	20 largest companies	X	X	41.8	X
	50 largest companies	X	X	55.4	115.9
3111	Animal food manufacturing				
	All companies	1 211	10 567 535	100.0	X
	4 largest companies	X	X	39.3	X
	8 largest companies	X	X	49.7	X
	20 largest companies	X	X	65.3	X
	50 largest companies	X	X	78.6	636.6
31111	Animal food manufacturing				
	All companies	1 211	10 567 535	100.0	X
	4 largest companies	X	X	39.3	X
	8 largest companies	X	X	49.7	X
	20 largest companies	X	X	65.3	X
	50 largest companies	X	X	78.6	636.6
311111	Dog and cat food manufacturing				
	All companies	176	5 921 682	100.0	X
	4 largest companies	X	X	67.1	X
	8 largest companies	X	X	81.4	X
	20 largest companies	X	X	93.4	X
	50 largest companies	X	X	98.1	1 876.1
311119	Other animal food manufacturing				
	All companies	1 043	4 645 853	100.0	X
	4 largest companies	X	X	25.4	X
	8 largest companies	X	X	35.8	X
	20 largest companies	X	X	52.5	X
	50 largest companies	X	X	68.1	244.2
3112	Grain and oilseed milling				
	All companies	506	17 634 556	100.0	X
	4 largest companies	X	X	50.8	X
	8 largest companies	X	X	63.8	X
	20 largest companies	X	X	79.0	X
	50 largest companies	X	X	91.2	839.1
31121	Flour milling and malt manufacturing				
	All companies	285	2 653 657	100.0	X
	4 largest companies	X	X	38.2	X
	8 largest companies	X	X	56.8	X
	20 largest companies	X	X	74.0	X
	50 largest companies	X	X	91.0	524.4
311211	Flour milling				
	All companies	211	2 002 207	100.0	X
	4 largest companies	X	X	48.8	X
	8 largest companies	X	X	67.4	X
	20 largest companies	X	X	83.8	X
	50 largest companies	X	X	96.5	785.3
311212	Rice milling				
	All companies	62	518 618	100.0	X
	4 largest companies	X	X	56.8	X
	8 largest companies	X	X	71.0	X
	20 largest companies	X	X	90.8	X
	50 largest companies	X	X	99.8	1 434.9
311213	Malt manufacturing				
	All companies	16	132 832	100.0	X
	4 largest companies	X	X	86.8	X
	8 largest companies	X	X	97.9	X
	20 largest companies	X	X	100.0	1 999.3
	50 largest companies	X	X	—	—
31122	Starch and vegetable fats and oils manufacturing				
	All companies	191	8 235 076	100.0	X
	4 largest companies	X	X	57.2	X
	8 largest companies	X	X	70.1	X
	20 largest companies	X	X	89.2	X
	50 largest companies	X	X	98.1	1 204.0
311221	Wet corn milling				
	All companies	35	3 181 182	100.0	X
	4 largest companies	X	X	69.0	X
	8 largest companies	X	X	88.6	X
	20 largest companies	X	X	99.7	X
	50 largest companies	X	X	100.0	1 471.3

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing—Con.				
3112	Grain and oilseed milling—Con.				
31122	Starch and vegetable fats and oils manufacturing—Con.				
311222	Soybean processing				
	All companies	62	3 003 967	100.0	X
	4 largest companies	X	X	D	X
	8 largest companies	X	X	95.3	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	99.9	2 785.2
311223	Other oilseed processing				
	All companies	34	366 756	100.0	X
	4 largest companies	X	X	65.2	X
	8 largest companies	X	X	81.5	X
	20 largest companies	X	X	98.5	X
	50 largest companies	X	X	100.0	1 579.9
311225	Fats and oils refining and blending				
	All companies	77	1 683 171	100.0	X
	4 largest companies	X	X	57.8	X
	8 largest companies	X	X	77.6	X
	20 largest companies	X	X	93.7	X
	50 largest companies	X	X	99.8	1 026.6
31123	Breakfast cereal manufacturing				
	All companies	45	6 745 823	100.0	X
	4 largest companies	X	X	82.1	X
	8 largest companies	X	X	92.5	X
	20 largest companies	X	X	99.0	X
	50 largest companies	X	X	100.0	2 999.6
311230	Breakfast cereal manufacturing				
	All companies	45	6 745 823	100.0	X
	4 largest companies	X	X	82.1	X
	8 largest companies	X	X	92.5	X
	20 largest companies	X	X	99.0	X
	50 largest companies	X	X	100.0	2 999.6
3113	Sugar and confectionery product manufacturing				
	All companies	1 656	13 530 717	100.0	X
	4 largest companies	X	X	43.4	X
	8 largest companies	X	X	53.3	X
	20 largest companies	X	X	68.9	X
	50 largest companies	X	X	82.9	681.8
31131	Sugar manufacturing				
	All companies	52	2 164 122	100.0	X
	4 largest companies	X	X	52.8	X
	8 largest companies	X	X	71.6	X
	20 largest companies	X	X	95.2	X
	50 largest companies	X	X	D	855.5
311311	Sugarcane mills				
	All companies	30	615 828	100.0	X
	4 largest companies	X	X	56.6	X
	8 largest companies	X	X	79.6	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	100.0	1 046.6
311312	Cane sugar refining				
	All companies	13	535 419	100.0	X
	4 largest companies	X	X	D	X
	8 largest companies	X	X	99.9	X
	20 largest companies	X	X	100.0	2 885.2
	50 largest companies	X	X	—	—
311313	Beet sugar manufacturing				
	All companies	12	1 012 875	100.0	X
	4 largest companies	X	X	85.3	X
	8 largest companies	X	X	97.7	X
	20 largest companies	X	X	100.0	2 208.9
	50 largest companies	X	X	—	—
31132	Chocolate and confectionery manufacturing from cacao beans				
	All companies	138	1 903 829	100.0	X
	4 largest companies	X	X	73.0	X
	8 largest companies	X	X	87.1	X
	20 largest companies	X	X	96.5	X
	50 largest companies	X	X	98.7	2 267.6
311320	Chocolate and confectionery manufacturing from cacao beans				
	All companies	138	1 903 829	100.0	X
	4 largest companies	X	X	73.0	X
	8 largest companies	X	X	87.1	X
	20 largest companies	X	X	96.5	X
	50 largest companies	X	X	98.7	2 267.6

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing—Con.				
3113	Sugar and confectionery product manufacturing—Con.				
31133	Confectionery manufacturing from purchased chocolate				
	All companies	1 008	5 708 718	100.0	X
	4 largest companies	X	X	65.5	X
	8 largest companies	X	X	75.6	X
	20 largest companies	X	X	83.4	X
	50 largest companies	X	X	89.4	1 690.3
311330	Confectionery manufacturing from purchased chocolate				
	All companies	1 008	5 708 718	100.0	X
	4 largest companies	X	X	65.5	X
	8 largest companies	X	X	75.6	X
	20 largest companies	X	X	83.4	X
	50 largest companies	X	X	89.4	1 690.3
31134	Nonchocolate confectionery manufacturing				
	All companies	476	3 754 048	100.0	X
	4 largest companies	X	X	47.6	X
	8 largest companies	X	X	61.0	X
	20 largest companies	X	X	77.9	X
	50 largest companies	X	X	91.4	702.3
311340	Nonchocolate confectionery manufacturing				
	All companies	476	3 754 048	100.0	X
	4 largest companies	X	X	47.6	X
	8 largest companies	X	X	61.0	X
	20 largest companies	X	X	77.9	X
	50 largest companies	X	X	91.4	702.3
3114	Fruit and vegetable preserving and specialty food manufacturing				
	All companies	1 360	29 628 205	100.0	X
	4 largest companies	X	X	27.7	X
	8 largest companies	X	X	39.6	X
	20 largest companies	X	X	55.0	X
	50 largest companies	X	X	72.1	274.9
31141	Frozen food manufacturing				
	All companies	506	12 044 309	100.0	X
	4 largest companies	X	X	36.4	X
	8 largest companies	X	X	48.9	X
	20 largest companies	X	X	67.3	X
	50 largest companies	X	X	83.4	456.5
311411	Frozen fruit, juice, and vegetable manufacturing				
	All companies	153	4 792 013	100.0	X
	4 largest companies	X	X	36.1	X
	8 largest companies	X	X	55.7	X
	20 largest companies	X	X	80.2	X
	50 largest companies	X	X	94.4	509.0
311412	Frozen specialty food manufacturing				
	All companies	361	7 252 296	100.0	X
	4 largest companies	X	X	44.5	X
	8 largest companies	X	X	58.9	X
	20 largest companies	X	X	76.0	X
	50 largest companies	X	X	88.6	749.2
31142	Fruit and vegetable canning, pickling, and drying				
	All companies	877	17 583 896	100.0	X
	4 largest companies	X	X	31.2	X
	8 largest companies	X	X	43.9	X
	20 largest companies	X	X	62.4	X
	50 largest companies	X	X	78.9	427.9
311421	Fruit and vegetable canning				
	All companies	632	9 431 910	100.0	X
	4 largest companies	X	X	24.9	X
	8 largest companies	X	X	41.0	X
	20 largest companies	X	X	61.4	X
	50 largest companies	X	X	80.5	273.6
311422	Specialty canning				
	All companies	115	5 178 505	100.0	X
	4 largest companies	X	X	74.2	X
	8 largest companies	X	X	85.6	X
	20 largest companies	X	X	94.1	X
	50 largest companies	X	X	99.0	D
311423	Dried and dehydrated food manufacturing				
	All companies	151	2 973 481	100.0	X
	4 largest companies	X	X	53.6	X
	8 largest companies	X	X	69.6	X
	20 largest companies	X	X	84.8	X
	50 largest companies	X	X	96.2	1 030.2

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added ² (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing—Con.				
3115	Dairy product manufacturing				
	All companies	1 170	22 319 986	100.0	X
	4 largest companies	X	X	29.6	X
	8 largest companies	X	X	42.5	X
	20 largest companies	X	X	61.4	X
	50 largest companies	X	X	77.6	356.0
31151	Dairy product (except frozen) manufacturing				
	All companies	825	17 909 069	100.0	X
	4 largest companies	X	X	34.6	X
	8 largest companies	X	X	46.4	X
	20 largest companies	X	X	64.2	X
	50 largest companies	X	X	79.2	422.3
311511	Fluid milk manufacturing				
	All companies	315	8 367 532	100.0	X
	4 largest companies	X	X	46.2	X
	8 largest companies	X	X	56.8	X
	20 largest companies	X	X	71.4	X
	50 largest companies	X	X	85.0	1 012.7
311512	Creamery butter manufacturing				
	All companies	33	268 567	100.0	X
	4 largest companies	X	X	66.9	X
	8 largest companies	X	X	85.8	X
	20 largest companies	X	X	99.3	X
	50 largest companies	X	X	100.0	1 421.5
311513	Cheese manufacturing				
	All companies	366	5 030 722	100.0	X
	4 largest companies	X	X	43.5	X
	8 largest companies	X	X	56.9	X
	20 largest companies	X	X	76.5	X
	50 largest companies	X	X	90.2	693.2
311514	Dry, condensed, and evaporated dairy product manufacturing				
	All companies	158	4 242 248	100.0	X
	4 largest companies	X	X	67.2	X
	8 largest companies	X	X	76.1	X
	20 largest companies	X	X	88.1	X
	50 largest companies	X	X	97.2	1 780.5
31152	Ice cream and frozen dessert manufacturing				
	All companies	364	4 410 917	100.0	X
	4 largest companies	X	X	54.2	X
	8 largest companies	X	X	69.6	X
	20 largest companies	X	X	84.1	X
	50 largest companies	X	X	93.0	880.7
311520	Ice cream and frozen dessert manufacturing				
	All companies	364	4 410 917	100.0	X
	4 largest companies	X	X	54.2	X
	8 largest companies	X	X	69.6	X
	20 largest companies	X	X	84.1	X
	50 largest companies	X	X	93.0	880.7
3116	Animal slaughtering and processing				
	All companies	3 335	40 734 141	100.0	X
	4 largest companies	X	X	36.1	X
	8 largest companies	X	X	50.9	X
	20 largest companies	X	X	63.5	X
	50 largest companies	X	X	74.2	581.8
31161	Animal slaughtering and processing				
	All companies	3 335	40 734 141	100.0	X
	4 largest companies	X	X	36.1	X
	8 largest companies	X	X	50.9	X
	20 largest companies	X	X	63.5	X
	50 largest companies	X	X	74.2	581.8
311611	Animal (except poultry) slaughtering				
	All companies	1 777	10 549 495	100.0	X
	4 largest companies	X	X	50.7	X
	8 largest companies	X	X	67.9	X
	20 largest companies	X	X	79.8	X
	50 largest companies	X	X	88.8	783.0
311612	Meat processed from carcasses				
	All companies	1 194	9 826 690	100.0	X
	4 largest companies	X	X	26.1	X
	8 largest companies	X	X	36.1	X
	20 largest companies	X	X	50.3	X
	50 largest companies	X	X	65.0	231.1

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing—Con.				
3116	Animal slaughtering and processing—Con.				
31161	Animal slaughtering and processing—Con.				
311613	Rendering and meat byproduct processing				
	All companies	122	1 182 598	100.0	X
	4 largest companies	X	X	42.4	X
	8 largest companies	X	X	57.9	X
	20 largest companies	X	X	80.8	X
	50 largest companies	X	X	95.0	615.6
311615	Poultry processing				
	All companies	310	19 175 358	100.0	X
	4 largest companies	X	X	53.8	X
	8 largest companies	X	X	65.6	X
	20 largest companies	X	X	81.1	X
	50 largest companies	X	X	93.8	1 139.6
3117	Seafood product preparation and packaging				
	All companies	648	3 264 610	100.0	X
	4 largest companies	X	X	18.8	X
	8 largest companies	X	X	27.8	X
	20 largest companies	X	X	45.2	X
	50 largest companies	X	X	68.5	158.0
31171	Seafood product preparation and packaging				
	All companies	648	3 264 610	100.0	X
	4 largest companies	X	X	18.8	X
	8 largest companies	X	X	27.8	X
	20 largest companies	X	X	45.2	X
	50 largest companies	X	X	68.5	158.0
311711	Seafood canning				
	All companies	128	424 368	100.0	X
	4 largest companies	X	X	39.6	X
	8 largest companies	X	X	56.5	X
	20 largest companies	X	X	83.7	X
	50 largest companies	X	X	95.5	635.3
311712	Fresh and frozen seafood processing				
	All companies	529	2 840 242	100.0	X
	4 largest companies	X	X	19.5	X
	8 largest companies	X	X	28.9	X
	20 largest companies	X	X	48.0	X
	50 largest companies	X	X	71.7	175.4
3118	Bakeries and tortilla manufacturing				
	All companies	10 413	32 104 360	100.0	X
	4 largest companies	X	X	31.5	X
	8 largest companies	X	X	48.3	X
	20 largest companies	X	X	61.2	X
	50 largest companies	X	X	70.4	370.4
31181	Bread and bakery product manufacturing				
	All companies	9 515	20 746 411	100.0	X
	4 largest companies	X	X	41.1	X
	8 largest companies	X	X	53.0	X
	20 largest companies	X	X	61.4	X
	50 largest companies	X	X	69.4	581.4
311811	Retail bakeries				
	All companies	7 079	1 880 414	100.0	X
	4 largest companies	X	X	4.0	X
	8 largest companies	X	X	6.5	X
	20 largest companies	X	X	10.4	X
	50 largest companies	X	X	15.8	8.0
311812	Commercial bakeries				
	All companies	2 259	16 652 807	100.0	X
	4 largest companies	X	X	48.3	X
	8 largest companies	X	X	62.6	X
	20 largest companies	X	X	71.2	X
	50 largest companies	X	X	79.8	844.0
311813	Frozen cakes, pies, and other pastries manufacturing				
	All companies	227	2 213 190	100.0	X
	4 largest companies	X	X	30.4	X
	8 largest companies	X	X	43.6	X
	20 largest companies	X	X	66.8	X
	50 largest companies	X	X	86.2	361.3

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing—Con.				
3118	Bakeries and tortilla manufacturing—Con.				
31182	Cookie, cracker, and pasta manufacturing				
	All companies	655	10 386 980	100.0	X
	4 largest companies	X	X	54.9	X
	8 largest companies	X	X	65.3	X
	20 largest companies	X	X	79.7	X
	50 largest companies	X	X	89.7	1 038.2
311821	Cookie and cracker manufacturing				
	All companies	296	7 387 602	100.0	X
	4 largest companies	X	X	70.9	X
	8 largest companies	X	X	81.3	X
	20 largest companies	X	X	91.4	X
	50 largest companies	X	X	96.4	1 901.2
311822	Flour mixes and dough manufacturing from purchased flour				
	All companies	183	2 345 803	100.0	X
	4 largest companies	X	X	50.7	X
	8 largest companies	X	X	63.4	X
	20 largest companies	X	X	79.9	X
	50 largest companies	X	X	93.1	1 286.1
311823	Dry pasta manufacturing				
	All companies	185	653 575	100.0	X
	4 largest companies	X	X	61.0	X
	8 largest companies	X	X	77.7	X
	20 largest companies	X	X	86.4	X
	50 largest companies	X	X	94.2	1 215.0
31183	Tortilla manufacturing				
	All companies	272	970 969	100.0	X
	4 largest companies	X	X	59.3	X
	8 largest companies	X	X	65.4	X
	20 largest companies	X	X	75.2	X
	50 largest companies	X	X	88.3	2 355.4
311830	Tortilla manufacturing				
	All companies	272	970 969	100.0	X
	4 largest companies	X	X	59.3	X
	8 largest companies	X	X	65.4	X
	20 largest companies	X	X	75.2	X
	50 largest companies	X	X	88.3	2 355.4
3119	Other food manufacturing				
	All companies	3 412	33 689 491	100.0	X
	4 largest companies	X	X	41.4	X
	8 largest companies	X	X	49.5	X
	20 largest companies	X	X	58.2	X
	50 largest companies	X	X	68.0	627.8
31191	Snack food manufacturing				
	All companies	411	10 466 701	100.0	X
	4 largest companies	X	X	64.0	X
	8 largest companies	X	X	71.5	X
	20 largest companies	X	X	82.7	X
	50 largest companies	X	X	91.3	2 717.1
311911	Roasted nuts and peanut butter manufacturing				
	All companies	145	1 860 216	100.0	X
	4 largest companies	X	X	37.5	X
	8 largest companies	X	X	59.2	X
	20 largest companies	X	X	80.6	X
	50 largest companies	X	X	94.4	546.7
311919	Other snack food manufacturing				
	All companies	267	8 606 485	100.0	X
	4 largest companies	X	X	76.4	X
	8 largest companies	X	X	83.8	X
	20 largest companies	X	X	90.9	X
	50 largest companies	X	X	95.9	D
31192	Coffee and tea manufacturing				
	All companies	258	2 879 879	100.0	X
	4 largest companies	X	X	51.6	X
	8 largest companies	X	X	63.4	X
	20 largest companies	X	X	82.0	X
	50 largest companies	X	X	93.3	779.8
311920	Coffee and tea manufacturing				
	All companies	258	2 879 879	100.0	X
	4 largest companies	X	X	51.6	X
	8 largest companies	X	X	63.4	X
	20 largest companies	X	X	82.0	X
	50 largest companies	X	X	93.3	779.8

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added ² (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
311	Food manufacturing—Con.				
3119	Other food manufacturing—Con.				
31193	Flavoring syrup and concentrate manufacturing				
	All companies	144	6 965 186	100.0	X
	4 largest companies	X	X	D	X
	8 largest companies	X	X	91.8	X
	20 largest companies	X	X	94.6	X
	50 largest companies	X	X	97.8	D
311930	Flavoring syrup and concentrate manufacturing				
	All companies	144	6 965 186	100.0	X
	4 largest companies	X	X	D	X
	8 largest companies	X	X	91.8	X
	20 largest companies	X	X	94.6	X
	50 largest companies	X	X	97.8	D
31194	Seasoning and dressing manufacturing				
	All companies	531	5 816 082	100.0	X
	4 largest companies	X	X	24.1	X
	8 largest companies	X	X	37.4	X
	20 largest companies	X	X	56.8	X
	50 largest companies	X	X	74.8	254.5
311941	Mayonnaise, dressing, and other prepared sauce manufacturing				
	All companies	261	2 753 004	100.0	X
	4 largest companies	X	X	42.0	X
	8 largest companies	X	X	59.6	X
	20 largest companies	X	X	76.5	X
	50 largest companies	X	X	88.1	648.9
311942	Spice and extract manufacturing				
	All companies	276	3 063 078	100.0	X
	4 largest companies	X	X	29.0	X
	8 largest companies	X	X	41.4	X
	20 largest companies	X	X	60.3	X
	50 largest companies	X	X	81.0	343.0
31199	All other food manufacturing				
	All companies	2 121	7 561 643	100.0	X
	4 largest companies	X	X	22.1	X
	8 largest companies	X	X	29.1	X
	20 largest companies	X	X	42.2	X
	50 largest companies	X	X	57.0	161.6
311991	Perishable prepared food manufacturing				
	All companies	567	2 729 657	100.0	X
	4 largest companies	X	X	25.2	X
	8 largest companies	X	X	37.1	X
	20 largest companies	X	X	53.1	X
	50 largest companies	X	X	72.3	263.6
311999	All other miscellaneous food manufacturing				
	All companies	1 561	4 831 986	100.0	X
	4 largest companies	X	X	27.0	X
	8 largest companies	X	X	35.9	X
	20 largest companies	X	X	50.3	X
	50 largest companies	X	X	66.2	260.0
312	Beverage and tobacco product manufacturing				
	All companies	2 534	66 670 063	100.0	X
	4 largest companies	X	X	52.4	X
	8 largest companies	X	X	63.6	X
	20 largest companies	X	X	79.2	X
	50 largest companies	X	X	88.9	1 105.8
3121	Beverage manufacturing				
	All companies	2 445	32 877 263	100.0	X
	4 largest companies	X	X	36.4	X
	8 largest companies	X	X	51.4	X
	20 largest companies	X	X	71.0	X
	50 largest companies	X	X	82.6	564.7
31211	Soft drink and ice manufacturing				
	All companies	916	14 006 584	100.0	X
	4 largest companies	X	X	41.0	X
	8 largest companies	X	X	57.3	X
	20 largest companies	X	X	74.2	X
	50 largest companies	X	X	86.5	571.9
312111	Soft drink manufacturing				
	All companies	294	12 392 910	100.0	X
	4 largest companies	X	X	46.3	X
	8 largest companies	X	X	63.7	X
	20 largest companies	X	X	79.9	X
	50 largest companies	X	X	91.3	709.9

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
312	Beverage and tobacco product manufacturing—Con.				
3121	Beverage manufacturing—Con.				
31211	Soft drink and ice manufacturing—Con.				
312112	Bottled water manufacturing				
	All companies	201	1 125 665	100.0	X
	4 largest companies	X	X	66.9	X
	8 largest companies	X	X	79.0	X
	20 largest companies	X	X	88.1	X
	50 largest companies	X	X	95.8	1 538.6
312113	Ice manufacturing				
	All companies	425	488 009	100.0	X
	4 largest companies	X	X	43.9	X
	8 largest companies	X	X	51.8	X
	20 largest companies	X	X	62.3	X
	50 largest companies	X	X	74.2	779.2
31212	Breweries				
	All companies	349	10 972 084	100.0	X
	4 largest companies	X	X	90.5	X
	8 largest companies	X	X	93.9	X
	20 largest companies	X	X	96.4	X
	50 largest companies	X	X	98.1	D
312120	Breweries				
	All companies	349	10 972 084	100.0	X
	4 largest companies	X	X	90.5	X
	8 largest companies	X	X	93.9	X
	20 largest companies	X	X	96.4	X
	50 largest companies	X	X	98.1	D
31213	Wineries				
	All companies	1 127	5 197 127	100.0	X
	4 largest companies	X	X	45.6	X
	8 largest companies	X	X	60.6	X
	20 largest companies	X	X	71.9	X
	50 largest companies	X	X	80.6	869.1
312130	Wineries				
	All companies	1 127	5 197 127	100.0	X
	4 largest companies	X	X	45.6	X
	8 largest companies	X	X	60.6	X
	20 largest companies	X	X	71.9	X
	50 largest companies	X	X	80.6	869.1
31214	Distilleries				
	All companies	67	2 701 468	100.0	X
	4 largest companies	X	X	78.9	X
	8 largest companies	X	X	89.4	X
	20 largest companies	X	X	99.2	X
	50 largest companies	X	X	99.9	2 089.5
312140	Distilleries				
	All companies	67	2 701 468	100.0	X
	4 largest companies	X	X	78.9	X
	8 largest companies	X	X	89.4	X
	20 largest companies	X	X	99.2	X
	50 largest companies	X	X	99.9	2 089.5
3122	Tobacco manufacturing				
	All companies	91	33 792 800	100.0	X
	4 largest companies	X	X	88.9	X
	8 largest companies	X	X	95.2	X
	20 largest companies	X	X	99.3	X
	50 largest companies	X	X	99.9	D
31221	Tobacco stemming and redrying				
	All companies	13	254 981	100.0	X
	4 largest companies	X	X	84.2	X
	8 largest companies	X	X	98.2	X
	20 largest companies	X	X	100.0	2 905.9
	50 largest companies	X	X	—	—
312210	Tobacco stemming and redrying				
	All companies	13	254 981	100.0	X
	4 largest companies	X	X	84.2	X
	8 largest companies	X	X	98.2	X
	20 largest companies	X	X	100.0	2 905.9
	50 largest companies	X	X	—	—

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
312	Beverage and tobacco product manufacturing—Con.				
3122	Tobacco manufacturing—Con.				
31222	Tobacco product manufacturing				
	All companies	84	33 537 819	100.0	X
	4 largest companies	X	X	89.5	X
	8 largest companies	X	X	95.8	X
	20 largest companies	X	X	99.5	X
	50 largest companies	X	X	99.9	D
312221	Cigarette manufacturing				
	All companies	15	30 632 954	100.0	X
	4 largest companies	X	X	95.3	X
	8 largest companies	X	X	99.4	X
	20 largest companies	X	X	100.0	D
	50 largest companies	X	X	—	—
312229	Other tobacco product manufacturing				
	All companies	70	2 904 865	100.0	X
	4 largest companies	X	X	78.6	X
	8 largest companies	X	X	93.1	X
	20 largest companies	X	X	98.8	X
	50 largest companies	X	X	99.9	D
313	Textile mills				
	All companies	3 279	19 403 354	100.0	X
	4 largest companies	X	X	15.6	X
	8 largest companies	X	X	23.2	X
	20 largest companies	X	X	37.1	X
	50 largest companies	X	X	54.9	108.4
3131	Fiber, yarn, and thread mills				
	All companies	384	3 608 095	100.0	X
	4 largest companies	X	X	39.1	X
	8 largest companies	X	X	52.6	X
	20 largest companies	X	X	70.9	X
	50 largest companies	X	X	86.8	549.2
31311	Fiber, yarn, and thread mills				
	All companies	384	3 608 095	100.0	X
	4 largest companies	X	X	39.1	X
	8 largest companies	X	X	52.6	X
	20 largest companies	X	X	70.9	X
	50 largest companies	X	X	86.8	549.2
313111	Yarn spinning mills				
	All companies	216	2 335 758	100.0	X
	4 largest companies	X	X	38.9	X
	8 largest companies	X	X	52.6	X
	20 largest companies	X	X	75.8	X
	50 largest companies	X	X	92.3	533.0
313112	Yarn texturizing, throwing, and twisting mills				
	All companies	100	1 155 480	100.0	X
	4 largest companies	X	X	60.3	X
	8 largest companies	X	X	73.5	X
	20 largest companies	X	X	88.4	X
	50 largest companies	X	X	98.3	1 277.2
313113	Thread mills				
	All companies	83	116 857	100.0	X
	4 largest companies	X	X	65.7	X
	8 largest companies	X	X	75.9	X
	20 largest companies	X	X	91.7	X
	50 largest companies	X	X	98.5	2 434.2
3132	Fabric mills				
	All companies	1 511	10 537 915	100.0	X
	4 largest companies	X	X	19.2	X
	8 largest companies	X	X	26.2	X
	20 largest companies	X	X	43.3	X
	50 largest companies	X	X	62.5	187.3
31321	Broadwoven fabric mills				
	All companies	643	5 094 011	100.0	X
	4 largest companies	X	X	21.3	X
	8 largest companies	X	X	34.0	X
	20 largest companies	X	X	55.3	X
	50 largest companies	X	X	78.7	225.0
313210	Broadwoven fabric mills				
	All companies	643	5 094 011	100.0	X
	4 largest companies	X	X	21.3	X
	8 largest companies	X	X	34.0	X
	20 largest companies	X	X	55.3	X
	50 largest companies	X	X	78.7	225.0

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
313	Textile mills—Con.				
3132	Fabric mills—Con.				
31322	Narrow fabric mills and schiffli machine embroidery				
	All companies	343	786 742	100.0	X
	4 largest companies	X	X	22.1	X
	8 largest companies	X	X	34.7	X
	20 largest companies	X	X	57.3	X
	50 largest companies	X	X	81.8	243.2
313221	Narrow fabric mills				
	All companies	208	686 233	100.0	X
	4 largest companies	X	X	25.3	X
	8 largest companies	X	X	39.8	X
	20 largest companies	X	X	65.5	X
	50 largest companies	X	X	88.4	310.6
313222	Schiffli machine embroidery				
	All companies	135	100 509	100.0	X
	4 largest companies	X	X	38.4	X
	8 largest companies	X	X	57.2	X
	20 largest companies	X	X	78.0	X
	50 largest companies	X	X	91.2	523.6
31323	Nonwoven fabric mills				
	All companies	218	3 075 709	100.0	X
	4 largest companies	X	X	51.5	X
	8 largest companies	X	X	64.2	X
	20 largest companies	X	X	77.7	X
	50 largest companies	X	X	90.5	1 426.1
313230	Nonwoven fabric mills				
	All companies	218	3 075 709	100.0	X
	4 largest companies	X	X	51.5	X
	8 largest companies	X	X	64.2	X
	20 largest companies	X	X	77.7	X
	50 largest companies	X	X	90.5	1 426.1
31324	Knit fabric mills				
	All companies	330	1 581 453	100.0	X
	4 largest companies	X	X	30.7	X
	8 largest companies	X	X	41.4	X
	20 largest companies	X	X	58.0	X
	50 largest companies	X	X	77.4	333.6
313241	Weft knit fabric mills				
	All companies	166	815 952	100.0	X
	4 largest companies	X	X	51.8	X
	8 largest companies	X	X	62.0	X
	20 largest companies	X	X	77.6	X
	50 largest companies	X	X	91.6	941.3
313249	Other knit fabric and lace mills				
	All companies	168	765 501	100.0	X
	4 largest companies	X	X	28.7	X
	8 largest companies	X	X	41.6	X
	20 largest companies	X	X	66.0	X
	50 largest companies	X	X	86.1	342.0
3133	Textile and fabric finishing and fabric coating mills				
	All companies	1 494	5 257 344	100.0	X
	4 largest companies	X	X	16.2	X
	8 largest companies	X	X	23.9	X
	20 largest companies	X	X	36.9	X
	50 largest companies	X	X	53.5	115.1
31331	Textile and fabric finishing mills				
	All companies	1 293	4 513 248	100.0	X
	4 largest companies	X	X	18.8	X
	8 largest companies	X	X	27.5	X
	20 largest companies	X	X	42.6	X
	50 largest companies	X	X	59.8	151.9
313311	Broadwoven fabric finishing mills				
	All companies	951	2 859 967	100.0	X
	4 largest companies	X	X	27.4	X
	8 largest companies	X	X	36.5	X
	20 largest companies	X	X	52.5	X
	50 largest companies	X	X	68.7	284.9
313312	Textile and fabric finishing (except broadwoven fabric) mills				
	All companies	350	1 653 281	100.0	X
	4 largest companies	X	X	25.6	X
	8 largest companies	X	X	38.9	X
	20 largest companies	X	X	57.0	X
	50 largest companies	X	X	78.4	262.2

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
313	Textile mills—Con.				
3133	Textile and fabric finishing and fabric coating mills—Con.				
31332	Fabric coating mills				
	All companies	207	744 096	100.0	X
	4 largest companies	X	X	17.9	X
	8 largest companies	X	X	29.6	X
	20 largest companies	X	X	52.4	X
	50 largest companies	X	X	78.4	186.2
313320	Fabric coating mills				
	All companies	207	744 096	100.0	X
	4 largest companies	X	X	17.9	X
	8 largest companies	X	X	29.6	X
	20 largest companies	X	X	52.4	X
	50 largest companies	X	X	78.4	186.2
314	Textile product mills				
	All companies	6 943	13 160 378	100.0	X
	4 largest companies	X	X	27.4	X
	8 largest companies	X	X	33.2	X
	20 largest companies	X	X	44.0	X
	50 largest companies	X	X	54.1	233.4
3141	Textile furnishings mills				
	All companies	2 738	8 354 102	100.0	X
	4 largest companies	X	X	42.1	X
	8 largest companies	X	X	49.9	X
	20 largest companies	X	X	64.4	X
	50 largest companies	X	X	75.8	531.7
31411	Carpet and rug mills				
	All companies	342	4 618 705	100.0	X
	4 largest companies	X	X	57.0	X
	8 largest companies	X	X	70.8	X
	20 largest companies	X	X	85.9	X
	50 largest companies	X	X	95.0	1 329.8
314110	Carpet and rug mills				
	All companies	342	4 618 705	100.0	X
	4 largest companies	X	X	57.0	X
	8 largest companies	X	X	70.8	X
	20 largest companies	X	X	85.9	X
	50 largest companies	X	X	95.0	1 329.8
31412	Curtain and linen mills				
	All companies	2 399	3 735 397	100.0	X
	4 largest companies	X	X	35.8	X
	8 largest companies	X	X	44.3	X
	20 largest companies	X	X	55.8	X
	50 largest companies	X	X	68.4	472.8
314121	Curtain and drapery mills				
	All companies	1 778	779 703	100.0	X
	4 largest companies	X	X	16.6	X
	8 largest companies	X	X	24.5	X
	20 largest companies	X	X	38.4	X
	50 largest companies	X	X	51.9	119.1
314129	Other household textile product mills				
	All companies	629	2 955 694	100.0	X
	4 largest companies	X	X	45.2	X
	8 largest companies	X	X	55.6	X
	20 largest companies	X	X	68.4	X
	50 largest companies	X	X	81.5	746.6
3149	Other textile product mills				
	All companies	4 219	4 806 276	100.0	X
	4 largest companies	X	X	10.0	X
	8 largest companies	X	X	15.5	X
	20 largest companies	X	X	24.8	X
	50 largest companies	X	X	38.4	51.3
31491	Textile bag and canvas mills				
	All companies	1 824	1 368 888	100.0	X
	4 largest companies	X	X	10.2	X
	8 largest companies	X	X	17.6	X
	20 largest companies	X	X	31.0	X
	50 largest companies	X	X	45.2	63.6
314911	Textile bag mills				
	All companies	280	345 722	100.0	X
	4 largest companies	X	X	28.4	X
	8 largest companies	X	X	38.7	X
	20 largest companies	X	X	55.4	X
	50 largest companies	X	X	76.9	320.0

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
314	Textile product mills—Con.				
3149	Other textile product mills—Con.				
31491	Textile bag and canvas mills—Con.				
314912	Canvas and related product mills				
	All companies	1 544	1 023 166	100.0	X
	4 largest companies	X	X	11.9	X
	8 largest companies	X	X	21.0	X
	20 largest companies	X	X	35.1	X
	50 largest companies	X	X	49.5	82.2
31499	All other textile product mills				
	All companies	2 400	3 437 388	100.0	X
	4 largest companies	X	X	14.0	X
	8 largest companies	X	X	21.6	X
	20 largest companies	X	X	33.8	X
	50 largest companies	X	X	48.9	94.2
314991	Rope, cordage, and twine mills				
	All companies	157	303 890	100.0	X
	4 largest companies	X	X	36.2	X
	8 largest companies	X	X	48.5	X
	20 largest companies	X	X	69.0	X
	50 largest companies	X	X	88.0	480.2
314992	Tire cord and tire fabric mills				
	All companies	18	348 471	100.0	X
	4 largest companies	X	X	79.5	X
	8 largest companies	X	X	95.3	X
	20 largest companies	X	X	100.0	1 889.9
	50 largest companies	X	X	—	—
314999	All other miscellaneous textile product mills				
	All companies	2 228	2 785 027	100.0	X
	4 largest companies	X	X	15.6	X
	8 largest companies	X	X	22.9	X
	20 largest companies	X	X	34.1	X
	50 largest companies	X	X	49.0	111.0
315	Apparel manufacturing				
	All companies	12 550	20 365 676	100.0	X
	4 largest companies	X	X	18.4	X
	8 largest companies	X	X	22.2	X
	20 largest companies	X	X	29.0	X
	50 largest companies	X	X	38.2	128.8
3151	Apparel knitting mills				
	All companies	779	2 838 560	100.0	X
	4 largest companies	X	X	29.1	X
	8 largest companies	X	X	36.9	X
	20 largest companies	X	X	50.4	X
	50 largest companies	X	X	69.9	293.8
31511	Hosiery and sock mills				
	All companies	366	1 747 105	100.0	X
	4 largest companies	X	X	35.1	X
	8 largest companies	X	X	45.6	X
	20 largest companies	X	X	63.6	X
	50 largest companies	X	X	81.9	381.8
315111	Sheer hosiery mills				
	All companies	87	446 704	100.0	X
	4 largest companies	X	X	59.6	X
	8 largest companies	X	X	74.4	X
	20 largest companies	X	X	90.9	X
	50 largest companies	X	X	98.6	1 327.5
315119	Other hosiery and sock mills				
	All companies	282	1 300 401	100.0	X
	4 largest companies	X	X	31.7	X
	8 largest companies	X	X	44.8	X
	20 largest companies	X	X	67.3	X
	50 largest companies	X	X	85.2	414.4
31519	Other apparel knitting mills				
	All companies	415	1 091 455	100.0	X
	4 largest companies	X	X	32.9	X
	8 largest companies	X	X	43.9	X
	20 largest companies	X	X	64.5	X
	50 largest companies	X	X	81.9	525.9
315191	Outerwear knitting mills				
	All companies	386	718 048	100.0	X
	4 largest companies	X	X	21.8	X
	8 largest companies	X	X	35.1	X
	20 largest companies	X	X	56.4	X
	50 largest companies	X	X	77.2	228.2

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
315	Apparel manufacturing—Con.				
3151	Apparel knitting mills—Con.				
31519	Other apparel knitting mills—Con.				
315192	Underwear and nightwear knitting mills				
	All companies	32	373 407	100.0	X
	4 largest companies	X	X	79.6	X
	8 largest companies	X	X	96.7	X
	20 largest companies	X	X	99.7	X
	50 largest companies	X	X	100.0	2 399.7
3152	Cut and sew apparel manufacturing				
	All companies	10 440	16 181 327	100.0	X
	4 largest companies	X	X	20.9	X
	8 largest companies	X	X	25.5	X
	20 largest companies	X	X	32.6	X
	50 largest companies	X	X	42.7	184.5
31521	Cut and sew apparel contractors				
	All companies	7 170	2 695 668	100.0	X
	4 largest companies	X	X	6.1	X
	8 largest companies	X	X	8.5	X
	20 largest companies	X	X	13.7	X
	50 largest companies	X	X	21.5	16.6
315211	Men's and boys' cut and sew apparel contractors				
	All companies	967	691 700	100.0	X
	4 largest companies	X	X	15.4	X
	8 largest companies	X	X	21.4	X
	20 largest companies	X	X	32.1	X
	50 largest companies	X	X	47.8	101.5
315212	Women's, girls', and infants' cut and sew apparel contractors				
	All companies	6 214	2 003 968	100.0	X
	4 largest companies	X	X	5.5	X
	8 largest companies	X	X	8.1	X
	20 largest companies	X	X	14.0	X
	50 largest companies	X	X	22.0	18.8
31522	Men's and boys' cut and sew apparel manufacturing				
	All companies	792	5 748 112	100.0	X
	4 largest companies	X	X	50.4	X
	8 largest companies	X	X	57.4	X
	20 largest companies	X	X	66.9	X
	50 largest companies	X	X	78.1	1 019.2
315221	Men's and boys' cut and sew underwear and nightwear manufacturing				
	All companies	26	111 899	100.0	X
	4 largest companies	X	X	62.2	X
	8 largest companies	X	X	80.3	X
	20 largest companies	X	X	98.3	X
	50 largest companies	X	X	100.0	1 373.9
315222	Men's and boys' cut and sew suit, coat, and overcoat manufacturing				
	All companies	200	687 938	100.0	X
	4 largest companies	X	X	53.8	X
	8 largest companies	X	X	64.4	X
	20 largest companies	X	X	80.2	X
	50 largest companies	X	X	93.2	1 534.2
315223	Men's and boys' cut and sew shirt (except work shirt) manufacturing				
	All companies	180	655 324	100.0	X
	4 largest companies	X	X	27.7	X
	8 largest companies	X	X	44.4	X
	20 largest companies	X	X	68.4	X
	50 largest companies	X	X	86.9	333.9
315224	Men's and boys' cut and sew trouser, slack, and jean manufacturing				
	All companies	92	2 882 744	100.0	X
	4 largest companies	X	X	84.1	X
	8 largest companies	X	X	90.0	X
	20 largest companies	X	X	94.5	X
	50 largest companies	X	X	99.0	D
315225	Men's and boys' cut and sew work clothing manufacturing				
	All companies	105	934 943	100.0	X
	4 largest companies	X	X	55.4	X
	8 largest companies	X	X	67.8	X
	20 largest companies	X	X	86.0	X
	50 largest companies	X	X	97.4	1 078.7
315228	Men's and boys' cut and sew other outerwear manufacturing				
	All companies	216	475 264	100.0	X
	4 largest companies	X	X	32.3	X
	8 largest companies	X	X	45.4	X
	20 largest companies	X	X	66.1	X
	50 largest companies	X	X	85.2	412.3

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
315	Apparel manufacturing—Con.				
3152	Cut and sew apparel manufacturing—Con.				
31523	Women's and girls' cut and sew apparel manufacturing				
	All companies	1 930	6 830 537	100.0	X
	4 largest companies	X	X	13.8	X
	8 largest companies	X	X	20.9	X
	20 largest companies	X	X	33.6	X
	50 largest companies	X	X	49.5	86.8
315231	Women's and girls' cut and sew lingerie, loungewear, and nightwear manufacturing				
	All companies	120	918 710	100.0	X
	4 largest companies	X	X	62.3	X
	8 largest companies	X	X	74.0	X
	20 largest companies	X	X	86.2	X
	50 largest companies	X	X	96.8	1 651.3
315232	Women's and girls' cut and sew blouse and shirt manufacturing				
	All companies	352	1 633 336	100.0	X
	4 largest companies	X	X	22.6	X
	8 largest companies	X	X	35.5	X
	20 largest companies	X	X	59.7	X
	50 largest companies	X	X	81.5	250.5
315233	Women's and girls' cut and sew dress manufacturing				
	All companies	525	1 417 331	100.0	X
	4 largest companies	X	X	18.2	X
	8 largest companies	X	X	28.3	X
	20 largest companies	X	X	47.7	X
	50 largest companies	X	X	68.1	160.6
315234	Women's and girls' cut and sew suit, coat, tailored jacket, and skirt manufacturing				
	All companies	186	611 368	100.0	X
	4 largest companies	X	X	31.3	X
	8 largest companies	X	X	47.7	X
	20 largest companies	X	X	68.8	X
	50 largest companies	X	X	87.6	388.4
315239	Women's and girls' cut and sew other outerwear manufacturing				
	All companies	759	2 249 792	100.0	X
	4 largest companies	X	X	27.5	X
	8 largest companies	X	X	40.0	X
	20 largest companies	X	X	55.4	X
	50 largest companies	X	X	72.5	272.3
31529	Other cut and sew apparel manufacturing				
	All companies	607	907 010	100.0	X
	4 largest companies	X	X	20.6	X
	8 largest companies	X	X	30.2	X
	20 largest companies	X	X	46.0	X
	50 largest companies	X	X	66.8	177.8
315291	Infants' cut and sew apparel manufacturing				
	All companies	41	155 340	100.0	X
	4 largest companies	X	X	59.8	X
	8 largest companies	X	X	76.6	X
	20 largest companies	X	X	94.9	X
	50 largest companies	X	X	100.0	1 297.8
315292	Fur and leather apparel manufacturing				
	All companies	153	88 476	100.0	X
	4 largest companies	X	X	37.0	X
	8 largest companies	X	X	53.3	X
	20 largest companies	X	X	73.9	X
	50 largest companies	X	X	90.2	494.5
315299	All other cut and sew apparel manufacturing				
	All companies	413	663 194	100.0	X
	4 largest companies	X	X	25.3	X
	8 largest companies	X	X	35.3	X
	20 largest companies	X	X	53.4	X
	50 largest companies	X	X	74.0	259.3
3159	Apparel accessories and other apparel manufacturing				
	All companies	1 362	1 345 789	100.0	X
	4 largest companies	X	X	17.4	X
	8 largest companies	X	X	27.7	X
	20 largest companies	X	X	42.6	X
	50 largest companies	X	X	57.6	132.0
31599	Apparel accessories and other apparel manufacturing				
	All companies	1 362	1 345 789	100.0	X
	4 largest companies	X	X	17.4	X
	8 largest companies	X	X	27.7	X
	20 largest companies	X	X	42.6	X
	50 largest companies	X	X	57.6	132.0

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315	Apparel manufacturing—Con.				
3159	Apparel accessories and other apparel manufacturing—Con.				
31599	Apparel accessories and other apparel manufacturing—Con.				
315991	Hat, cap, and millinery manufacturing				
	All companies	240	393 142	100.0	X
	4 largest companies	X	X	D	X
	8 largest companies	X	X	53.0	X
	20 largest companies	X	X	66.2	X
	50 largest companies	X	X	83.3	623.2
315992	Glove and mitten manufacturing				
	All companies	74	89 731	100.0	X
	4 largest companies	X	X	31.6	X
	8 largest companies	X	X	51.8	X
	20 largest companies	X	X	79.1	X
	50 largest companies	X	X	98.3	442.8
315993	Men's and boys' neckwear manufacturing				
	All companies	72	220 268	100.0	X
	4 largest companies	X	X	65.4	X
	8 largest companies	X	X	79.6	X
	20 largest companies	X	X	90.6	X
	50 largest companies	X	X	98.9	1 407.2
315999	Other apparel accessories and other apparel manufacturing				
	All companies	979	642 648	100.0	X
	4 largest companies	X	X	20.5	X
	8 largest companies	X	X	32.0	X
	20 largest companies	X	X	47.7	X
	50 largest companies	X	X	65.8	189.1
316	Leather and allied product manufacturing				
	All companies	1 459	2 837 523	100.0	X
	4 largest companies	X	X	20.4	X
	8 largest companies	X	X	30.1	X
	20 largest companies	X	X	45.6	X
	50 largest companies	X	X	61.9	172.6
3161	Leather and hide tanning and finishing				
	All companies	246	712 655	100.0	X
	4 largest companies	X	X	51.0	X
	8 largest companies	X	X	62.8	X
	20 largest companies	X	X	78.9	X
	50 largest companies	X	X	93.1	1 214.7
31611	Leather and hide tanning and finishing				
	All companies	246	712 655	100.0	X
	4 largest companies	X	X	51.0	X
	8 largest companies	X	X	62.8	X
	20 largest companies	X	X	78.9	X
	50 largest companies	X	X	93.1	1 214.7
316110	Leather and hide tanning and finishing				
	All companies	246	712 655	100.0	X
	4 largest companies	X	X	51.0	X
	8 largest companies	X	X	62.8	X
	20 largest companies	X	X	78.9	X
	50 largest companies	X	X	93.1	1 214.7
3162	Footwear manufacturing				
	All companies	320	1 101 366	100.0	X
	4 largest companies	X	X	34.5	X
	8 largest companies	X	X	49.6	X
	20 largest companies	X	X	72.4	X
	50 largest companies	X	X	89.8	462.4
31621	Footwear manufacturing				
	All companies	320	1 101 366	100.0	X
	4 largest companies	X	X	34.5	X
	8 largest companies	X	X	49.6	X
	20 largest companies	X	X	72.4	X
	50 largest companies	X	X	89.8	462.4
316211	Rubber and plastics footwear manufacturing				
	All companies	58	261 797	100.0	X
	4 largest companies	X	X	75.1	X
	8 largest companies	X	X	86.8	X
	20 largest companies	X	X	96.9	X
	50 largest companies	X	X	99.9	D
316212	House slipper manufacturing				
	All companies	12	41 755	100.0	X
	4 largest companies	X	X	94.3	X
	8 largest companies	X	X	98.5	X
	20 largest companies	X	X	100.0	2 943.5
	50 largest companies	X	X	—	—

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
316	Leather and allied product manufacturing—Con.				
3162	Footwear manufacturing—Con.				
31621	Footwear manufacturing—Con.				
316213	Men's footwear (except athletic) manufacturing				
	All companies	100	589 328	100.0	X
	4 largest companies	X	X	42.4	X
	8 largest companies	X	X	64.4	X
	20 largest companies	X	X	91.9	X
	50 largest companies	X	X	99.0	713.1
316214	Women's footwear (except athletic) manufacturing				
	All companies	79	128 600	100.0	X
	4 largest companies	X	X	61.2	X
	8 largest companies	X	X	76.6	X
	20 largest companies	X	X	92.0	X
	50 largest companies	X	X	99.1	1 560.2
316219	Other footwear manufacturing				
	All companies	75	79 886	100.0	X
	4 largest companies	X	X	48.7	X
	8 largest companies	X	X	69.2	X
	20 largest companies	X	X	89.9	X
	50 largest companies	X	X	98.7	869.4
3169	Other leather and allied product manufacturing				
	All companies	898	1 023 502	100.0	X
	4 largest companies	X	X	21.6	X
	8 largest companies	X	X	30.0	X
	20 largest companies	X	X	44.1	X
	50 largest companies	X	X	61.2	177.9
31699	Other leather and allied product manufacturing				
	All companies	898	1 023 502	100.0	X
	4 largest companies	X	X	21.6	X
	8 largest companies	X	X	30.0	X
	20 largest companies	X	X	44.1	X
	50 largest companies	X	X	61.2	177.9
316991	Luggage manufacturing				
	All companies	226	350 095	100.0	X
	4 largest companies	X	X	34.2	X
	8 largest companies	X	X	44.0	X
	20 largest companies	X	X	61.0	X
	50 largest companies	X	X	80.1	580.2
316992	Women's handbag and purse manufacturing				
	All companies	99	116 573	100.0	X
	4 largest companies	X	X	69.5	X
	8 largest companies	X	X	86.8	X
	20 largest companies	X	X	93.9	X
	50 largest companies	X	X	98.2	1 796.4
316993	Personal leather goods (except women's handbag and purse) manufacturing				
	All companies	164	184 462	100.0	X
	4 largest companies	X	X	53.7	X
	8 largest companies	X	X	64.4	X
	20 largest companies	X	X	77.9	X
	50 largest companies	X	X	91.2	1 731.1
316999	All other leather goods manufacturing				
	All companies	412	372 372	100.0	X
	4 largest companies	X	X	24.3	X
	8 largest companies	X	X	37.8	X
	20 largest companies	X	X	55.8	X
	50 largest companies	X	X	73.6	245.6
321	Wood product manufacturing				
	All companies	15 347	35 135 788	100.0	X
	4 largest companies	X	X	8.7	X
	8 largest companies	X	X	14.4	X
	20 largest companies	X	X	23.5	X
	50 largest companies	X	X	33.2	39.1
3211	Sawmills and wood preservation				
	All companies	3 858	7 771 151	100.0	X
	4 largest companies	X	X	12.6	X
	8 largest companies	X	X	18.3	X
	20 largest companies	X	X	28.2	X
	50 largest companies	X	X	39.7	73.8

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
321	Wood product manufacturing—Con.				
3211	Sawmills and wood preservation—Con.				
32111	Sawmills and wood preservation				
	All companies	3 858	7 771 151	100.0	X
	4 largest companies	X	X	12.6	X
	8 largest companies	X	X	18.3	X
	20 largest companies	X	X	28.2	X
	50 largest companies	X	X	39.7	73.8
321113	Sawmills				
	All companies	3 462	6 809 251	100.0	X
	4 largest companies	X	X	14.2	X
	8 largest companies	X	X	20.3	X
	20 largest companies	X	X	30.4	X
	50 largest companies	X	X	41.8	89.6
321114	Wood preservation				
	All companies	414	961 900	100.0	X
	4 largest companies	X	X	26.3	X
	8 largest companies	X	X	36.1	X
	20 largest companies	X	X	56.4	X
	50 largest companies	X	X	79.1	272.5
3212	Veneer, plywood, and engineered wood product manufacturing				
	All companies	1 524	8 083 979	100.0	X
	4 largest companies	X	X	23.6	X
	8 largest companies	X	X	32.7	X
	20 largest companies	X	X	45.3	X
	50 largest companies	X	X	56.9	200.1
32121	Veneer, plywood, and engineered wood product manufacturing				
	All companies	1 524	8 083 979	100.0	X
	4 largest companies	X	X	23.6	X
	8 largest companies	X	X	32.7	X
	20 largest companies	X	X	45.3	X
	50 largest companies	X	X	56.9	200.1
321211	Hardwood veneer and plywood manufacturing				
	All companies	304	1 201 834	100.0	X
	4 largest companies	X	X	30.4	X
	8 largest companies	X	X	41.5	X
	20 largest companies	X	X	57.4	X
	50 largest companies	X	X	76.0	380.3
321212	Softwood veneer and plywood manufacturing				
	All companies	85	1 364 061	100.0	X
	4 largest companies	X	X	60.5	X
	8 largest companies	X	X	72.1	X
	20 largest companies	X	X	88.4	X
	50 largest companies	X	X	99.2	1 405.1
321213	Engineered wood member (except truss) manufacturing				
	All companies	90	694 179	100.0	X
	4 largest companies	X	X	66.6	X
	8 largest companies	X	X	80.7	X
	20 largest companies	X	X	90.5	X
	50 largest companies	X	X	98.0	2 409.5
321214	Truss manufacturing				
	All companies	899	2 317 563	100.0	X
	4 largest companies	X	X	9.4	X
	8 largest companies	X	X	14.5	X
	20 largest companies	X	X	24.1	X
	50 largest companies	X	X	39.4	46.2
321219	Reconstituted wood product manufacturing				
	All companies	180	2 506 342	100.0	X
	4 largest companies	X	X	37.5	X
	8 largest companies	X	X	54.1	X
	20 largest companies	X	X	74.6	X
	50 largest companies	X	X	91.1	536.1
3219	Other wood product manufacturing				
	All companies	10 133	19 280 658	100.0	X
	4 largest companies	X	X	10.9	X
	8 largest companies	X	X	17.3	X
	20 largest companies	X	X	26.8	X
	50 largest companies	X	X	36.2	51.9
32191	Millwork				
	All companies	4 432	9 557 086	100.0	X
	4 largest companies	X	X	19.6	X
	8 largest companies	X	X	27.5	X
	20 largest companies	X	X	36.7	X
	50 largest companies	X	X	47.0	130.0

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
321	Wood product manufacturing—Con.				
3219	Other wood product manufacturing—Con.				
32191	Millwork—Con.				
321911	Wood window and door manufacturing				
	All companies	1 328	5 049 341	100.0	X
	4 largest companies	X	X	35.9	X
	8 largest companies	X	X	45.9	X
	20 largest companies	X	X	57.7	X
	50 largest companies	X	X	70.0	394.3
321912	Cut stock, resawing lumber, and planing				
	All companies	1 129	1 946 311	100.0	X
	4 largest companies	X	X	12.5	X
	8 largest companies	X	X	18.8	X
	20 largest companies	X	X	30.6	X
	50 largest companies	X	X	47.9	76.3
321918	Other millwork (including flooring)				
	All companies	2 020	2 561 434	100.0	X
	4 largest companies	X	X	18.2	X
	8 largest companies	X	X	23.7	X
	20 largest companies	X	X	33.7	X
	50 largest companies	X	X	47.5	167.9
32192	Wood container and pallet manufacturing				
	All companies	2 792	2 405 697	100.0	X
	4 largest companies	X	X	7.4	X
	8 largest companies	X	X	11.0	X
	20 largest companies	X	X	17.6	X
	50 largest companies	X	X	27.3	26.1
321920	Wood container and pallet manufacturing				
	All companies	2 792	2 405 697	100.0	X
	4 largest companies	X	X	7.4	X
	8 largest companies	X	X	11.0	X
	20 largest companies	X	X	17.6	X
	50 largest companies	X	X	27.3	26.1
32199	All other wood product manufacturing				
	All companies	2 939	7 317 875	100.0	X
	4 largest companies	X	X	19.4	X
	8 largest companies	X	X	28.6	X
	20 largest companies	X	X	40.8	X
	50 largest companies	X	X	51.9	145.2
321991	Manufactured home (mobile home) manufacturing				
	All companies	241	2 861 012	100.0	X
	4 largest companies	X	X	44.3	X
	8 largest companies	X	X	62.3	X
	20 largest companies	X	X	81.1	X
	50 largest companies	X	X	92.4	699.4
321992	Prefabricated wood building manufacturing				
	All companies	671	1 796 523	100.0	X
	4 largest companies	X	X	20.8	X
	8 largest companies	X	X	28.6	X
	20 largest companies	X	X	41.0	X
	50 largest companies	X	X	60.8	174.3
321999	All other miscellaneous wood product manufacturing				
	All companies	2 031	2 660 340	100.0	X
	4 largest companies	X	X	20.0	X
	8 largest companies	X	X	24.2	X
	20 largest companies	X	X	32.8	X
	50 largest companies	X	X	44.6	222.8
322	Paper manufacturing				
	All companies	3 537	75 586 540	100.0	X
	4 largest companies	X	X	30.4	X
	8 largest companies	X	X	45.3	X
	20 largest companies	X	X	57.4	X
	50 largest companies	X	X	70.5	312.1
3221	Pulp, paper, and paperboard mills				
	All companies	269	38 053 614	100.0	X
	4 largest companies	X	X	45.3	X
	8 largest companies	X	X	64.5	X
	20 largest companies	X	X	78.3	X
	50 largest companies	X	X	90.6	648.8

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
322	Paper manufacturing—Con.				
3221	Pulp, paper, and paperboard mills—Con.				
32211	Pulp mills				
	All companies	21	1 736 798	100.0	X
	4 largest companies	X	X	68.5	X
	8 largest companies	X	X	89.5	X
	20 largest companies	X	X	D	X
	50 largest companies	X	X	100.0	1 350.6
322110	Pulp mills				
	All companies	21	1 736 798	100.0	X
	4 largest companies	X	X	68.5	X
	8 largest companies	X	X	89.5	X
	20 largest companies	X	X	D	X
	50 largest companies	X	X	100.0	1 350.6
32212	Paper mills				
	All companies	187	25 497 054	100.0	X
	4 largest companies	X	X	56.1	X
	8 largest companies	X	X	70.7	X
	20 largest companies	X	X	84.7	X
	50 largest companies	X	X	95.2	883.0
322121	Paper (except newsprint) mills				
	All companies	174	24 145 138	100.0	X
	4 largest companies	X	X	59.3	X
	8 largest companies	X	X	73.9	X
	20 largest companies	X	X	87.5	X
	50 largest companies	X	X	96.8	975.7
322122	Newsprint mills				
	All companies	16	1 351 916	100.0	X
	4 largest companies	X	X	54.0	X
	8 largest companies	X	X	78.0	X
	20 largest companies	X	X	100.0	993.1
	50 largest companies	X	X	—	—
32213	Paperboard mills				
	All companies	80	10 819 762	100.0	X
	4 largest companies	X	X	50.7	X
	8 largest companies	X	X	70.0	X
	20 largest companies	X	X	88.9	X
	50 largest companies	X	X	99.0	815.1
322130	Paperboard mills				
	All companies	80	10 819 762	100.0	X
	4 largest companies	X	X	50.7	X
	8 largest companies	X	X	70.0	X
	20 largest companies	X	X	88.9	X
	50 largest companies	X	X	99.0	815.1
3222	Converted paper product manufacturing				
	All companies	3 348	37 532 926	100.0	X
	4 largest companies	X	X	18.0	X
	8 largest companies	X	X	28.5	X
	20 largest companies	X	X	44.6	X
	50 largest companies	X	X	58.8	142.1
32221	Paperboard container manufacturing				
	All companies	1 544	17 483 210	100.0	X
	4 largest companies	X	X	26.9	X
	8 largest companies	X	X	39.4	X
	20 largest companies	X	X	56.2	X
	50 largest companies	X	X	67.3	267.6
322211	Corrugated and solid fiber box manufacturing				
	All companies	959	10 945 861	100.0	X
	4 largest companies	X	X	33.1	X
	8 largest companies	X	X	49.1	X
	20 largest companies	X	X	62.7	X
	50 largest companies	X	X	72.4	391.6
322212	Folding paperboard box manufacturing				
	All companies	351	3 864 059	100.0	X
	4 largest companies	X	X	33.3	X
	8 largest companies	X	X	49.8	X
	20 largest companies	X	X	63.6	X
	50 largest companies	X	X	77.5	380.2
322213	Setup paperboard box manufacturing				
	All companies	114	335 250	100.0	X
	4 largest companies	X	X	22.8	X
	8 largest companies	X	X	35.9	X
	20 largest companies	X	X	60.5	X
	50 largest companies	X	X	87.9	274.5

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
322	Paper manufacturing—Con.				
3222	Converted paper product manufacturing—Con.				
32221	Paperboard container manufacturing—Con.				
322214	Fiber can, tube, drum, and similar products manufacturing				
	All companies	135	929 284	100.0	X
	4 largest companies	X	X	66.6	X
	8 largest companies	X	X	76.4	X
	20 largest companies	X	X	84.0	X
	50 largest companies	X	X	93.2	2 053.3
322215	Nonfolding sanitary food container manufacturing				
	All companies	37	1 408 756	100.0	X
	4 largest companies	X	X	70.2	X
	8 largest companies	X	X	89.6	X
	20 largest companies	X	X	98.8	X
	50 largest companies	X	X	100.0	1 466.3
32222	Paper bag and coated and treated paper manufacturing				
	All companies	745	8 366 462	100.0	X
	4 largest companies	X	X	32.4	X
	8 largest companies	X	X	41.3	X
	20 largest companies	X	X	54.0	X
	50 largest companies	X	X	68.3	423.8
322221	Coated and laminated packaging paper and plastics film manufacturing				
	All companies	109	471 325	100.0	X
	4 largest companies	X	X	24.5	X
	8 largest companies	X	X	41.6	X
	20 largest companies	X	X	72.2	X
	50 largest companies	X	X	94.8	329.4
322222	Coated and laminated paper manufacturing				
	All companies	459	5 812 686	100.0	X
	4 largest companies	X	X	45.6	X
	8 largest companies	X	X	54.0	X
	20 largest companies	X	X	66.6	X
	50 largest companies	X	X	80.3	822.4
322223	Plastics, foil, and coated paper bag manufacturing				
	All companies	41	258 618	100.0	X
	4 largest companies	X	X	41.2	X
	8 largest companies	X	X	63.0	X
	20 largest companies	X	X	93.7	X
	50 largest companies	X	X	100.0	685.5
322224	Uncoated paper and multiwall bag manufacturing				
	All companies	80	932 334	100.0	X
	4 largest companies	X	X	51.0	X
	8 largest companies	X	X	67.5	X
	20 largest companies	X	X	85.1	X
	50 largest companies	X	X	98.5	871.5
322225	Laminated aluminum foil manufacturing for flexible packaging uses				
	All companies	38	602 561	100.0	X
	4 largest companies	X	X	52.1	X
	8 largest companies	X	X	69.7	X
	20 largest companies	X	X	94.1	X
	50 largest companies	X	X	100.0	929.8
322226	Surface-coated paperboard manufacturing				
	All companies	49	288 938	100.0	X
	4 largest companies	X	X	45.2	X
	8 largest companies	X	X	65.3	X
	20 largest companies	X	X	92.0	X
	50 largest companies	X	X	100.0	713.8
32223	Stationery product manufacturing				
	All companies	525	3 364 048	100.0	X
	4 largest companies	X	X	32.5	X
	8 largest companies	X	X	44.3	X
	20 largest companies	X	X	61.1	X
	50 largest companies	X	X	77.0	353.3
322231	Die-cut paper and paperboard office supplies manufacturing				
	All companies	229	1 059 109	100.0	X
	4 largest companies	X	X	42.3	X
	8 largest companies	X	X	55.9	X
	20 largest companies	X	X	73.9	X
	50 largest companies	X	X	87.0	617.6
322232	Envelope manufacturing				
	All companies	166	1 537 660	100.0	X
	4 largest companies	X	X	48.6	X
	8 largest companies	X	X	63.1	X
	20 largest companies	X	X	77.2	X
	50 largest companies	X	X	91.2	757.7

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322	Paper manufacturing—Con.				
3222	Converted paper product manufacturing—Con.				
32223	Stationery product manufacturing—Con.				
322233	Stationery, tablet, and related product manufacturing				
	All companies	140	767 279	100.0	X
	4 largest companies	X	X	D	X
	8 largest companies	X	X	67.1	X
	20 largest companies	X	X	84.1	X
	50 largest companies	X	X	95.8	1 292.1
32229	Other converted paper product manufacturing				
	All companies	616	8 319 206	100.0	X
	4 largest companies	X	X	46.2	X
	8 largest companies	X	X	59.5	X
	20 largest companies	X	X	73.8	X
	50 largest companies	X	X	84.6	822.5
322291	Sanitary paper product manufacturing				
	All companies	109	6 008 981	100.0	X
	4 largest companies	X	X	64.0	X
	8 largest companies	X	X	79.6	X
	20 largest companies	X	X	92.9	X
	50 largest companies	X	X	98.7	1 531.4
322299	All other converted paper product manufacturing				
	All companies	510	2 310 225	100.0	X
	4 largest companies	X	X	29.4	X
	8 largest companies	X	X	39.0	X
	20 largest companies	X	X	52.7	X
	50 largest companies	X	X	69.0	312.4
323	Printing and related support activities				
	All companies	35 738	59 000 542	100.0	X
	4 largest companies	X	X	10.0	X
	8 largest companies	X	X	14.7	X
	20 largest companies	X	X	22.9	X
	50 largest companies	X	X	30.9	43.1
3231	Printing and related support activities				
	All companies	35 738	59 000 542	100.0	X
	4 largest companies	X	X	10.0	X
	8 largest companies	X	X	14.7	X
	20 largest companies	X	X	22.9	X
	50 largest companies	X	X	30.9	43.1
32311	Printing				
	All companies	32 572	54 807 694	100.0	X
	4 largest companies	X	X	10.5	X
	8 largest companies	X	X	15.6	X
	20 largest companies	X	X	24.3	X
	50 largest companies	X	X	32.5	48.0
323110	Commercial lithographic printing				
	All companies	14 970	30 518 439	100.0	X
	4 largest companies	X	X	11.6	X
	8 largest companies	X	X	16.7	X
	20 largest companies	X	X	26.3	X
	50 largest companies	X	X	33.8	54.2
323111	Commercial gravure printing				
	All companies	337	1 928 748	100.0	X
	4 largest companies	X	X	66.6	X
	8 largest companies	X	X	73.2	X
	20 largest companies	X	X	84.6	X
	50 largest companies	X	X	94.2	1 413.5
323112	Commercial flexographic printing				
	All companies	838	2 929 402	100.0	X
	4 largest companies	X	X	15.5	X
	8 largest companies	X	X	22.9	X
	20 largest companies	X	X	35.4	X
	50 largest companies	X	X	52.2	98.1
323113	Commercial screen printing				
	All companies	4 385	3 934 320	100.0	X
	4 largest companies	X	X	6.0	X
	8 largest companies	X	X	9.9	X
	20 largest companies	X	X	17.9	X
	50 largest companies	X	X	30.0	24.0
323114	Quick printing				
	All companies	7 515	3 214 832	100.0	X
	4 largest companies	X	X	22.3	X
	8 largest companies	X	X	24.3	X
	20 largest companies	X	X	27.5	X
	50 largest companies	X	X	31.8	339.7

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added ² (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
323	Printing and related support activities—Con.				
3231	Printing and related support activities—Con.				
32311	Printing—Con.				
323115	Digital printing				
	All companies	1 033	1 721 227	100.0	X
	4 largest companies	X	X	19.8	X
	8 largest companies	X	X	28.0	X
	20 largest companies	X	X	42.2	X
	50 largest companies	X	X	55.6	177.5
323116	Manifold business forms printing				
	All companies	559	4 761 758	100.0	X
	4 largest companies	X	X	34.1	X
	8 largest companies	X	X	49.8	X
	20 largest companies	X	X	67.8	X
	50 largest companies	X	X	80.7	515.7
323117	Books printing				
	All companies	560	3 132 841	100.0	X
	4 largest companies	X	X	40.3	X
	8 largest companies	X	X	55.5	X
	20 largest companies	X	X	69.5	X
	50 largest companies	X	X	82.4	534.2
323118	Blankbook, looseleaf binders, and devices manufacturing				
	All companies	223	1 062 615	100.0	X
	4 largest companies	X	X	48.3	X
	8 largest companies	X	X	57.5	X
	20 largest companies	X	X	71.5	X
	50 largest companies	X	X	84.1	991.3
323119	Other commercial printing				
	All companies	2 393	1 603 512	100.0	X
	4 largest companies	X	X	8.7	X
	8 largest companies	X	X	14.0	X
	20 largest companies	X	X	23.0	X
	50 largest companies	X	X	35.4	39.2
32312	Support activities for printing				
	All companies	3 242	4 192 848	100.0	X
	4 largest companies	X	X	10.0	X
	8 largest companies	X	X	16.0	X
	20 largest companies	X	X	24.9	X
	50 largest companies	X	X	36.3	47.0
323121	Tradebinding and related work				
	All companies	1 211	1 524 535	100.0	X
	4 largest companies	X	X	12.7	X
	8 largest companies	X	X	18.6	X
	20 largest companies	X	X	28.4	X
	50 largest companies	X	X	41.7	67.8
323122	Prepress services				
	All companies	2 033	2 668 313	100.0	X
	4 largest companies	X	X	15.8	X
	8 largest companies	X	X	23.9	X
	20 largest companies	X	X	34.3	X
	50 largest companies	X	X	47.7	97.4
324	Petroleum and coal products manufacturing				
	All companies	1 106	37 077 275	100.0	X
	4 largest companies	X	X	38.4	X
	8 largest companies	X	X	54.0	X
	20 largest companies	X	X	74.8	X
	50 largest companies	X	X	86.7	544.9
3241	Petroleum and coal products manufacturing				
	All companies	1 106	37 077 275	100.0	X
	4 largest companies	X	X	38.4	X
	8 largest companies	X	X	54.0	X
	20 largest companies	X	X	74.8	X
	50 largest companies	X	X	86.7	544.9
32411	Petroleum refineries				
	All companies	88	28 376 524	100.0	X
	4 largest companies	X	X	46.7	X
	8 largest companies	X	X	66.7	X
	20 largest companies	X	X	91.9	X
	50 largest companies	X	X	99.6	809.1
324110	Petroleum refineries				
	All companies	88	28 376 524	100.0	X
	4 largest companies	X	X	46.7	X
	8 largest companies	X	X	66.7	X
	20 largest companies	X	X	91.9	X
	50 largest companies	X	X	99.6	809.1

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added ² (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
324	Petroleum and coal products manufacturing—Con.				
3241	Petroleum and coal products manufacturing—Con.				
32412	Asphalt paving, roofing, and saturated materials manufacturing				
	All companies	628	5 453 777	100.0	X
	4 largest companies	X	X	28.4	X
	8 largest companies	X	X	41.3	X
	20 largest companies	X	X	55.2	X
	50 largest companies	X	X	69.5	276.6
324121	Asphalt paving mixture and block manufacturing				
	All companies	511	2 835 919	100.0	X
	4 largest companies	X	X	19.7	X
	8 largest companies	X	X	28.9	X
	20 largest companies	X	X	43.3	X
	50 largest companies	X	X	61.8	154.7
324122	Asphalt shingle and coating materials manufacturing				
	All companies	123	2 617 858	100.0	X
	4 largest companies	X	X	59.3	X
	8 largest companies	X	X	76.8	X
	20 largest companies	X	X	89.5	X
	50 largest companies	X	X	97.4	1 031.3
32419	Other petroleum and coal products manufacturing				
	All companies	420	3 246 974	100.0	X
	4 largest companies	X	X	35.2	X
	8 largest companies	X	X	48.0	X
	20 largest companies	X	X	64.9	X
	50 largest companies	X	X	80.8	444.3
324191	Petroleum lubricating oil and grease manufacturing				
	All companies	356	2 607 323	100.0	X
	4 largest companies	X	X	42.2	X
	8 largest companies	X	X	56.5	X
	20 largest companies	X	X	69.7	X
	50 largest companies	X	X	85.1	631.0
324199	All other petroleum and coal products manufacturing				
	All companies	66	639 651	100.0	X
	4 largest companies	X	X	40.2	X
	8 largest companies	X	X	65.1	X
	20 largest companies	X	X	91.3	X
	50 largest companies	X	X	99.8	658.4
325	Chemical manufacturing				
	All companies	9 659	256 192 792	100.0	X
	4 largest companies	X	X	15.7	X
	8 largest companies	X	X	24.2	X
	20 largest companies	X	X	40.1	X
	50 largest companies	X	X	57.8	125.5
3251	Basic chemical manufacturing				
	All companies	1 229	45 712 261	100.0	X
	4 largest companies	X	X	18.3	X
	8 largest companies	X	X	28.6	X
	20 largest companies	X	X	45.3	X
	50 largest companies	X	X	66.4	160.4
32511	Petrochemical manufacturing				
	All companies	43	5 983 886	100.0	X
	4 largest companies	X	X	88.2	X
	8 largest companies	X	X	98.4	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	100.0	D
325110	Petrochemical manufacturing				
	All companies	43	5 983 886	100.0	X
	4 largest companies	X	X	88.2	X
	8 largest companies	X	X	98.4	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	100.0	D
32512	Industrial gas manufacturing				
	All companies	103	3 579 560	100.0	X
	4 largest companies	X	X	65.2	X
	8 largest companies	X	X	84.7	X
	20 largest companies	X	X	97.7	X
	50 largest companies	X	X	99.9	1 317.2
325120	Industrial gas manufacturing				
	All companies	103	3 579 560	100.0	X
	4 largest companies	X	X	65.2	X
	8 largest companies	X	X	84.7	X
	20 largest companies	X	X	97.7	X
	50 largest companies	X	X	99.9	1 317.2

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
325	Chemical manufacturing—Con.				
3251	Basic chemical manufacturing—Con.				
32513	Synthetic dye and pigment manufacturing				
	All companies	159	3 349 807	100.0	X
	4 largest companies	X	X	40.7	X
	8 largest companies	X	X	58.4	X
	20 largest companies	X	X	78.6	X
	50 largest companies	X	X	96.1	690.9
325131	Inorganic dye and pigment manufacturing				
	All companies	62	1 938 703	100.0	X
	4 largest companies	X	X	69.0	X
	8 largest companies	X	X	81.7	X
	20 largest companies	X	X	97.1	X
	50 largest companies	X	X	99.9	1 732.4
325132	Synthetic organic dye and pigment manufacturing				
	All companies	98	1 411 104	100.0	X
	4 largest companies	X	X	44.1	X
	8 largest companies	X	X	60.4	X
	20 largest companies	X	X	88.0	X
	50 largest companies	X	X	99.0	631.2
32518	Other basic inorganic chemical manufacturing				
	All companies	423	11 340 748	100.0	X
	4 largest companies	X	X	22.3	X
	8 largest companies	X	X	34.0	X
	20 largest companies	X	X	58.6	X
	50 largest companies	X	X	81.1	244.8
325181	Alkalies and chlorine manufacturing				
	All companies	29	1 299 762	100.0	X
	4 largest companies	X	X	73.3	X
	8 largest companies	X	X	91.7	X
	20 largest companies	X	X	99.6	X
	50 largest companies	X	X	100.0	1 680.1
325182	Carbon black manufacturing				
	All companies	11	514 981	100.0	X
	4 largest companies	X	X	77.6	X
	8 largest companies	X	X	99.2	X
	20 largest companies	X	X	100.0	2 011.9
	50 largest companies	X	X	—	—
325188	All other basic inorganic chemical manufacturing				
	All companies	394	9 526 005	100.0	X
	4 largest companies	X	X	26.6	X
	8 largest companies	X	X	38.5	X
	20 largest companies	X	X	61.2	X
	50 largest companies	X	X	81.9	297.0
32519	Other basic organic chemical manufacturing				
	All companies	597	21 458 260	100.0	X
	4 largest companies	X	X	18.7	X
	8 largest companies	X	X	29.4	X
	20 largest companies	X	X	49.4	X
	50 largest companies	X	X	74.2	174.0
325191	Gum and wood chemical manufacturing				
	All companies	42	531 006	100.0	X
	4 largest companies	X	X	82.0	X
	8 largest companies	X	X	91.3	X
	20 largest companies	X	X	97.9	X
	50 largest companies	X	X	100.0	2 693.1
325192	Cyclic crude and intermediate manufacturing				
	All companies	30	2 294 875	100.0	X
	4 largest companies	X	X	77.1	X
	8 largest companies	X	X	93.6	X
	20 largest companies	X	X	99.7	X
	50 largest companies	X	X	100.0	2 459.7
325193	Ethyl alcohol manufacturing				
	All companies	64	784 010	100.0	X
	4 largest companies	X	X	53.7	X
	8 largest companies	X	X	70.5	X
	20 largest companies	X	X	89.8	X
	50 largest companies	X	X	99.9	1 030.5
325199	All other basic organic chemical manufacturing				
	All companies	481	17 848 369	100.0	X
	4 largest companies	X	X	18.1	X
	8 largest companies	X	X	29.7	X
	20 largest companies	X	X	51.0	X
	50 largest companies	X	X	76.0	180.5

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
325	Chemical manufacturing—Con.				
3252	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing				
	All companies	627	22 614 958	100.0	X
	4 largest companies	X	X	34.0	X
	8 largest companies	X	X	43.7	X
	20 largest companies	X	X	61.6	X
	50 largest companies	X	X	82.6	395.8
32521	Resin and synthetic rubber manufacturing				
	All companies	559	19 038 566	100.0	X
	4 largest companies	X	X	33.8	X
	8 largest companies	X	X	44.0	X
	20 largest companies	X	X	63.8	X
	50 largest companies	X	X	83.8	399.9
325211	Plastics material and resin manufacturing				
	All companies	445	16 471 055	100.0	X
	4 largest companies	X	X	36.8	X
	8 largest companies	X	X	48.0	X
	20 largest companies	X	X	66.0	X
	50 largest companies	X	X	85.2	477.4
325212	Synthetic rubber manufacturing				
	All companies	133	2 567 511	100.0	X
	4 largest companies	X	X	47.4	X
	8 largest companies	X	X	70.9	X
	20 largest companies	X	X	94.1	X
	50 largest companies	X	X	98.7	793.3
32522	Artificial and synthetic fibers and filaments manufacturing				
	All companies	77	3 576 392	100.0	X
	4 largest companies	X	X	55.3	X
	8 largest companies	X	X	76.9	X
	20 largest companies	X	X	93.6	X
	50 largest companies	X	X	99.6	1 549.6
325221	Cellulosic organic fiber manufacturing				
	All companies	8	261 635	100.0	X
	4 largest companies	X	X	92.4	X
	8 largest companies	X	X	100.0	D
	20 largest companies	X	X	—	—
	50 largest companies	X	X	—	—
325222	Noncellulosic organic fiber manufacturing				
	All companies	69	3 314 757	100.0	X
	4 largest companies	X	X	59.7	X
	8 largest companies	X	X	82.6	X
	20 largest companies	X	X	95.5	X
	50 largest companies	X	X	99.8	1 769.3
3253	Pesticide, fertilizer, and other agricultural chemical manufacturing				
	All companies	704	9 282 504	100.0	X
	4 largest companies	X	X	47.3	X
	8 largest companies	X	X	61.1	X
	20 largest companies	X	X	78.2	X
	50 largest companies	X	X	87.8	1 029.9
32531	Fertilizer manufacturing				
	All companies	502	3 407 370	100.0	X
	4 largest companies	X	X	39.7	X
	8 largest companies	X	X	59.3	X
	20 largest companies	X	X	76.5	X
	50 largest companies	X	X	88.1	564.6
325311	Nitrogenous fertilizer manufacturing				
	All companies	116	971 247	100.0	X
	4 largest companies	X	X	56.5	X
	8 largest companies	X	X	80.9	X
	20 largest companies	X	X	95.4	X
	50 largest companies	X	X	99.3	1 071.0
325312	Phosphatic fertilizer manufacturing				
	All companies	33	1 361 338	100.0	X
	4 largest companies	X	X	82.1	X
	8 largest companies	X	X	94.8	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	100.0	1 765.6
325314	Fertilizer (mixing only) manufacturing				
	All companies	367	1 074 785	100.0	X
	4 largest companies	X	X	33.8	X
	8 largest companies	X	X	43.3	X
	20 largest companies	X	X	60.4	X
	50 largest companies	X	X	78.3	597.8

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
325	Chemical manufacturing—Con.				
3253	Pesticide, fertilizer, and other agricultural chemical manufacturing—Con.				
32532	Pesticide and other agricultural chemical manufacturing				
	All companies	206	5 875 134	100.0	X
	4 largest companies	X	X	73.0	X
	8 largest companies	X	X	83.9	X
	20 largest companies	X	X	90.3	X
	50 largest companies	X	X	95.6	2 381.3
325320	Pesticide and other agricultural chemical manufacturing				
	All companies	206	5 875 134	100.0	X
	4 largest companies	X	X	73.0	X
	8 largest companies	X	X	83.9	X
	20 largest companies	X	X	90.3	X
	50 largest companies	X	X	95.6	2 381.3
3254	Pharmaceutical and medicine manufacturing				
	All companies	1 444	104 300 076	100.0	X
	4 largest companies	X	X	33.6	X
	8 largest companies	X	X	49.6	X
	20 largest companies	X	X	71.8	X
	50 largest companies	X	X	85.1	481.4
32541	Pharmaceutical and medicine manufacturing				
	All companies	1 444	104 300 076	100.0	X
	4 largest companies	X	X	33.6	X
	8 largest companies	X	X	49.6	X
	20 largest companies	X	X	71.8	X
	50 largest companies	X	X	85.1	481.4
325411	Medicinal and botanical manufacturing				
	All companies	343	7 955 203	100.0	X
	4 largest companies	X	X	69.7	X
	8 largest companies	X	X	76.1	X
	20 largest companies	X	X	85.9	X
	50 largest companies	X	X	92.8	D
325412	Pharmaceutical preparation manufacturing				
	All companies	731	84 611 875	100.0	X
	4 largest companies	X	X	34.9	X
	8 largest companies	X	X	53.1	X
	20 largest companies	X	X	77.4	X
	50 largest companies	X	X	89.8	504.6
325413	In-vitro diagnostic substance manufacturing				
	All companies	197	5 727 462	100.0	X
	4 largest companies	X	X	54.3	X
	8 largest companies	X	X	71.4	X
	20 largest companies	X	X	85.7	X
	50 largest companies	X	X	94.1	959.2
325414	Biological product (except diagnostic) manufacturing				
	All companies	233	6 005 536	100.0	X
	4 largest companies	X	X	44.8	X
	8 largest companies	X	X	69.2	X
	20 largest companies	X	X	85.2	X
	50 largest companies	X	X	94.4	710.6
3255	Paint, coating, and adhesive manufacturing				
	All companies	1 597	13 341 216	100.0	X
	4 largest companies	X	X	28.2	X
	8 largest companies	X	X	41.2	X
	20 largest companies	X	X	57.1	X
	50 largest companies	X	X	71.1	277.4
32551	Paint and coating manufacturing				
	All companies	1 149	9 533 554	100.0	X
	4 largest companies	X	X	34.4	X
	8 largest companies	X	X	51.6	X
	20 largest companies	X	X	68.9	X
	50 largest companies	X	X	78.3	423.0
325510	Paint and coating manufacturing				
	All companies	1 149	9 533 554	100.0	X
	4 largest companies	X	X	34.4	X
	8 largest companies	X	X	51.6	X
	20 largest companies	X	X	68.9	X
	50 largest companies	X	X	78.3	423.0
32552	Adhesive manufacturing				
	All companies	466	3 807 662	100.0	X
	4 largest companies	X	X	24.7	X
	8 largest companies	X	X	35.9	X
	20 largest companies	X	X	57.2	X
	50 largest companies	X	X	77.0	272.9

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
325	Chemical manufacturing—Con.				
3255	Paint, coating, and adhesive manufacturing—Con.				
32552	Adhesive manufacturing—Con.				
325520	Adhesive manufacturing				
	All companies	466	3 807 662	100.0	X
	4 largest companies	X	X	24.7	X
	8 largest companies	X	X	35.9	X
	20 largest companies	X	X	57.2	X
	50 largest companies	X	X	77.0	272.9
3256	Soap, cleaning compound, and toilet preparation manufacturing				
	All companies	2 142	40 740 477	100.0	X
	4 largest companies	X	X	44.7	X
	8 largest companies	X	X	55.1	X
	20 largest companies	X	X	70.3	X
	50 largest companies	X	X	79.6	854.7
32561	Soap and cleaning compound manufacturing				
	All companies	1 387	18 051 324	100.0	X
	4 largest companies	X	X	49.0	X
	8 largest companies	X	X	61.6	X
	20 largest companies	X	X	72.2	X
	50 largest companies	X	X	81.0	949.0
325611	Soap and other detergent manufacturing				
	All companies	699	10 260 490	100.0	X
	4 largest companies	X	X	63.1	X
	8 largest companies	X	X	73.9	X
	20 largest companies	X	X	82.7	X
	50 largest companies	X	X	88.4	2 307.8
325612	Polish and other sanitation good manufacturing				
	All companies	561	5 897 284	100.0	X
	4 largest companies	X	X	64.2	X
	8 largest companies	X	X	72.4	X
	20 largest companies	X	X	79.5	X
	50 largest companies	X	X	87.0	1 674.0
325613	Surface active agent manufacturing				
	All companies	142	1 893 550	100.0	X
	4 largest companies	X	X	47.8	X
	8 largest companies	X	X	62.4	X
	20 largest companies	X	X	79.8	X
	50 largest companies	X	X	94.4	1 237.7
32562	Toilet preparation manufacturing				
	All companies	765	22 689 153	100.0	X
	4 largest companies	X	X	52.2	X
	8 largest companies	X	X	66.9	X
	20 largest companies	X	X	79.7	X
	50 largest companies	X	X	87.7	1 023.6
325620	Toilet preparation manufacturing				
	All companies	765	22 689 153	100.0	X
	4 largest companies	X	X	52.2	X
	8 largest companies	X	X	66.9	X
	20 largest companies	X	X	79.7	X
	50 largest companies	X	X	87.7	1 023.6
3259	Other chemical product and preparation manufacturing				
	All companies	2 304	20 201 300	100.0	X
	4 largest companies	X	X	34.2	X
	8 largest companies	X	X	40.7	X
	20 largest companies	X	X	51.6	X
	50 largest companies	X	X	64.7	681.1
32591	Printing ink manufacturing				
	All companies	229	2 021 098	100.0	X
	4 largest companies	X	X	52.0	X
	8 largest companies	X	X	63.2	X
	20 largest companies	X	X	76.2	X
	50 largest companies	X	X	89.4	1 004.3
325910	Printing ink manufacturing				
	All companies	229	2 021 098	100.0	X
	4 largest companies	X	X	52.0	X
	8 largest companies	X	X	63.2	X
	20 largest companies	X	X	76.2	X
	50 largest companies	X	X	89.4	1 004.3

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NAICS code	Industry and company size	Companies ¹	Value added ² (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
325	Chemical manufacturing—Con.				
3259	Other chemical product and preparation manufacturing—Con.				
32592	Explosives manufacturing				
	All companies	57	600 090	100.0	X
	4 largest companies	X	X	56.9	X
	8 largest companies	X	X	78.1	X
	20 largest companies	X	X	94.1	X
	50 largest companies	X	X	99.9	1 075.3
325920	Explosives manufacturing				
	All companies	57	600 090	100.0	X
	4 largest companies	X	X	56.9	X
	8 largest companies	X	X	78.1	X
	20 largest companies	X	X	94.1	X
	50 largest companies	X	X	99.9	1 075.3
32599	All other chemical product and preparation manufacturing				
	All companies	2 028	17 580 112	100.0	X
	4 largest companies	X	X	38.5	X
	8 largest companies	X	X	44.9	X
	20 largest companies	X	X	55.6	X
	50 largest companies	X	X	68.2	885.5
325991	Custom compounding of purchased resins				
	All companies	651	3 074 791	100.0	X
	4 largest companies	X	X	27.2	X
	8 largest companies	X	X	38.7	X
	20 largest companies	X	X	58.7	X
	50 largest companies	X	X	73.4	287.5
325992	Photographic film, paper, plate, and chemical manufacturing				
	All companies	382	7 254 720	100.0	X
	4 largest companies	X	X	83.1	X
	8 largest companies	X	X	87.0	X
	20 largest companies	X	X	91.9	X
	50 largest companies	X	X	96.3	D
325998	All other miscellaneous chemical product and preparation manufacturing				
	All companies	1 016	7 250 601	100.0	X
	4 largest companies	X	X	22.3	X
	8 largest companies	X	X	31.1	X
	20 largest companies	X	X	46.7	X
	50 largest companies	X	X	63.5	210.2
326	Plastics and rubber products manufacturing				
	All companies	12 318	92 539 553	100.0	X
	4 largest companies	X	X	7.3	X
	8 largest companies	X	X	11.9	X
	20 largest companies	X	X	21.2	X
	50 largest companies	X	X	32.4	31.9
3261	Plastics product manufacturing				
	All companies	10 489	75 392 692	100.0	X
	4 largest companies	X	X	5.6	X
	8 largest companies	X	X	10.1	X
	20 largest companies	X	X	18.8	X
	50 largest companies	X	X	30.2	24.0
32611	Plastics packaging materials and unlaminated film and sheet manufacturing				
	All companies	1 281	13 868 464	100.0	X
	4 largest companies	X	X	20.4	X
	8 largest companies	X	X	31.0	X
	20 largest companies	X	X	48.1	X
	50 largest companies	X	X	64.5	174.5
326111	Plastics bag manufacturing				
	All companies	375	3 752 137	100.0	X
	4 largest companies	X	X	27.2	X
	8 largest companies	X	X	39.5	X
	20 largest companies	X	X	59.6	X
	50 largest companies	X	X	78.7	293.3
326112	Plastics packaging film and sheet (including laminated) manufacturing				
	All companies	212	3 205 621	100.0	X
	4 largest companies	X	X	57.7	X
	8 largest companies	X	X	65.6	X
	20 largest companies	X	X	75.1	X
	50 largest companies	X	X	87.0	1 017.2
326113	Unlaminated plastics film and sheet (except packaging) manufacturing				
	All companies	744	6 910 706	100.0	X
	4 largest companies	X	X	23.8	X
	8 largest companies	X	X	35.9	X
	20 largest companies	X	X	54.3	X
	50 largest companies	X	X	70.8	243.6

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added ² (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
326	Plastics and rubber products manufacturing—Con.				
3261	Plastics product manufacturing—Con.				
32612	Plastics pipe, pipe fitting, and unlaminated profile shape manufacturing				
	All companies	858	5 231 579	100.0	X
	4 largest companies	X	X	21.0	X
	8 largest companies	X	X	30.2	X
	20 largest companies	X	X	47.6	X
	50 largest companies	X	X	65.5	178.0
326121	Unlaminated plastics profile shape manufacturing				
	All companies	555	3 005 280	100.0	X
	4 largest companies	X	X	35.3	X
	8 largest companies	X	X	46.1	X
	20 largest companies	X	X	61.8	X
	50 largest companies	X	X	74.9	404.4
326122	Plastics pipe and pipe fitting manufacturing				
	All companies	310	2 226 299	100.0	X
	4 largest companies	X	X	22.9	X
	8 largest companies	X	X	36.3	X
	20 largest companies	X	X	58.5	X
	50 largest companies	X	X	79.2	239.1
32613	Laminated plastics plate, sheet, (except packaging), and shape manufacturing				
	All companies	280	1 202 258	100.0	X
	4 largest companies	X	X	46.9	X
	8 largest companies	X	X	57.7	X
	20 largest companies	X	X	73.0	X
	50 largest companies	X	X	87.9	1 067.5
326130	Laminated plastics plate, sheet, (except packaging), and shape manufacturing				
	All companies	280	1 202 258	100.0	X
	4 largest companies	X	X	46.9	X
	8 largest companies	X	X	57.7	X
	20 largest companies	X	X	73.0	X
	50 largest companies	X	X	87.9	1 067.5
32614	Polystyrene foam product manufacturing				
	All companies	394	3 535 701	100.0	X
	4 largest companies	X	X	46.0	X
	8 largest companies	X	X	56.0	X
	20 largest companies	X	X	70.3	X
	50 largest companies	X	X	83.5	839.2
326140	Polystyrene foam product manufacturing				
	All companies	394	3 535 701	100.0	X
	4 largest companies	X	X	46.0	X
	8 largest companies	X	X	56.0	X
	20 largest companies	X	X	70.3	X
	50 largest companies	X	X	83.5	839.2
32615	Urethane and other foam product (except polystyrene) manufacturing				
	All companies	424	3 347 267	100.0	X
	4 largest companies	X	X	37.6	X
	8 largest companies	X	X	51.3	X
	20 largest companies	X	X	65.1	X
	50 largest companies	X	X	79.1	515.8
326150	Urethane and other foam product (except polystyrene) manufacturing				
	All companies	424	3 347 267	100.0	X
	4 largest companies	X	X	37.6	X
	8 largest companies	X	X	51.3	X
	20 largest companies	X	X	65.1	X
	50 largest companies	X	X	79.1	515.8
32616	Plastics bottle manufacturing				
	All companies	184	3 877 924	100.0	X
	4 largest companies	X	X	40.9	X
	8 largest companies	X	X	62.1	X
	20 largest companies	X	X	82.6	X
	50 largest companies	X	X	93.3	608.8
326160	Plastics bottle manufacturing				
	All companies	184	3 877 924	100.0	X
	4 largest companies	X	X	40.9	X
	8 largest companies	X	X	62.1	X
	20 largest companies	X	X	82.6	X
	50 largest companies	X	X	93.3	608.8
32619	Other plastics product manufacturing				
	All companies	7 312	44 329 499	100.0	X
	4 largest companies	X	X	6.3	X
	8 largest companies	X	X	10.0	X
	20 largest companies	X	X	17.9	X
	50 largest companies	X	X	29.3	23.6

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
326	Plastics and rubber products manufacturing—Con.				
3261	Plastics product manufacturing—Con.				
32619	Other plastics product manufacturing—Con.				
326191	Plastics plumbing fixture manufacturing				
	All companies	505	1 840 160	100.0	X
	4 largest companies	X	X	37.4	X
	8 largest companies	X	X	47.8	X
	20 largest companies	X	X	58.7	X
	50 largest companies	X	X	72.0	444.6
326192	Resilient floor covering manufacturing				
	All companies	48	851 945	100.0	X
	4 largest companies	X	X	85.4	X
	8 largest companies	X	X	94.3	X
	20 largest companies	X	X	98.8	X
	50 largest companies	X	X	100.0	D
326199	All other plastics product manufacturing				
	All companies	6 775	41 637 394	100.0	X
	4 largest companies	X	X	6.4	X
	8 largest companies	X	X	9.9	X
	20 largest companies	X	X	18.0	X
	50 largest companies	X	X	29.4	23.9
3262	Rubber product manufacturing				
	All companies	1 907	17 146 861	100.0	X
	4 largest companies	X	X	39.2	X
	8 largest companies	X	X	49.4	X
	20 largest companies	X	X	59.9	X
	50 largest companies	X	X	70.6	472.2
32621	Tire manufacturing				
	All companies	545	7 678 355	100.0	X
	4 largest companies	X	X	72.9	X
	8 largest companies	X	X	89.4	X
	20 largest companies	X	X	93.9	X
	50 largest companies	X	X	96.7	1 644.7
326211	Tire manufacturing (except retreading)				
	All companies	112	7 189 543	100.0	X
	4 largest companies	X	X	76.1	X
	8 largest companies	X	X	93.4	X
	20 largest companies	X	X	98.2	X
	50 largest companies	X	X	99.7	1 773.8
326212	Tire retreading				
	All companies	440	488 812	100.0	X
	4 largest companies	X	X	32.9	X
	8 largest companies	X	X	42.8	X
	20 largest companies	X	X	57.1	X
	50 largest companies	X	X	71.4	572.7
32622	Rubber and plastics hoses and belting manufacturing				
	All companies	187	2 121 044	100.0	X
	4 largest companies	X	X	45.7	X
	8 largest companies	X	X	59.0	X
	20 largest companies	X	X	78.3	X
	50 largest companies	X	X	92.2	752.5
326220	Rubber and plastics hoses and belting manufacturing				
	All companies	187	2 121 044	100.0	X
	4 largest companies	X	X	45.7	X
	8 largest companies	X	X	59.0	X
	20 largest companies	X	X	78.3	X
	50 largest companies	X	X	92.2	752.5
32629	Other rubber product manufacturing				
	All companies	1 202	7 347 462	100.0	X
	4 largest companies	X	X	13.6	X
	8 largest companies	X	X	21.8	X
	20 largest companies	X	X	37.7	X
	50 largest companies	X	X	55.7	100.5
326291	Rubber product manufacturing for mechanical use				
	All companies	494	4 137 609	100.0	X
	4 largest companies	X	X	21.9	X
	8 largest companies	X	X	34.8	X
	20 largest companies	X	X	53.8	X
	50 largest companies	X	X	74.6	223.3
326299	All other rubber product manufacturing				
	All companies	729	3 209 853	100.0	X
	4 largest companies	X	X	15.9	X
	8 largest companies	X	X	25.0	X
	20 largest companies	X	X	40.4	X
	50 largest companies	X	X	58.0	120.5

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
327	Nonmetallic mineral product manufacturing				
	All companies	11 514	54 765 493	100.0	X
	4 largest companies	X	X	7.7	X
	8 largest companies	X	X	14.2	X
	20 largest companies	X	X	28.0	X
	50 largest companies	X	X	43.5	50.5
3271	Clay product and refractory manufacturing				
	All companies	1 423	5 449 685	100.0	X
	4 largest companies	X	X	17.8	X
	8 largest companies	X	X	27.5	X
	20 largest companies	X	X	48.1	X
	50 largest companies	X	X	67.5	156.7
32711	Pottery, ceramics, and plumbing fixture manufacturing				
	All companies	909	2 208 533	100.0	X
	4 largest companies	X	X	29.9	X
	8 largest companies	X	X	44.3	X
	20 largest companies	X	X	63.9	X
	50 largest companies	X	X	80.0	382.7
327111	Vitreous china and earthenware plumbing fixture and accessories mfg				
	All companies	37	835 905	100.0	X
	4 largest companies	X	X	72.5	X
	8 largest companies	X	X	95.0	X
	20 largest companies	X	X	99.6	X
	50 largest companies	X	X	100.0	1 973.5
327112	Vitreous china, fine earthenware, and other pottery product manufacturing				
	All companies	753	625 926	100.0	X
	4 largest companies	X	X	32.4	X
	8 largest companies	X	X	43.1	X
	20 largest companies	X	X	59.5	X
	50 largest companies	X	X	76.4	363.7
327113	Porcelain electrical supply manufacturing				
	All companies	122	746 702	100.0	X
	4 largest companies	X	X	38.9	X
	8 largest companies	X	X	51.1	X
	20 largest companies	X	X	74.9	X
	50 largest companies	X	X	93.7	586.9
32712	Clay building material and refractories manufacturing				
	All companies	520	3 241 152	100.0	X
	4 largest companies	X	X	24.7	X
	8 largest companies	X	X	37.9	X
	20 largest companies	X	X	60.3	X
	50 largest companies	X	X	76.5	256.3
327121	Brick and structural clay tile manufacturing				
	All companies	106	1 383 086	100.0	X
	4 largest companies	X	X	48.1	X
	8 largest companies	X	X	63.3	X
	20 largest companies	X	X	81.3	X
	50 largest companies	X	X	96.4	716.3
327122	Ceramic wall and floor tile manufacturing				
	All companies	188	659 874	100.0	X
	4 largest companies	X	X	61.4	X
	8 largest companies	X	X	79.4	X
	20 largest companies	X	X	88.7	X
	50 largest companies	X	X	94.5	1 615.9
327123	Other structural clay product manufacturing				
	All companies	46	139 189	100.0	X
	4 largest companies	X	X	46.8	X
	8 largest companies	X	X	69.1	X
	20 largest companies	X	X	94.8	X
	50 largest companies	X	X	100.0	761.8
327124	Clay refractory manufacturing				
	All companies	111	441 484	100.0	X
	4 largest companies	X	X	37.5	X
	8 largest companies	X	X	48.3	X
	20 largest companies	X	X	69.2	X
	50 largest companies	X	X	91.8	498.1
327125	Nonclay refractory manufacturing				
	All companies	87	617 519	100.0	X
	4 largest companies	X	X	49.4	X
	8 largest companies	X	X	68.8	X
	20 largest companies	X	X	85.5	X
	50 largest companies	X	X	97.8	770.8

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
327	Nonmetallic mineral product manufacturing—Con.				
3272	Glass and glass product manufacturing				
	All companies	1 960	13 086 419	100.0	X
	4 largest companies	X	X	25.9	X
	8 largest companies	X	X	41.7	X
	20 largest companies	X	X	64.4	X
	50 largest companies	X	X	82.3	293.3
32721	Glass and glass product manufacturing				
	All companies	1 960	13 086 419	100.0	X
	4 largest companies	X	X	25.9	X
	8 largest companies	X	X	41.7	X
	20 largest companies	X	X	64.4	X
	50 largest companies	X	X	82.3	293.3
327211	Flat glass manufacturing				
	All companies	13	1 678 192	100.0	X
	4 largest companies	X	X	76.3	X
	8 largest companies	X	X	98.9	X
	20 largest companies	X	X	100.0	1 677.6
	50 largest companies	X	X	—	—
327212	Other pressed and blown glass and glassware manufacturing				
	All companies	479	3 055 589	100.0	X
	4 largest companies	X	X	35.9	X
	8 largest companies	X	X	60.1	X
	20 largest companies	X	X	87.7	X
	50 largest companies	X	X	94.3	565.4
327213	Glass container manufacturing				
	All companies	22	2 726 755	100.0	X
	4 largest companies	X	X	87.1	X
	8 largest companies	X	X	95.8	X
	20 largest companies	X	X	D	X
	50 largest companies	X	X	100.0	2 548.1
327215	Glass product manufacturing made of purchased glass				
	All companies	1 468	5 625 883	100.0	X
	4 largest companies	X	X	22.7	X
	8 largest companies	X	X	37.7	X
	20 largest companies	X	X	60.9	X
	50 largest companies	X	X	74.8	250.1
3273	Cement and concrete product manufacturing				
	All companies	5 431	24 416 919	100.0	X
	4 largest companies	X	X	12.4	X
	8 largest companies	X	X	21.2	X
	20 largest companies	X	X	33.0	X
	50 largest companies	X	X	44.7	76.3
32731	Cement manufacturing				
	All companies	131	4 542 435	100.0	X
	4 largest companies	X	X	39.8	X
	8 largest companies	X	X	60.2	X
	20 largest companies	X	X	86.7	X
	50 largest companies	X	X	97.5	598.0
327310	Cement manufacturing				
	All companies	131	4 542 435	100.0	X
	4 largest companies	X	X	39.8	X
	8 largest companies	X	X	60.2	X
	20 largest companies	X	X	86.7	X
	50 largest companies	X	X	97.5	598.0
32732	Ready-mix concrete manufacturing				
	All companies	2 614	10 311 823	100.0	X
	4 largest companies	X	X	11.2	X
	8 largest companies	X	X	16.8	X
	20 largest companies	X	X	26.9	X
	50 largest companies	X	X	40.2	57.3
327320	Ready-mix concrete manufacturing				
	All companies	2 614	10 311 823	100.0	X
	4 largest companies	X	X	11.2	X
	8 largest companies	X	X	16.8	X
	20 largest companies	X	X	26.9	X
	50 largest companies	X	X	40.2	57.3
32733	Concrete pipe, brick, and block manufacturing				
	All companies	837	3 986 411	100.0	X
	4 largest companies	X	X	28.4	X
	8 largest companies	X	X	35.8	X
	20 largest companies	X	X	46.6	X
	50 largest companies	X	X	59.5	259.0

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327	Nonmetallic mineral product manufacturing—Con.				
3273	Cement and concrete product manufacturing—Con.				
32733	Concrete pipe, brick, and block manufacturing—Con.				
327331	Concrete block and brick manufacturing				
	All companies	635	2 275 696	100.0	X
	4 largest companies	X	X	23.7	X
	8 largest companies	X	X	31.5	X
	20 largest companies	X	X	43.9	X
	50 largest companies	X	X	58.5	206.5
327332	Concrete pipe manufacturing				
	All companies	214	1 710 715	100.0	X
	4 largest companies	X	X	43.4	X
	8 largest companies	X	X	53.4	X
	20 largest companies	X	X	68.3	X
	50 largest companies	X	X	82.3	685.3
32739	Other concrete product manufacturing				
	All companies	1 996	5 576 250	100.0	X
	4 largest companies	X	X	16.2	X
	8 largest companies	X	X	23.8	X
	20 largest companies	X	X	35.0	X
	50 largest companies	X	X	47.8	106.8
327390	Other concrete product manufacturing				
	All companies	1 996	5 576 250	100.0	X
	4 largest companies	X	X	16.2	X
	8 largest companies	X	X	23.8	X
	20 largest companies	X	X	35.0	X
	50 largest companies	X	X	47.8	106.8
3274	Lime and gypsum product manufacturing				
	All companies	260	2 506 680	100.0	X
	4 largest companies	X	X	56.4	X
	8 largest companies	X	X	72.8	X
	20 largest companies	X	X	89.1	X
	50 largest companies	X	X	95.3	1 009.2
32741	Lime manufacturing				
	All companies	41	578 982	100.0	X
	4 largest companies	X	X	69.0	X
	8 largest companies	X	X	83.7	X
	20 largest companies	X	X	96.5	X
	50 largest companies	X	X	100.0	1 365.5
327410	Lime manufacturing				
	All companies	41	578 982	100.0	X
	4 largest companies	X	X	69.0	X
	8 largest companies	X	X	83.7	X
	20 largest companies	X	X	96.5	X
	50 largest companies	X	X	100.0	1 365.5
32742	Gypsum product manufacturing				
	All companies	219	1 927 698	100.0	X
	4 largest companies	X	X	73.4	X
	8 largest companies	X	X	86.5	X
	20 largest companies	X	X	93.3	X
	50 largest companies	X	X	96.7	1 583.6
327420	Gypsum product manufacturing				
	All companies	219	1 927 698	100.0	X
	4 largest companies	X	X	73.4	X
	8 largest companies	X	X	86.5	X
	20 largest companies	X	X	93.3	X
	50 largest companies	X	X	96.7	1 583.6
3279	Other nonmetallic mineral product manufacturing				
	All companies	2 550	9 305 790	100.0	X
	4 largest companies	X	X	30.7	X
	8 largest companies	X	X	42.4	X
	20 largest companies	X	X	52.7	X
	50 largest companies	X	X	62.6	293.7
32791	Abrasive product manufacturing				
	All companies	312	2 371 290	100.0	X
	4 largest companies	X	X	57.1	X
	8 largest companies	X	X	64.2	X
	20 largest companies	X	X	74.5	X
	50 largest companies	X	X	85.2	1 529.4
327910	Abrasive product manufacturing				
	All companies	312	2 371 290	100.0	X
	4 largest companies	X	X	57.1	X
	8 largest companies	X	X	64.2	X
	20 largest companies	X	X	74.5	X
	50 largest companies	X	X	85.2	1 529.4

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327	Nonmetallic mineral product manufacturing—Con.				
3279	Other nonmetallic mineral product manufacturing—Con.				
32799	All other nonmetallic mineral product manufacturing				
	All companies	2 245	6 934 500	100.0	X
	4 largest companies	X	X	29.2	X
	8 largest companies	X	X	42.4	X
	20 largest companies	X	X	52.6	X
	50 largest companies	X	X	62.9	310.0
327991	Cut stone and stone product manufacturing				
	All companies	1 521	1 526 129	100.0	X
	4 largest companies	X	X	10.8	X
	8 largest companies	X	X	14.3	X
	20 largest companies	X	X	21.6	X
	50 largest companies	X	X	33.4	61.2
327992	Ground or treated mineral and earth manufacturing				
	All companies	185	1 400 218	100.0	X
	4 largest companies	X	X	50.6	X
	8 largest companies	X	X	62.2	X
	20 largest companies	X	X	77.7	X
	50 largest companies	X	X	91.3	1 034.6
327993	Mineral wool manufacturing				
	All companies	197	2 976 712	100.0	X
	4 largest companies	X	X	64.1	X
	8 largest companies	X	X	77.5	X
	20 largest companies	X	X	87.7	X
	50 largest companies	X	X	95.3	1 311.3
327999	All other miscellaneous nonmetallic mineral product manufacturing				
	All companies	357	1 031 441	100.0	X
	4 largest companies	X	X	29.0	X
	8 largest companies	X	X	41.3	X
	20 largest companies	X	X	59.7	X
	50 largest companies	X	X	75.3	428.2
331	Primary metal manufacturing				
	All companies	4 150	57 154 378	100.0	X
	4 largest companies	X	X	18.9	X
	8 largest companies	X	X	28.5	X
	20 largest companies	X	X	38.9	X
	50 largest companies	X	X	53.0	138.9
3311	Iron and steel mills and ferroalloy manufacturing				
	All companies	302	18 818 914	100.0	X
	4 largest companies	X	X	44.2	X
	8 largest companies	X	X	61.2	X
	20 largest companies	X	X	78.4	X
	50 largest companies	X	X	91.8	650.4
33111	Iron and steel mills and ferroalloy manufacturing				
	All companies	302	18 818 914	100.0	X
	4 largest companies	X	X	44.2	X
	8 largest companies	X	X	61.2	X
	20 largest companies	X	X	78.4	X
	50 largest companies	X	X	91.8	650.4
331111	Iron and steel mills				
	All companies	285	18 558 177	100.0	X
	4 largest companies	X	X	44.9	X
	8 largest companies	X	X	62.0	X
	20 largest companies	X	X	79.5	X
	50 largest companies	X	X	92.7	668.5
331112	Electrometallurgical ferroalloy product manufacturing				
	All companies	19	260 737	100.0	X
	4 largest companies	X	X	69.7	X
	8 largest companies	X	X	91.4	X
	20 largest companies	X	X	100.0	2 230.0
	50 largest companies	X	X	—	—
3312	Steel product manufacturing from purchased steel				
	All companies	512	5 643 702	100.0	X
	4 largest companies	X	X	14.9	X
	8 largest companies	X	X	24.3	X
	20 largest companies	X	X	40.9	X
	50 largest companies	X	X	62.4	120.4
33121	Iron and steel pipe and tube manufacturing from purchased steel				
	All companies	133	2 372 127	100.0	X
	4 largest companies	X	X	24.8	X
	8 largest companies	X	X	37.2	X
	20 largest companies	X	X	59.8	X
	50 largest companies	X	X	86.4	270.0

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
331	Primary metal manufacturing—Con.				
3312	Steel product manufacturing from purchased steel—Con.				
33121	Iron and steel pipe and tube manufacturing from purchased steel—Con.				
331210	Iron and steel pipe and tube manufacturing from purchased steel				
	All companies	133	2 372 127	100.0	X
	4 largest companies	X	X	24.8	X
	8 largest companies	X	X	37.2	X
	20 largest companies	X	X	59.8	X
	50 largest companies	X	X	86.4	270.0
33122	Rolling and drawing of purchased steel				
	All companies	383	3 271 575	100.0	X
	4 largest companies	X	X	21.5	X
	8 largest companies	X	X	33.1	X
	20 largest companies	X	X	53.5	X
	50 largest companies	X	X	74.9	215.5
331221	Rolled steel shape manufacturing				
	All companies	121	1 669 729	100.0	X
	4 largest companies	X	X	38.1	X
	8 largest companies	X	X	54.7	X
	20 largest companies	X	X	76.6	X
	50 largest companies	X	X	92.4	560.5
331222	Steel wire drawing				
	All companies	270	1 601 846	100.0	X
	4 largest companies	X	X	27.4	X
	8 largest companies	X	X	39.9	X
	20 largest companies	X	X	60.9	X
	50 largest companies	X	X	84.3	295.7
3313	Alumina and aluminum production and processing				
	All companies	435	9 406 420	100.0	X
	4 largest companies	X	X	54.6	X
	8 largest companies	X	X	62.6	X
	20 largest companies	X	X	77.3	X
	50 largest companies	X	X	87.5	1 440.0
33131	Alumina and aluminum production and processing				
	All companies	435	9 406 420	100.0	X
	4 largest companies	X	X	54.6	X
	8 largest companies	X	X	62.6	X
	20 largest companies	X	X	77.3	X
	50 largest companies	X	X	87.5	1 440.0
331311	Alumina refining				
	All companies	8	260 084	100.0	X
	4 largest companies	X	X	96.9	X
	8 largest companies	X	X	100.0	D
	20 largest companies	X	X	—	—
	50 largest companies	X	X	—	—
331312	Primary aluminum production				
	All companies	26	1 776 932	100.0	X
	4 largest companies	X	X	83.0	X
	8 largest companies	X	X	98.3	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	100.0	D
331314	Secondary smelting and alloying of aluminum				
	All companies	124	716 203	100.0	X
	4 largest companies	X	X	43.7	X
	8 largest companies	X	X	59.1	X
	20 largest companies	X	X	83.5	X
	50 largest companies	X	X	99.9	675.4
331315	Aluminum sheet, plate, and foil manufacturing				
	All companies	79	3 907 885	100.0	X
	4 largest companies	X	X	74.5	X
	8 largest companies	X	X	88.6	X
	20 largest companies	X	X	98.2	X
	50 largest companies	X	X	99.9	2 285.6
331316	Aluminum extruded product manufacturing				
	All companies	134	2 328 137	100.0	X
	4 largest companies	X	X	45.1	X
	8 largest companies	X	X	57.8	X
	20 largest companies	X	X	73.3	X
	50 largest companies	X	X	91.6	1 009.1
331319	Other aluminum rolling and drawing				
	All companies	88	417 179	100.0	X
	4 largest companies	X	X	43.6	X
	8 largest companies	X	X	61.6	X
	20 largest companies	X	X	85.4	X
	50 largest companies	X	X	97.9	626.1

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
331	Primary metal manufacturing—Con.				
3314	Nonferrous metal (except aluminum) production and processing				
	All companies	819	7 904 084	100.0	X
	4 largest companies	X	X	17.4	X
	8 largest companies	X	X	29.6	X
	20 largest companies	X	X	50.3	X
	50 largest companies	X	X	69.9	170.2
33141	Nonferrous metal (except aluminum) smelting and refining				
	All companies	164	1 767 883	100.0	X
	4 largest companies	X	X	58.4	X
	8 largest companies	X	X	71.1	X
	20 largest companies	X	X	86.0	X
	50 largest companies	X	X	96.9	1 184.6
331411	Primary smelting and refining of copper				
	All companies	10	787 249	100.0	X
	4 largest companies	X	X	99.3	X
	8 largest companies	X	X	D	X
	20 largest companies	X	X	100.0	D
	50 largest companies	X	X	—	—
331419	Primary smelting and refining of nonferrous metal (except copper and aluminum)				
	All companies	155	980 634	100.0	X
	4 largest companies	X	X	41.0	X
	8 largest companies	X	X	57.5	X
	20 largest companies	X	X	79.5	X
	50 largest companies	X	X	95.6	691.6
33142	Copper rolling, drawing, extruding, and alloying				
	All companies	193	3 147 259	100.0	X
	4 largest companies	X	X	31.9	X
	8 largest companies	X	X	53.0	X
	20 largest companies	X	X	77.6	X
	50 largest companies	X	X	93.4	445.5
331421	Copper rolling, drawing, and extruding				
	All companies	92	1 623 280	100.0	X
	4 largest companies	X	X	48.5	X
	8 largest companies	X	X	70.9	X
	20 largest companies	X	X	91.0	X
	50 largest companies	X	X	99.5	793.1
331422	Copper wire (except mechanical) drawing				
	All companies	80	1 373 419	100.0	X
	4 largest companies	X	X	54.4	X
	8 largest companies	X	X	73.0	X
	20 largest companies	X	X	89.2	X
	50 largest companies	X	X	99.4	955.1
331423	Secondary smelting, refining, and alloying of copper				
	All companies	30	150 560	100.0	X
	4 largest companies	X	X	58.9	X
	8 largest companies	X	X	90.8	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	100.0	1 243.9
33149	Nonferrous metal (except copper and aluminum) rolling, drawing, extruding, and alloying				
	All companies	489	2 988 942	100.0	X
	4 largest companies	X	X	24.8	X
	8 largest companies	X	X	34.9	X
	20 largest companies	X	X	51.4	X
	50 largest companies	X	X	73.2	263.1
331491	Nonferrous metal (except copper and aluminum) rolling, drawing, and extruding				
	All companies	288	1 887 466	100.0	X
	4 largest companies	X	X	37.4	X
	8 largest companies	X	X	48.6	X
	20 largest companies	X	X	68.7	X
	50 largest companies	X	X	88.6	535.4
331492	Secondary smelting, refining, and alloying of nonferrous metal (except copper and aluminum)				
	All companies	213	1 101 476	100.0	X
	4 largest companies	X	X	25.1	X
	8 largest companies	X	X	38.7	X
	20 largest companies	X	X	58.9	X
	50 largest companies	X	X	83.0	270.0

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
331	Primary metal manufacturing—Con.				
3315	Foundries				
	All companies	2 203	15 381 258	100.0	X
	4 largest companies	X	X	14.7	X
	8 largest companies	X	X	24.2	X
	20 largest companies	X	X	40.1	X
	50 largest companies	X	X	55.1	108.6
33151	Ferrous metal foundries				
	All companies	872	8 787 554	100.0	X
	4 largest companies	X	X	20.7	X
	8 largest companies	X	X	33.2	X
	20 largest companies	X	X	55.1	X
	50 largest companies	X	X	71.0	202.3
331511	Iron foundries				
	All companies	531	5 931 467	100.0	X
	4 largest companies	X	X	27.5	X
	8 largest companies	X	X	42.8	X
	20 largest companies	X	X	66.0	X
	50 largest companies	X	X	80.2	316.4
331512	Steel investment foundries				
	All companies	130	1 404 604	100.0	X
	4 largest companies	X	X	57.6	X
	8 largest companies	X	X	67.0	X
	20 largest companies	X	X	78.0	X
	50 largest companies	X	X	90.7	1 478.2
331513	Steel foundries (except investment)				
	All companies	229	1 451 483	100.0	X
	4 largest companies	X	X	31.6	X
	8 largest companies	X	X	46.1	X
	20 largest companies	X	X	69.0	X
	50 largest companies	X	X	87.3	386.1
33152	Nonferrous metal foundries				
	All companies	1 360	6 593 704	100.0	X
	4 largest companies	X	X	15.0	X
	8 largest companies	X	X	24.2	X
	20 largest companies	X	X	38.9	X
	50 largest companies	X	X	54.7	107.4
331521	Aluminum die-casting foundries				
	All companies	255	2 290 070	100.0	X
	4 largest companies	X	X	27.6	X
	8 largest companies	X	X	43.0	X
	20 largest companies	X	X	62.4	X
	50 largest companies	X	X	79.3	300.8
331522	Nonferrous (except aluminum) die-casting foundries				
	All companies	219	1 213 993	100.0	X
	4 largest companies	X	X	25.1	X
	8 largest companies	X	X	37.0	X
	20 largest companies	X	X	60.1	X
	50 largest companies	X	X	83.1	283.8
331524	Aluminum foundries (except die-casting)				
	All companies	505	2 187 086	100.0	X
	4 largest companies	X	X	24.3	X
	8 largest companies	X	X	36.4	X
	20 largest companies	X	X	55.3	X
	50 largest companies	X	X	73.8	237.0
331525	Copper foundries (except die-casting)				
	All companies	278	454 387	100.0	X
	4 largest companies	X	X	12.3	X
	8 largest companies	X	X	19.8	X
	20 largest companies	X	X	38.4	X
	50 largest companies	X	X	63.8	106.5
331528	Other nonferrous foundries (except die-casting)				
	All companies	139	448 168	100.0	X
	4 largest companies	X	X	60.8	X
	8 largest companies	X	X	67.7	X
	20 largest companies	X	X	80.3	X
	50 largest companies	X	X	92.9	1 577.9
332	Fabricated metal product manufacturing				
	All companies	58 008	138 778 384	100.0	X
	4 largest companies	X	X	3.2	X
	8 largest companies	X	X	5.6	X
	20 largest companies	X	X	10.8	X
	50 largest companies	X	X	18.0	8.1

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
332	Fabricated metal product manufacturing—Con.				
3321	Forging and stamping				
	All companies	2 623	10 647 978	100.0	X
	4 largest companies	X	X	6.9	X
	8 largest companies	X	X	11.6	X
	20 largest companies	X	X	19.9	X
	50 largest companies	X	X	31.5	28.1
33211	Forging and stamping				
	All companies	2 623	10 647 978	100.0	X
	4 largest companies	X	X	6.9	X
	8 largest companies	X	X	11.6	X
	20 largest companies	X	X	19.9	X
	50 largest companies	X	X	31.5	28.1
332111	Iron and steel forging				
	All companies	343	2 006 971	100.0	X
	4 largest companies	X	X	19.5	X
	8 largest companies	X	X	30.2	X
	20 largest companies	X	X	50.7	X
	50 largest companies	X	X	73.3	184.2
332112	Nonferrous forging				
	All companies	64	830 585	100.0	X
	4 largest companies	X	X	43.7	X
	8 largest companies	X	X	61.0	X
	20 largest companies	X	X	86.2	X
	50 largest companies	X	X	99.7	761.5
332114	Custom roll forming				
	All companies	371	1 756 419	100.0	X
	4 largest companies	X	X	23.6	X
	8 largest companies	X	X	34.4	X
	20 largest companies	X	X	51.7	X
	50 largest companies	X	X	71.3	235.7
332115	Crown and closure manufacturing				
	All companies	54	330 007	100.0	X
	4 largest companies	X	X	63.1	X
	8 largest companies	X	X	81.3	X
	20 largest companies	X	X	93.6	X
	50 largest companies	X	X	99.9	1 337.4
332116	Metal stamping				
	All companies	1 694	5 002 176	100.0	X
	4 largest companies	X	X	8.4	X
	8 largest companies	X	X	11.7	X
	20 largest companies	X	X	19.1	X
	50 largest companies	X	X	30.6	30.7
332117	Powder metallurgy part manufacturing				
	All companies	119	721 820	100.0	X
	4 largest companies	X	X	40.2	X
	8 largest companies	X	X	53.9	X
	20 largest companies	X	X	74.3	X
	50 largest companies	X	X	93.0	602.9
3322	Cutlery and handtool manufacturing				
	All companies	1 397	6 754 220	100.0	X
	4 largest companies	X	X	20.4	X
	8 largest companies	X	X	31.4	X
	20 largest companies	X	X	47.4	X
	50 largest companies	X	X	65.8	177.4
33221	Cutlery and handtool manufacturing				
	All companies	1 397	6 754 220	100.0	X
	4 largest companies	X	X	20.4	X
	8 largest companies	X	X	31.4	X
	20 largest companies	X	X	47.4	X
	50 largest companies	X	X	65.8	177.4
332211	Cutlery and flatware (except precious) manufacturing				
	All companies	126	1 128 130	100.0	X
	4 largest companies	X	X	69.2	X
	8 largest companies	X	X	80.5	X
	20 largest companies	X	X	92.4	X
	50 largest companies	X	X	98.0	1 678.3
332212	Hand and edge tool manufacturing				
	All companies	1 077	3 940 526	100.0	X
	4 largest companies	X	X	19.2	X
	8 largest companies	X	X	30.5	X
	20 largest companies	X	X	47.8	X
	50 largest companies	X	X	65.4	165.0

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332	Fabricated metal product manufacturing—Con.				
3322	Cutlery and handtool manufacturing—Con.				
33221	Cutlery and handtool manufacturing—Con.				
332213	Saw blade and handsaw manufacturing				
	All companies	139	877 704	100.0	X
	4 largest companies	X	X	55.8	X
	8 largest companies	X	X	69.4	X
	20 largest companies	X	X	87.7	X
	50 largest companies	X	X	95.7	1 422.2
332214	Kitchen utensil, pot, and pan manufacturing				
	All companies	69	807 860	100.0	X
	4 largest companies	X	X	63.4	X
	8 largest companies	X	X	78.0	X
	20 largest companies	X	X	92.5	X
	50 largest companies	X	X	99.6	1 749.5
3323	Architectural and structural metals manufacturing				
	All companies	12 740	31 279 948	100.0	X
	4 largest companies	X	X	3.8	X
	8 largest companies	X	X	6.7	X
	20 largest companies	X	X	13.1	X
	50 largest companies	X	X	22.2	12.2
33231	Plate work and fabricated structural product manufacturing				
	All companies	5 236	14 207 749	100.0	X
	4 largest companies	X	X	7.2	X
	8 largest companies	X	X	12.1	X
	20 largest companies	X	X	21.0	X
	50 largest companies	X	X	32.1	30.2
332311	Prefabricated metal building and component manufacturing				
	All companies	678	2 474 492	100.0	X
	4 largest companies	X	X	22.0	X
	8 largest companies	X	X	32.5	X
	20 largest companies	X	X	49.1	X
	50 largest companies	X	X	66.4	203.1
332312	Fabricated structural metal manufacturing				
	All companies	3 569	10 010 789	100.0	X
	4 largest companies	X	X	9.7	X
	8 largest companies	X	X	15.7	X
	20 largest companies	X	X	25.8	X
	50 largest companies	X	X	37.4	46.8
332313	Plate work manufacturing				
	All companies	1 010	1 722 468	100.0	X
	4 largest companies	X	X	9.4	X
	8 largest companies	X	X	15.1	X
	20 largest companies	X	X	26.2	X
	50 largest companies	X	X	42.1	50.2
33232	Ornamental and architectural metal products manufacturing				
	All companies	7 555	17 072 199	100.0	X
	4 largest companies	X	X	6.1	X
	8 largest companies	X	X	9.9	X
	20 largest companies	X	X	17.0	X
	50 largest companies	X	X	26.6	21.2
332321	Metal window and door manufacturing				
	All companies	1 158	5 482 750	100.0	X
	4 largest companies	X	X	13.8	X
	8 largest companies	X	X	23.4	X
	20 largest companies	X	X	40.0	X
	50 largest companies	X	X	58.5	108.6
332322	Sheet metal work manufacturing				
	All companies	4 139	8 478 559	100.0	X
	4 largest companies	X	X	5.4	X
	8 largest companies	X	X	8.7	X
	20 largest companies	X	X	15.3	X
	50 largest companies	X	X	26.5	18.1
332323	Ornamental and architectural metal work manufacturing				
	All companies	2 290	3 110 890	100.0	X
	4 largest companies	X	X	15.7	X
	8 largest companies	X	X	19.7	X
	20 largest companies	X	X	28.2	X
	50 largest companies	X	X	41.0	95.9

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332	Fabricated metal product manufacturing—Con.				
3324	Boiler, tank, and shipping container manufacturing				
	All companies	1 319	10 183 391	100.0	X
	4 largest companies	X	X	28.6	X
	8 largest companies	X	X	40.4	X
	20 largest companies	X	X	52.9	X
	50 largest companies	X	X	64.1	281.8
33241	Power boiler and heat exchanger manufacturing				
	All companies	293	1 888 967	100.0	X
	4 largest companies	X	X	20.6	X
	8 largest companies	X	X	31.5	X
	20 largest companies	X	X	48.4	X
	50 largest companies	X	X	71.6	185.8
332410	Power boiler and heat exchanger manufacturing				
	All companies	293	1 888 967	100.0	X
	4 largest companies	X	X	20.6	X
	8 largest companies	X	X	31.5	X
	20 largest companies	X	X	48.4	X
	50 largest companies	X	X	71.6	185.8
33242	Metal tank (heavy gauge) manufacturing				
	All companies	593	2 557 904	100.0	X
	4 largest companies	X	X	18.6	X
	8 largest companies	X	X	27.7	X
	20 largest companies	X	X	41.0	X
	50 largest companies	X	X	57.5	136.4
332420	Metal tank (heavy gauge) manufacturing				
	All companies	593	2 557 904	100.0	X
	4 largest companies	X	X	18.6	X
	8 largest companies	X	X	27.7	X
	20 largest companies	X	X	41.0	X
	50 largest companies	X	X	57.5	136.4
33243	Metal can, box, and other metal container (light gauge) manufacturing				
	All companies	448	5 736 520	100.0	X
	4 largest companies	X	X	50.7	X
	8 largest companies	X	X	71.7	X
	20 largest companies	X	X	82.2	X
	50 largest companies	X	X	90.6	845.9
332431	Metal can manufacturing				
	All companies	82	4 173 072	100.0	X
	4 largest companies	X	X	69.4	X
	8 largest companies	X	X	92.9	X
	20 largest companies	X	X	98.1	X
	50 largest companies	X	X	99.8	1 517.8
332439	Other metal container manufacturing				
	All companies	372	1 563 448	100.0	X
	4 largest companies	X	X	34.8	X
	8 largest companies	X	X	42.9	X
	20 largest companies	X	X	60.1	X
	50 largest companies	X	X	78.5	452.8
3325	Hardware manufacturing				
	All companies	807	6 034 496	100.0	X
	4 largest companies	X	X	20.6	X
	8 largest companies	X	X	31.6	X
	20 largest companies	X	X	53.7	X
	50 largest companies	X	X	72.5	203.3
33251	Hardware manufacturing				
	All companies	807	6 034 496	100.0	X
	4 largest companies	X	X	20.6	X
	8 largest companies	X	X	31.6	X
	20 largest companies	X	X	53.7	X
	50 largest companies	X	X	72.5	203.3
332510	Hardware manufacturing				
	All companies	807	6 034 496	100.0	X
	4 largest companies	X	X	20.6	X
	8 largest companies	X	X	31.6	X
	20 largest companies	X	X	53.7	X
	50 largest companies	X	X	72.5	203.3
3326	Spring and wire product manufacturing				
	All companies	1 963	5 020 473	100.0	X
	4 largest companies	X	X	17.6	X
	8 largest companies	X	X	24.1	X
	20 largest companies	X	X	34.2	X
	50 largest companies	X	X	47.1	134.4

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
332	Fabricated metal product manufacturing—Con.				
3326	Spring and wire product manufacturing—Con.				
33261	Spring and wire product manufacturing				
	All companies	1 963	5 020 473	100.0	X
	4 largest companies	X	X	17.6	X
	8 largest companies	X	X	24.1	X
	20 largest companies	X	X	34.2	X
	50 largest companies	X	X	47.1	134.4
332611	Spring (heavy gauge) manufacturing				
	All companies	114	375 921	100.0	X
	4 largest companies	X	X	44.5	X
	8 largest companies	X	X	55.0	X
	20 largest companies	X	X	74.9	X
	50 largest companies	X	X	94.3	631.1
332612	Spring (light gauge) manufacturing				
	All companies	282	1 423 202	100.0	X
	4 largest companies	X	X	44.5	X
	8 largest companies	X	X	54.0	X
	20 largest companies	X	X	66.6	X
	50 largest companies	X	X	81.8	965.1
332618	Other fabricated wire product manufacturing				
	All companies	1 573	3 221 350	100.0	X
	4 largest companies	X	X	16.1	X
	8 largest companies	X	X	22.0	X
	20 largest companies	X	X	33.1	X
	50 largest companies	X	X	47.3	99.6
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing				
	All companies	25 783	28 103 673	100.0	X
	4 largest companies	X	X	4.2	X
	8 largest companies	X	X	6.0	X
	20 largest companies	X	X	9.0	X
	50 largest companies	X	X	13.3	7.0
33271	Machine shops				
	All companies	22 180	17 788 959	100.0	X
	4 largest companies	X	X	1.7	X
	8 largest companies	X	X	3.0	X
	20 largest companies	X	X	5.6	X
	50 largest companies	X	X	9.4	2.2
332710	Machine shops				
	All companies	22 180	17 788 959	100.0	X
	4 largest companies	X	X	1.7	X
	8 largest companies	X	X	3.0	X
	20 largest companies	X	X	5.6	X
	50 largest companies	X	X	9.4	2.2
33272	Turned product and screw, nut, and bolt manufacturing				
	All companies	3 640	10 314 714	100.0	X
	4 largest companies	X	X	11.0	X
	8 largest companies	X	X	15.8	X
	20 largest companies	X	X	22.2	X
	50 largest companies	X	X	30.9	45.9
332721	Precision turned product manufacturing				
	All companies	2 823	5 886 620	100.0	X
	4 largest companies	X	X	4.0	X
	8 largest companies	X	X	6.7	X
	20 largest companies	X	X	12.4	X
	50 largest companies	X	X	21.8	11.8
332722	Bolt, nut, screw, rivet, and washer manufacturing				
	All companies	836	4 428 094	100.0	X
	4 largest companies	X	X	24.3	X
	8 largest companies	X	X	34.1	X
	20 largest companies	X	X	47.1	X
	50 largest companies	X	X	61.9	212.5
3328	Coating, engraving, heat treating, and allied activities				
	All companies	5 791	11 151 091	100.0	X
	4 largest companies	X	X	9.2	X
	8 largest companies	X	X	13.8	X
	20 largest companies	X	X	22.1	X
	50 largest companies	X	X	31.8	39.9
33281	Coating, engraving, heat treating, and allied activities				
	All companies	5 791	11 151 091	100.0	X
	4 largest companies	X	X	9.2	X
	8 largest companies	X	X	13.8	X
	20 largest companies	X	X	22.1	X
	50 largest companies	X	X	31.8	39.9

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added ² (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
332	Fabricated metal product manufacturing—Con.				
3328	Coating, engraving, heat treating, and allied activities—Con.				
33281	Coating, engraving, heat treating, and allied activities—Con.				
332811	Metal heat treating				
	All companies	659	2 193 743	100.0	X
	4 largest companies	X	X	25.0	X
	8 largest companies	X	X	34.9	X
	20 largest companies	X	X	48.4	X
	50 largest companies	X	X	61.8	209.8
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers				
	All companies	2 252	5 094 836	100.0	X
	4 largest companies	X	X	18.3	X
	8 largest companies	X	X	25.8	X
	20 largest companies	X	X	37.7	X
	50 largest companies	X	X	51.3	142.3
332813	Electroplating, plating, polishing, anodizing, and coloring				
	All companies	2 930	3 862 512	100.0	X
	4 largest companies	X	X	4.8	X
	8 largest companies	X	X	7.8	X
	20 largest companies	X	X	14.4	X
	50 largest companies	X	X	24.9	15.7
3329	Other fabricated metal product manufacturing				
	All companies	6 315	29 603 114	100.0	X
	4 largest companies	X	X	11.4	X
	8 largest companies	X	X	17.8	X
	20 largest companies	X	X	28.5	X
	50 largest companies	X	X	44.1	61.7
33291	Metal valve manufacturing				
	All companies	1 070	12 461 428	100.0	X
	4 largest companies	X	X	20.9	X
	8 largest companies	X	X	31.3	X
	20 largest companies	X	X	47.0	X
	50 largest companies	X	X	65.9	175.7
332911	Industrial valve manufacturing				
	All companies	395	5 251 602	100.0	X
	4 largest companies	X	X	24.4	X
	8 largest companies	X	X	35.1	X
	20 largest companies	X	X	58.4	X
	50 largest companies	X	X	81.9	310.6
332912	Fluid power valve and hose fitting manufacturing				
	All companies	335	3 946 348	100.0	X
	4 largest companies	X	X	42.0	X
	8 largest companies	X	X	54.5	X
	20 largest companies	X	X	70.2	X
	50 largest companies	X	X	85.9	572.7
332913	Plumbing fixture fitting and trim manufacturing				
	All companies	135	1 754 278	100.0	X
	4 largest companies	X	X	59.4	X
	8 largest companies	X	X	72.9	X
	20 largest companies	X	X	86.7	X
	50 largest companies	X	X	96.4	1 830.0
332919	Other metal valve and pipe fitting manufacturing				
	All companies	238	1 509 200	100.0	X
	4 largest companies	X	X	20.5	X
	8 largest companies	X	X	35.2	X
	20 largest companies	X	X	57.2	X
	50 largest companies	X	X	80.4	222.8
33299	All other fabricated metal product manufacturing				
	All companies	5 289	17 141 686	100.0	X
	4 largest companies	X	X	13.7	X
	8 largest companies	X	X	19.6	X
	20 largest companies	X	X	32.3	X
	50 largest companies	X	X	46.0	82.3
332991	Ball and roller bearing manufacturing				
	All companies	125	3 510 968	100.0	X
	4 largest companies	X	X	52.2	X
	8 largest companies	X	X	70.8	X
	20 largest companies	X	X	90.4	X
	50 largest companies	X	X	98.1	1 089.0
332992	Small arms ammunition manufacturing				
	All companies	109	756 249	100.0	X
	4 largest companies	X	X	84.2	X
	8 largest companies	X	X	90.0	X
	20 largest companies	X	X	95.8	X
	50 largest companies	X	X	98.8	2 098.3

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
332	Fabricated metal product manufacturing—Con.				
3329	Other fabricated metal product manufacturing—Con.				
33299	All other fabricated metal product manufacturing—Con.				
332993	Ammunition (except small arms) manufacturing				
	All companies	49	818 636	100.0	X
	4 largest companies	X	X	56.1	X
	8 largest companies	X	X	78.9	X
	20 largest companies	X	X	98.5	X
	50 largest companies	X	X	100.0	1 037.6
332994	Small arms manufacturing				
	All companies	179	1 133 551	100.0	X
	4 largest companies	X	X	45.8	X
	8 largest companies	X	X	61.4	X
	20 largest companies	X	X	84.6	X
	50 largest companies	X	X	95.0	720.8
332995	Other ordnance and accessories manufacturing				
	All companies	58	828 628	100.0	X
	4 largest companies	X	X	76.0	X
	8 largest companies	X	X	90.3	X
	20 largest companies	X	X	97.4	X
	50 largest companies	X	X	99.9	2 993.5
332996	Fabricated pipe and pipe fitting manufacturing				
	All companies	733	2 097 905	100.0	X
	4 largest companies	X	X	22.0	X
	8 largest companies	X	X	29.7	X
	20 largest companies	X	X	41.8	X
	50 largest companies	X	X	58.2	179.9
332997	Industrial pattern manufacturing				
	All companies	534	403 298	100.0	X
	4 largest companies	X	X	20.2	X
	8 largest companies	X	X	26.8	X
	20 largest companies	X	X	40.4	X
	50 largest companies	X	X	59.7	240.5
332998	Enameled iron and metal sanitary ware manufacturing				
	All companies	73	807 161	100.0	X
	4 largest companies	X	X	66.5	X
	8 largest companies	X	X	83.5	X
	20 largest companies	X	X	96.7	X
	50 largest companies	X	X	99.6	1 427.4
332999	All other miscellaneous fabricated metal product manufacturing				
	All companies	3 454	6 785 290	100.0	X
	4 largest companies	X	X	9.8	X
	8 largest companies	X	X	14.6	X
	20 largest companies	X	X	23.1	X
	50 largest companies	X	X	34.6	41.1
333	Machinery manufacturing				
	All companies	25 526	129 152 744	100.0	X
	4 largest companies	X	X	13.8	X
	8 largest companies	X	X	18.6	X
	20 largest companies	X	X	25.8	X
	50 largest companies	X	X	35.7	63.4
3331	Agriculture, construction, and mining machinery manufacturing				
	All companies	2 666	20 627 837	100.0	X
	4 largest companies	X	X	36.5	X
	8 largest companies	X	X	44.3	X
	20 largest companies	X	X	54.3	X
	50 largest companies	X	X	66.7	615.0
33311	Agricultural implement manufacturing				
	All companies	1 260	9 469 471	100.0	X
	4 largest companies	X	X	52.3	X
	8 largest companies	X	X	61.2	X
	20 largest companies	X	X	71.5	X
	50 largest companies	X	X	81.5	1 443.9
333111	Farm machinery and equipment manufacturing				
	All companies	1 138	6 953 445	100.0	X
	4 largest companies	X	X	58.1	X
	8 largest companies	X	X	63.0	X
	20 largest companies	X	X	72.0	X
	50 largest companies	X	X	81.0	1 906.4
333112	Lawn and garden tractor and home lawn and garden equipment manufacturing				
	All companies	129	2 516 026	100.0	X
	4 largest companies	X	X	61.2	X
	8 largest companies	X	X	76.6	X
	20 largest companies	X	X	92.2	X
	50 largest companies	X	X	98.7	1 170.2

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
333	Machinery manufacturing—Con.				
3331	Agriculture, construction, and mining machinery manufacturing—Con.				
33312	Construction machinery manufacturing				
	All companies	719	7 569 158	100.0	X
	4 largest companies	X	X	45.9	X
	8 largest companies	X	X	55.0	X
	20 largest companies	X	X	69.8	X
	50 largest companies	X	X	82.9	770.7
333120	Construction machinery manufacturing				
	All companies	719	7 569 158	100.0	X
	4 largest companies	X	X	45.9	X
	8 largest companies	X	X	55.0	X
	20 largest companies	X	X	69.8	X
	50 largest companies	X	X	82.9	770.7
33313	Mining and oil and gas field machinery manufacturing				
	All companies	708	3 589 208	100.0	X
	4 largest companies	X	X	19.2	X
	8 largest companies	X	X	31.0	X
	20 largest companies	X	X	50.7	X
	50 largest companies	X	X	68.1	175.9
333131	Mining machinery and equipment manufacturing				
	All companies	246	888 077	100.0	X
	4 largest companies	X	X	37.8	X
	8 largest companies	X	X	47.6	X
	20 largest companies	X	X	64.7	X
	50 largest companies	X	X	83.2	508.7
333132	Oil and gas field machinery and equipment manufacturing				
	All companies	467	2 701 131	100.0	X
	4 largest companies	X	X	22.6	X
	8 largest companies	X	X	35.1	X
	20 largest companies	X	X	56.9	X
	50 largest companies	X	X	75.9	229.6
3332	Industrial machinery manufacturing				
	All companies	4 139	18 123 302	100.0	X
	4 largest companies	X	X	24.4	X
	8 largest companies	X	X	28.0	X
	20 largest companies	X	X	35.1	X
	50 largest companies	X	X	45.5	351.4
33321	Sawmill and woodworking machinery manufacturing				
	All companies	290	536 360	100.0	X
	4 largest companies	X	X	24.4	X
	8 largest companies	X	X	36.2	X
	20 largest companies	X	X	52.7	X
	50 largest companies	X	X	74.9	246.7
333210	Sawmill and woodworking machinery manufacturing				
	All companies	290	536 360	100.0	X
	4 largest companies	X	X	24.4	X
	8 largest companies	X	X	36.2	X
	20 largest companies	X	X	52.7	X
	50 largest companies	X	X	74.9	246.7
33322	Plastics and rubber industry machinery manufacturing				
	All companies	538	1 545 928	100.0	X
	4 largest companies	X	X	18.0	X
	8 largest companies	X	X	28.5	X
	20 largest companies	X	X	46.1	X
	50 largest companies	X	X	68.2	154.4
333220	Plastics and rubber industry machinery manufacturing				
	All companies	538	1 545 928	100.0	X
	4 largest companies	X	X	18.0	X
	8 largest companies	X	X	28.5	X
	20 largest companies	X	X	46.1	X
	50 largest companies	X	X	68.2	154.4
33329	Other industrial machinery manufacturing				
	All companies	3 325	16 041 014	100.0	X
	4 largest companies	X	X	27.6	X
	8 largest companies	X	X	31.6	X
	20 largest companies	X	X	39.6	X
	50 largest companies	X	X	50.5	447.9
333291	Paper industry machinery manufacturing				
	All companies	272	998 094	100.0	X
	4 largest companies	X	X	27.2	X
	8 largest companies	X	X	41.9	X
	20 largest companies	X	X	61.3	X
	50 largest companies	X	X	78.3	294.9

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333	Machinery manufacturing—Con.				
3332	Industrial machinery manufacturing—Con.				
33329	Other industrial machinery manufacturing—Con.				
333292	Textile machinery manufacturing				
	All companies	395	529 337	100.0	X
	4 largest companies	X	X	21.9	X
	8 largest companies	X	X	33.0	X
	20 largest companies	X	X	51.8	X
	50 largest companies	X	X	71.6	218.9
333293	Printing machinery and equipment manufacturing				
	All companies	468	1 632 437	100.0	X
	4 largest companies	X	X	21.5	X
	8 largest companies	X	X	33.0	X
	20 largest companies	X	X	52.8	X
	50 largest companies	X	X	70.7	204.8
333294	Food product machinery manufacturing				
	All companies	534	1 708 892	100.0	X
	4 largest companies	X	X	17.7	X
	8 largest companies	X	X	26.5	X
	20 largest companies	X	X	42.9	X
	50 largest companies	X	X	62.9	147.7
333295	Semiconductor machinery manufacturing				
	All companies	262	6 979 822	100.0	X
	4 largest companies	X	X	63.5	X
	8 largest companies	X	X	71.5	X
	20 largest companies	X	X	82.7	X
	50 largest companies	X	X	92.8	2 325.7
333298	All other industrial machinery manufacturing				
	All companies	1 414	4 192 432	100.0	X
	4 largest companies	X	X	11.2	X
	8 largest companies	X	X	17.7	X
	20 largest companies	X	X	30.2	X
	50 largest companies	X	X	46.0	65.1
3333	Commercial and service industry machinery manufacturing				
	All companies	2 215	11 082 808	100.0	X
	4 largest companies	X	X	16.7	X
	8 largest companies	X	X	23.9	X
	20 largest companies	X	X	36.8	X
	50 largest companies	X	X	52.5	126.3
33331	Commercial and service industry machinery manufacturing				
	All companies	2 215	11 082 808	100.0	X
	4 largest companies	X	X	16.7	X
	8 largest companies	X	X	23.9	X
	20 largest companies	X	X	36.8	X
	50 largest companies	X	X	52.5	126.3
333311	Automatic vending machine manufacturing				
	All companies	106	736 370	100.0	X
	4 largest companies	X	X	42.3	X
	8 largest companies	X	X	67.1	X
	20 largest companies	X	X	88.7	X
	50 largest companies	X	X	98.0	679.3
333312	Commercial laundry, drycleaning, and pressing machine manufacturing				
	All companies	57	250 674	100.0	X
	4 largest companies	X	X	49.7	X
	8 largest companies	X	X	72.2	X
	20 largest companies	X	X	92.9	X
	50 largest companies	X	X	99.9	842.3
333313	Office machinery manufacturing				
	All companies	92	1 453 739	100.0	X
	4 largest companies	X	X	81.2	X
	8 largest companies	X	X	89.4	X
	20 largest companies	X	X	96.8	X
	50 largest companies	X	X	99.9	D
333314	Optical instrument and lens manufacturing				
	All companies	423	1 760 757	100.0	X
	4 largest companies	X	X	30.7	X
	8 largest companies	X	X	44.4	X
	20 largest companies	X	X	57.6	X
	50 largest companies	X	X	74.7	369.6
333315	Photographic and photocopying equipment manufacturing				
	All companies	283	928 804	100.0	X
	4 largest companies	X	X	36.6	X
	8 largest companies	X	X	53.6	X
	20 largest companies	X	X	75.7	X
	50 largest companies	X	X	89.3	522.7

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333	Machinery manufacturing—Con.				
3333	Commercial and service industry machinery manufacturing—Con.				
33331	Commercial and service industry machinery manufacturing—Con.				
333319	Other commercial and service industry machinery manufacturing				
	All companies	1 264	5 952 464	100.0	X
	4 largest companies	X	X	19.4	X
	8 largest companies	X	X	28.9	X
	20 largest companies	X	X	44.4	X
	50 largest companies	X	X	60.4	150.6
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing				
	All companies	1 531	16 584 751	100.0	X
	4 largest companies	X	X	28.6	X
	8 largest companies	X	X	40.4	X
	20 largest companies	X	X	55.3	X
	50 largest companies	X	X	68.3	290.1
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing				
	All companies	1 531	16 584 751	100.0	X
	4 largest companies	X	X	28.6	X
	8 largest companies	X	X	40.4	X
	20 largest companies	X	X	55.3	X
	50 largest companies	X	X	68.3	290.1
333411	Air purification equipment manufacturing				
	All companies	327	1 194 974	100.0	X
	4 largest companies	X	X	26.8	X
	8 largest companies	X	X	40.5	X
	20 largest companies	X	X	59.1	X
	50 largest companies	X	X	77.9	278.6
333412	Industrial and commercial fan and blower manufacturing				
	All companies	132	1 061 929	100.0	X
	4 largest companies	X	X	29.2	X
	8 largest companies	X	X	46.9	X
	20 largest companies	X	X	70.5	X
	50 largest companies	X	X	89.3	372.7
333414	Heating equipment (except warm air furnaces) manufacturing				
	All companies	391	2 265 448	100.0	X
	4 largest companies	X	X	24.7	X
	8 largest companies	X	X	38.8	X
	20 largest companies	X	X	57.3	X
	50 largest companies	X	X	76.9	261.4
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing				
	All companies	705	12 062 400	100.0	X
	4 largest companies	X	X	39.0	X
	8 largest companies	X	X	54.2	X
	20 largest companies	X	X	71.6	X
	50 largest companies	X	X	83.0	521.9
3335	Metalworking machinery manufacturing				
	All companies	8 772	15 890 672	100.0	X
	4 largest companies	X	X	5.4	X
	8 largest companies	X	X	8.2	X
	20 largest companies	X	X	13.6	X
	50 largest companies	X	X	21.7	15.0
33351	Metalworking machinery manufacturing				
	All companies	8 772	15 890 672	100.0	X
	4 largest companies	X	X	5.4	X
	8 largest companies	X	X	8.2	X
	20 largest companies	X	X	13.6	X
	50 largest companies	X	X	21.7	15.0
333511	Industrial mold manufacturing				
	All companies	2 399	3 765 282	100.0	X
	4 largest companies	X	X	5.4	X
	8 largest companies	X	X	9.5	X
	20 largest companies	X	X	17.2	X
	50 largest companies	X	X	28.3	20.8
333512	Machine tool (metal cutting types) manufacturing				
	All companies	342	1 479 823	100.0	X
	4 largest companies	X	X	26.0	X
	8 largest companies	X	X	38.1	X
	20 largest companies	X	X	53.4	X
	50 largest companies	X	X	70.3	241.2

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
333	Machinery manufacturing—Con.				
3335	Metalworking machinery manufacturing—Con.				
33351	Metalworking machinery manufacturing—Con.				
333513	Machine tool (metal forming types) manufacturing				
	All companies	173	666 950	100.0	X
	4 largest companies	X	X	19.0	X
	8 largest companies	X	X	32.9	X
	20 largest companies	X	X	54.0	X
	50 largest companies	X	X	76.5	196.7
333514	Special die and tool, die set, jig, and fixture manufacturing				
	All companies	3 660	4 781 317	100.0	X
	4 largest companies	X	X	5.6	X
	8 largest companies	X	X	8.4	X
	20 largest companies	X	X	15.1	X
	50 largest companies	X	X	24.8	19.3
333515	Cutting tool and machine tool accessory manufacturing				
	All companies	1 805	3 330 331	100.0	X
	4 largest companies	X	X	19.8	X
	8 largest companies	X	X	25.6	X
	20 largest companies	X	X	37.2	X
	50 largest companies	X	X	51.3	172.1
333516	Rolling mill machinery and equipment manufacturing				
	All companies	71	268 072	100.0	X
	4 largest companies	X	X	47.5	X
	8 largest companies	X	X	69.1	X
	20 largest companies	X	X	88.2	X
	50 largest companies	X	X	99.9	735.4
333518	Other metalworking machinery manufacturing				
	All companies	415	1 598 897	100.0	X
	4 largest companies	X	X	27.6	X
	8 largest companies	X	X	37.3	X
	20 largest companies	X	X	50.1	X
	50 largest companies	X	X	67.8	260.4
3336	Engine, turbine, and power transmission equipment manufacturing				
	All companies	751	17 297 643	100.0	X
	4 largest companies	X	X	53.5	X
	8 largest companies	X	X	61.7	X
	20 largest companies	X	X	73.0	X
	50 largest companies	X	X	85.3	1 290.1
33361	Engine, turbine, and power transmission equipment manufacturing				
	All companies	751	17 297 643	100.0	X
	4 largest companies	X	X	53.5	X
	8 largest companies	X	X	61.7	X
	20 largest companies	X	X	73.0	X
	50 largest companies	X	X	85.3	1 290.1
333611	Turbine and turbine generator set units manufacturing				
	All companies	93	7 673 779	100.0	X
	4 largest companies	X	X	88.0	X
	8 largest companies	X	X	91.4	X
	20 largest companies	X	X	96.4	X
	50 largest companies	X	X	99.5	D
333612	Speed changer, industrial high-speed drive, and gear manufacturing				
	All companies	210	1 260 881	100.0	X
	4 largest companies	X	X	29.3	X
	8 largest companies	X	X	43.0	X
	20 largest companies	X	X	64.0	X
	50 largest companies	X	X	82.8	317.8
333613	Mechanical power transmission equipment manufacturing				
	All companies	203	1 646 655	100.0	X
	4 largest companies	X	X	24.7	X
	8 largest companies	X	X	40.4	X
	20 largest companies	X	X	69.3	X
	50 largest companies	X	X	88.6	308.4
333618	Other engine equipment manufacturing				
	All companies	267	6 716 328	100.0	X
	4 largest companies	X	X	49.5	X
	8 largest companies	X	X	66.1	X
	20 largest companies	X	X	85.1	X
	50 largest companies	X	X	94.5	867.4

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Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added ² (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
333	Machinery manufacturing—Con.				
3339	Other general purpose machinery manufacturing				
	All companies	5 909	29 545 731	100.0	X
	4 largest companies	X	X	7.9	X
	8 largest companies	X	X	14.2	X
	20 largest companies	X	X	25.9	X
	50 largest companies	X	X	41.0	45.8
33391	Pump and compressor manufacturing				
	All companies	684	6 204 183	100.0	X
	4 largest companies	X	X	20.7	X
	8 largest companies	X	X	31.6	X
	20 largest companies	X	X	52.2	X
	50 largest companies	X	X	74.4	196.3
333911	Pump and pumping equipment manufacturing				
	All companies	399	3 582 830	100.0	X
	4 largest companies	X	X	28.2	X
	8 largest companies	X	X	43.9	X
	20 largest companies	X	X	66.2	X
	50 largest companies	X	X	83.0	336.9
333912	Air and gas compressor manufacturing				
	All companies	276	2 164 362	100.0	X
	4 largest companies	X	X	30.4	X
	8 largest companies	X	X	46.2	X
	20 largest companies	X	X	69.9	X
	50 largest companies	X	X	86.9	438.5
333913	Measuring and dispensing pump manufacturing				
	All companies	29	456 991	100.0	X
	4 largest companies	X	X	63.0	X
	8 largest companies	X	X	85.7	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	100.0	1 275.9
33392	Material handling equipment manufacturing				
	All companies	1 623	7 048 515	100.0	X
	4 largest companies	X	X	15.3	X
	8 largest companies	X	X	23.5	X
	20 largest companies	X	X	37.7	X
	50 largest companies	X	X	52.1	111.3
333921	Elevator and moving stairway manufacturing				
	All companies	167	918 607	100.0	X
	4 largest companies	X	X	57.5	X
	8 largest companies	X	X	66.5	X
	20 largest companies	X	X	79.2	X
	50 largest companies	X	X	91.6	940.4
333922	Conveyor and conveying equipment manufacturing				
	All companies	794	3 066 826	100.0	X
	4 largest companies	X	X	23.1	X
	8 largest companies	X	X	29.5	X
	20 largest companies	X	X	40.3	X
	50 largest companies	X	X	55.1	284.1
333923	Overhead traveling crane, hoist, and monorail system manufacturing				
	All companies	275	1 203 473	100.0	X
	4 largest companies	X	X	41.0	X
	8 largest companies	X	X	54.3	X
	20 largest companies	X	X	66.6	X
	50 largest companies	X	X	81.1	560.0
333924	Industrial truck, tractor, trailer, and stacker machinery manufacturing				
	All companies	402	1 859 609	100.0	X
	4 largest companies	X	X	26.9	X
	8 largest companies	X	X	41.5	X
	20 largest companies	X	X	63.4	X
	50 largest companies	X	X	79.6	307.5
33399	All other general purpose machinery manufacturing				
	All companies	3 665	16 293 033	100.0	X
	4 largest companies	X	X	13.4	X
	8 largest companies	X	X	21.4	X
	20 largest companies	X	X	35.6	X
	50 largest companies	X	X	49.6	87.2
333991	Power-driven handtool manufacturing				
	All companies	109	1 781 615	100.0	X
	4 largest companies	X	X	56.8	X
	8 largest companies	X	X	74.1	X
	20 largest companies	X	X	93.4	X
	50 largest companies	X	X	98.0	1 266.0

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
333	Machinery manufacturing—Con.				
3339	Other general purpose machinery manufacturing—Con.				
33399	All other general purpose machinery manufacturing—Con.				
333992	Welding and soldering equipment manufacturing				
	All companies	203	2 017 402	100.0	X
	4 largest companies	X	X	54.9	X
	8 largest companies	X	X	71.5	X
	20 largest companies	X	X	82.4	X
	50 largest companies	X	X	92.0	1 030.6
333993	Packaging machinery manufacturing				
	All companies	625	2 457 324	100.0	X
	4 largest companies	X	X	23.6	X
	8 largest companies	X	X	34.8	X
	20 largest companies	X	X	50.4	X
	50 largest companies	X	X	67.5	214.8
333994	Industrial process furnace and oven manufacturing				
	All companies	331	933 633	100.0	X
	4 largest companies	X	X	22.7	X
	8 largest companies	X	X	30.5	X
	20 largest companies	X	X	45.3	X
	50 largest companies	X	X	67.3	184.3
333995	Fluid power cylinder and actuator manufacturing				
	All companies	258	1 881 923	100.0	X
	4 largest companies	X	X	49.8	X
	8 largest companies	X	X	57.7	X
	20 largest companies	X	X	73.4	X
	50 largest companies	X	X	87.5	830.4
333996	Fluid power pump and motor manufacturing				
	All companies	141	1 399 152	100.0	X
	4 largest companies	X	X	68.7	X
	8 largest companies	X	X	78.8	X
	20 largest companies	X	X	91.4	X
	50 largest companies	X	X	96.9	1 274.6
333997	Scale and balance (except laboratory) manufacturing				
	All companies	105	372 072	100.0	X
	4 largest companies	X	X	43.6	X
	8 largest companies	X	X	63.2	X
	20 largest companies	X	X	82.8	X
	50 largest companies	X	X	97.8	760.5
333999	All other miscellaneous general purpose machinery manufacturing				
	All companies	1 933	5 449 912	100.0	X
	4 largest companies	X	X	18.8	X
	8 largest companies	X	X	26.3	X
	20 largest companies	X	X	38.0	X
	50 largest companies	X	X	52.2	142.9
334	Computer and electronic product manufacturing				
	All companies	13 910	200 425 588	100.0	X
	4 largest companies	X	X	20.8	X
	8 largest companies	X	X	28.6	X
	20 largest companies	X	X	42.2	X
	50 largest companies	X	X	56.6	179.0
3341	Computer and peripheral equipment manufacturing				
	All companies	1 517	34 401 587	100.0	X
	4 largest companies	X	X	49.8	X
	8 largest companies	X	X	67.4	X
	20 largest companies	X	X	80.7	X
	50 largest companies	X	X	89.0	1 073.3
33411	Computer and peripheral equipment manufacturing				
	All companies	1 517	34 401 587	100.0	X
	4 largest companies	X	X	49.8	X
	8 largest companies	X	X	67.4	X
	20 largest companies	X	X	80.7	X
	50 largest companies	X	X	89.0	1 073.3
334111	Electronic computer manufacturing				
	All companies	465	20 937 780	100.0	X
	4 largest companies	X	X	80.6	X
	8 largest companies	X	X	92.1	X
	20 largest companies	X	X	96.6	X
	50 largest companies	X	X	99.0	2 662.0
334112	Computer storage device manufacturing				
	All companies	157	4 734 197	100.0	X
	4 largest companies	X	X	66.8	X
	8 largest companies	X	X	79.4	X
	20 largest companies	X	X	92.4	X
	50 largest companies	X	X	98.0	1 684.9

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
334	Computer and electronic product manufacturing—Con.				
3341	Computer and peripheral equipment manufacturing—Con.				
33411	Computer and peripheral equipment manufacturing—Con.				
334113	Computer terminal manufacturing				
	All companies	70	235 979	100.0	X
	4 largest companies	X	X	67.7	X
	8 largest companies	X	X	80.3	X
	20 largest companies	X	X	92.4	X
	50 largest companies	X	X	99.3	1 889.6
334119	Other computer peripheral equipment manufacturing				
	All companies	838	8 493 631	100.0	X
	4 largest companies	X	X	46.0	X
	8 largest companies	X	X	56.0	X
	20 largest companies	X	X	71.1	X
	50 largest companies	X	X	82.4	703.9
3342	Communications equipment manufacturing				
	All companies	1 828	32 442 325	100.0	X
	4 largest companies	X	X	34.6	X
	8 largest companies	X	X	45.6	X
	20 largest companies	X	X	60.9	X
	50 largest companies	X	X	73.9	451.6
33421	Telephone apparatus manufacturing				
	All companies	456	14 557 161	100.0	X
	4 largest companies	X	X	54.2	X
	8 largest companies	X	X	65.0	X
	20 largest companies	X	X	78.1	X
	50 largest companies	X	X	87.2	1 452.0
334210	Telephone apparatus manufacturing				
	All companies	456	14 557 161	100.0	X
	4 largest companies	X	X	54.2	X
	8 largest companies	X	X	65.0	X
	20 largest companies	X	X	78.1	X
	50 largest companies	X	X	87.2	1 452.0
33422	Radio and television broadcasting and wireless communications equipment manufacturing				
	All companies	934	14 615 653	100.0	X
	4 largest companies	X	X	44.0	X
	8 largest companies	X	X	55.3	X
	20 largest companies	X	X	68.6	X
	50 largest companies	X	X	80.3	717.9
334220	Radio and television broadcasting and wireless communications equipment manufacturing				
	All companies	934	14 615 653	100.0	X
	4 largest companies	X	X	44.0	X
	8 largest companies	X	X	55.3	X
	20 largest companies	X	X	68.6	X
	50 largest companies	X	X	80.3	717.9
33429	Other communications equipment manufacturing				
	All companies	470	3 269 511	100.0	X
	4 largest companies	X	X	45.9	X
	8 largest companies	X	X	57.1	X
	20 largest companies	X	X	69.6	X
	50 largest companies	X	X	81.6	698.7
334290	Other communications equipment manufacturing				
	All companies	470	3 269 511	100.0	X
	4 largest companies	X	X	45.9	X
	8 largest companies	X	X	57.1	X
	20 largest companies	X	X	69.6	X
	50 largest companies	X	X	81.6	698.7
3343	Audio and video equipment manufacturing				
	All companies	544	3 308 714	100.0	X
	4 largest companies	X	X	45.6	X
	8 largest companies	X	X	57.0	X
	20 largest companies	X	X	73.1	X
	50 largest companies	X	X	86.1	893.9
33431	Audio and video equipment manufacturing				
	All companies	544	3 308 714	100.0	X
	4 largest companies	X	X	45.6	X
	8 largest companies	X	X	57.0	X
	20 largest companies	X	X	73.1	X
	50 largest companies	X	X	86.1	893.9

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
334	Computer and electronic product manufacturing—Con.				
3343	Audio and video equipment manufacturing—Con.				
33431	Audio and video equipment manufacturing—Con.				
334310	Audio and video equipment manufacturing				
	All companies	544	3 308 714	100.0	X
	4 largest companies	X	X	45.6	X
	8 largest companies	X	X	57.0	X
	20 largest companies	X	X	73.1	X
	50 largest companies	X	X	86.1	893.9
3344	Semiconductor and other electronic component manufacturing				
	All companies	4 798	69 209 138	100.0	X
	4 largest companies	X	X	42.7	X
	8 largest companies	X	X	48.4	X
	20 largest companies	X	X	58.5	X
	50 largest companies	X	X	69.7	907.6
33441	Semiconductor and other electronic component manufacturing				
	All companies	4 798	69 209 138	100.0	X
	4 largest companies	X	X	42.7	X
	8 largest companies	X	X	48.4	X
	20 largest companies	X	X	58.5	X
	50 largest companies	X	X	69.7	907.6
334411	Electron tube manufacturing				
	All companies	90	898 751	100.0	X
	4 largest companies	X	X	55.9	X
	8 largest companies	X	X	78.4	X
	20 largest companies	X	X	92.8	X
	50 largest companies	X	X	98.9	1 008.4
334412	Bare printed circuit board manufacturing				
	All companies	891	3 546 093	100.0	X
	4 largest companies	X	X	24.6	X
	8 largest companies	X	X	34.7	X
	20 largest companies	X	X	50.3	X
	50 largest companies	X	X	63.3	209.2
334413	Semiconductor and related device manufacturing				
	All companies	904	44 818 228	100.0	X
	4 largest companies	X	X	60.3	X
	8 largest companies	X	X	66.7	X
	20 largest companies	X	X	80.1	X
	50 largest companies	X	X	90.8	2 058.9
334414	Electronic capacitor manufacturing				
	All companies	84	734 069	100.0	X
	4 largest companies	X	X	53.1	X
	8 largest companies	X	X	71.7	X
	20 largest companies	X	X	88.5	X
	50 largest companies	X	X	99.1	1 145.8
334415	Electronic resistor manufacturing				
	All companies	58	393 932	100.0	X
	4 largest companies	X	X	38.7	X
	8 largest companies	X	X	57.6	X
	20 largest companies	X	X	86.7	X
	50 largest companies	X	X	99.6	613.0
334416	Electronic coil, transformer, and other inductor manufacturing				
	All companies	332	641 423	100.0	X
	4 largest companies	X	X	20.5	X
	8 largest companies	X	X	29.6	X
	20 largest companies	X	X	43.9	X
	50 largest companies	X	X	64.5	184.1
334417	Electronic connector manufacturing				
	All companies	280	2 263 117	100.0	X
	4 largest companies	X	X	43.7	X
	8 largest companies	X	X	54.9	X
	20 largest companies	X	X	70.8	X
	50 largest companies	X	X	85.3	912.5
334418	Printed circuit assembly (electronic assembly) manufacturing				
	All companies	790	10 248 676	100.0	X
	4 largest companies	X	X	40.2	X
	8 largest companies	X	X	52.5	X
	20 largest companies	X	X	66.3	X
	50 largest companies	X	X	76.9	588.6
334419	Other electronic component manufacturing				
	All companies	1 526	5 664 849	100.0	X
	4 largest companies	X	X	11.6	X
	8 largest companies	X	X	17.9	X
	20 largest companies	X	X	29.4	X
	50 largest companies	X	X	46.8	66.8

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334	Computer and electronic product manufacturing—Con.				
3345	Navigational, measuring, electromedical, and control instruments manufacturing				
	All companies	4 624	56 407 500	100.0	X
	4 largest companies	X	X	23.5	X
	8 largest companies	X	X	33.3	X
	20 largest companies	X	X	49.1	X
	50 largest companies	X	X	64.5	215.6
33451	Navigational, measuring, electromedical, and control instruments manufacturing				
	All companies	4 624	56 407 500	100.0	X
	4 largest companies	X	X	23.5	X
	8 largest companies	X	X	33.3	X
	20 largest companies	X	X	49.1	X
	50 largest companies	X	X	64.5	215.6
334510	Electromedical and electrotherapeutic apparatus manufacturing				
	All companies	485	9 731 759	100.0	X
	4 largest companies	X	X	38.5	X
	8 largest companies	X	X	50.2	X
	20 largest companies	X	X	66.6	X
	50 largest companies	X	X	82.6	487.2
334511	Search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing				
	All companies	504	21 190 101	100.0	X
	4 largest companies	X	X	60.5	X
	8 largest companies	X	X	78.2	X
	20 largest companies	X	X	89.8	X
	50 largest companies	X	X	95.5	1 195.7
334512	Automatic environmental control manufacturing for residential, commercial, and appliance use				
	All companies	312	1 662 199	100.0	X
	4 largest companies	X	X	48.9	X
	8 largest companies	X	X	62.5	X
	20 largest companies	X	X	77.5	X
	50 largest companies	X	X	87.5	693.3
334513	Instruments and related products manufacturing for measuring, displaying, and controlling industrial process variables				
	All companies	909	4 321 114	100.0	X
	4 largest companies	X	X	25.0	X
	8 largest companies	X	X	33.9	X
	20 largest companies	X	X	47.7	X
	50 largest companies	X	X	64.4	249.6
334514	Totalizing fluid meter and counting device manufacturing				
	All companies	220	1 969 887	100.0	X
	4 largest companies	X	X	48.1	X
	8 largest companies	X	X	63.1	X
	20 largest companies	X	X	81.4	X
	50 largest companies	X	X	93.9	849.6
334515	Instrument manufacturing for measuring and testing electricity and electrical signals				
	All companies	733	6 010 197	100.0	X
	4 largest companies	X	X	37.4	X
	8 largest companies	X	X	51.0	X
	20 largest companies	X	X	63.7	X
	50 largest companies	X	X	77.1	505.5
334516	Analytical laboratory instrument manufacturing				
	All companies	526	4 958 699	100.0	X
	4 largest companies	X	X	36.9	X
	8 largest companies	X	X	50.4	X
	20 largest companies	X	X	67.8	X
	50 largest companies	X	X	82.2	452.9
334517	Irradiation apparatus manufacturing				
	All companies	154	2 516 308	100.0	X
	4 largest companies	X	X	49.1	X
	8 largest companies	X	X	72.3	X
	20 largest companies	X	X	87.7	X
	50 largest companies	X	X	96.5	819.6
334518	Watch, clock, and part manufacturing				
	All companies	123	408 301	100.0	X
	4 largest companies	X	X	54.3	X
	8 largest companies	X	X	64.8	X
	20 largest companies	X	X	85.5	X
	50 largest companies	X	X	98.0	1 287.2
334519	Other measuring and controlling device manufacturing				
	All companies	793	3 638 935	100.0	X
	4 largest companies	X	X	19.2	X
	8 largest companies	X	X	29.4	X
	20 largest companies	X	X	47.0	X
	50 largest companies	X	X	65.1	162.2

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
334	Computer and electronic product manufacturing—Con.				
3346	Manufacturing and reproducing magnetic and optical media				
	All companies	893	4 656 324	100.0	X
	4 largest companies	X	X	41.4	X
	8 largest companies	X	X	54.6	X
	20 largest companies	X	X	68.1	X
	50 largest companies	X	X	80.5	512.2
33461	Manufacturing and reproducing magnetic and optical media				
	All companies	893	4 656 324	100.0	X
	4 largest companies	X	X	41.4	X
	8 largest companies	X	X	54.6	X
	20 largest companies	X	X	68.1	X
	50 largest companies	X	X	80.5	512.2
334611	Software reproducing				
	All companies	189	290 470	100.0	X
	4 largest companies	X	X	34.1	X
	8 largest companies	X	X	50.1	X
	20 largest companies	X	X	68.5	X
	50 largest companies	X	X	84.1	412.4
334612	Prerecorded compact disc (except software), tape, and record reproducing				
	All companies	538	2 887 709	100.0	X
	4 largest companies	X	X	39.5	X
	8 largest companies	X	X	52.1	X
	20 largest companies	X	X	69.3	X
	50 largest companies	X	X	83.4	541.9
334613	Magnetic and optical recording media manufacturing				
	All companies	169	1 478 145	100.0	X
	4 largest companies	X	X	83.8	X
	8 largest companies	X	X	88.6	X
	20 largest companies	X	X	94.6	X
	50 largest companies	X	X	98.0	2 645.8
335	Electrical equipment, appliance, and component manufacturing				
	All companies	5 498	52 836 934	100.0	X
	4 largest companies	X	X	15.5	X
	8 largest companies	X	X	24.8	X
	20 largest companies	X	X	37.9	X
	50 largest companies	X	X	51.5	106.3
3351	Electric lighting equipment manufacturing				
	All companies	1 130	7 092 620	100.0	X
	4 largest companies	X	X	32.2	X
	8 largest companies	X	X	47.9	X
	20 largest companies	X	X	58.7	X
	50 largest companies	X	X	69.7	354.8
33511	Electric lamp bulb and part manufacturing				
	All companies	57	1 750 630	100.0	X
	4 largest companies	X	X	89.6	X
	8 largest companies	X	X	94.3	X
	20 largest companies	X	X	98.2	X
	50 largest companies	X	X	99.9	2 848.0
335110	Electric lamp bulb and part manufacturing				
	All companies	57	1 750 630	100.0	X
	4 largest companies	X	X	89.6	X
	8 largest companies	X	X	94.3	X
	20 largest companies	X	X	98.2	X
	50 largest companies	X	X	99.9	2 848.0
33512	Lighting fixture manufacturing				
	All companies	1 077	5 341 990	100.0	X
	4 largest companies	X	X	29.2	X
	8 largest companies	X	X	38.2	X
	20 largest companies	X	X	50.1	X
	50 largest companies	X	X	63.5	271.4
335121	Residential electric lighting fixture manufacturing				
	All companies	470	1 274 114	100.0	X
	4 largest companies	X	X	32.4	X
	8 largest companies	X	X	41.5	X
	20 largest companies	X	X	56.1	X
	50 largest companies	X	X	74.7	395.8
335122	Commercial, industrial, and institutional electric lighting fixture manufacturing				
	All companies	324	2 055 014	100.0	X
	4 largest companies	X	X	48.7	X
	8 largest companies	X	X	55.6	X
	20 largest companies	X	X	67.4	X
	50 largest companies	X	X	82.6	744.1

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added ² (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
335	Electrical equipment, appliance, and component manufacturing—Con.				
3351	Electric lighting equipment manufacturing—Con.				
33512	Lighting fixture manufacturing—Con.				
335129	Other lighting equipment manufacturing				
	All companies	300	2 012 862	100.0	X
	4 largest companies	X	X	27.6	X
	8 largest companies	X	X	41.6	X
	20 largest companies	X	X	61.6	X
	50 largest companies	X	X	82.1	331.8
3352	Household appliance manufacturing				
	All companies	251	10 022 841	100.0	X
	4 largest companies	X	X	57.6	X
	8 largest companies	X	X	67.4	X
	20 largest companies	X	X	84.1	X
	50 largest companies	X	X	95.8	1 131.9
33521	Small electrical appliance manufacturing				
	All companies	117	2 495 574	100.0	X
	4 largest companies	X	X	48.1	X
	8 largest companies	X	X	67.6	X
	20 largest companies	X	X	90.8	X
	50 largest companies	X	X	99.1	835.1
335211	Electric housewares and household fan manufacturing				
	All companies	88	1 426 074	100.0	X
	4 largest companies	X	X	55.7	X
	8 largest companies	X	X	75.0	X
	20 largest companies	X	X	94.7	X
	50 largest companies	X	X	99.6	1 020.5
335212	Household vacuum cleaner manufacturing				
	All companies	29	1 069 500	100.0	X
	4 largest companies	X	X	83.4	X
	8 largest companies	X	X	96.6	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	100.0	2 732.9
33522	Major appliance manufacturing				
	All companies	139	7 527 267	100.0	X
	4 largest companies	X	X	65.5	X
	8 largest companies	X	X	76.8	X
	20 largest companies	X	X	92.4	X
	50 largest companies	X	X	99.1	1 499.2
335221	Household cooking appliance manufacturing				
	All companies	92	1 549 780	100.0	X
	4 largest companies	X	X	46.5	X
	8 largest companies	X	X	72.6	X
	20 largest companies	X	X	94.2	X
	50 largest companies	X	X	99.7	782.2
335222	Household refrigerator and home freezer manufacturing				
	All companies	18	2 222 439	100.0	X
	4 largest companies	X	X	82.0	X
	8 largest companies	X	X	95.6	X
	20 largest companies	X	X	100.0	2 106.6
	50 largest companies	X	X	—	—
335224	Household laundry equipment manufacturing				
	All companies	13	1 908 531	100.0	X
	4 largest companies	X	X	93.8	X
	8 largest companies	X	X	99.9	X
	20 largest companies	X	X	100.0	D
	50 largest companies	X	X	—	—
335228	Other major household appliance manufacturing				
	All companies	32	1 846 517	100.0	X
	4 largest companies	X	X	55.4	X
	8 largest companies	X	X	84.7	X
	20 largest companies	X	X	99.4	X
	50 largest companies	X	X	100.0	1 101.6
3353	Electrical equipment manufacturing				
	All companies	2 188	16 582 869	100.0	X
	4 largest companies	X	X	26.1	X
	8 largest companies	X	X	39.2	X
	20 largest companies	X	X	54.0	X
	50 largest companies	X	X	67.2	245.3

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
335	Electrical equipment, appliance, and component manufacturing—Con.				
3353	Electrical equipment manufacturing—Con.				
33531	Electrical equipment manufacturing				
	All companies	2 188	16 582 869	100.0	X
	4 largest companies	X	X	26.1	X
	8 largest companies	X	X	39.2	X
	20 largest companies	X	X	54.0	X
	50 largest companies	X	X	67.2	245.3
335311	Power, distribution, and specialty transformer manufacturing				
	All companies	259	2 046 610	100.0	X
	4 largest companies	X	X	40.7	X
	8 largest companies	X	X	56.3	X
	20 largest companies	X	X	74.1	X
	50 largest companies	X	X	88.3	599.0
335312	Motor and generator manufacturing				
	All companies	478	4 782 748	100.0	X
	4 largest companies	X	X	26.4	X
	8 largest companies	X	X	42.6	X
	20 largest companies	X	X	66.5	X
	50 largest companies	X	X	83.2	333.4
335313	Switchgear and switchboard apparatus manufacturing				
	All companies	450	4 543 576	100.0	X
	4 largest companies	X	X	49.5	X
	8 largest companies	X	X	63.8	X
	20 largest companies	X	X	79.5	X
	50 largest companies	X	X	88.3	820.2
335314	Relay and industrial control manufacturing				
	All companies	1 058	5 209 935	100.0	X
	4 largest companies	X	X	37.7	X
	8 largest companies	X	X	47.7	X
	20 largest companies	X	X	57.8	X
	50 largest companies	X	X	69.3	544.8
3359	Other electrical equipment and component manufacturing				
	All companies	2 008	19 138 604	100.0	X
	4 largest companies	X	X	11.7	X
	8 largest companies	X	X	20.0	X
	20 largest companies	X	X	35.3	X
	50 largest companies	X	X	56.2	87.6
33591	Battery manufacturing				
	All companies	125	3 261 888	100.0	X
	4 largest companies	X	X	55.0	X
	8 largest companies	X	X	76.5	X
	20 largest companies	X	X	92.9	X
	50 largest companies	X	X	98.7	958.4
335911	Storage battery manufacturing				
	All companies	94	1 527 656	100.0	X
	4 largest companies	X	X	61.2	X
	8 largest companies	X	X	79.8	X
	20 largest companies	X	X	91.8	X
	50 largest companies	X	X	99.0	1 130.6
335912	Primary battery manufacturing				
	All companies	33	1 734 232	100.0	X
	4 largest companies	X	X	89.9	X
	8 largest companies	X	X	98.2	X
	20 largest companies	X	X	99.8	X
	50 largest companies	X	X	100.0	2 506.7
33592	Communication and energy wire and cable manufacturing				
	All companies	340	4 668 840	100.0	X
	4 largest companies	X	X	27.6	X
	8 largest companies	X	X	42.3	X
	20 largest companies	X	X	67.8	X
	50 largest companies	X	X	85.7	319.8
335921	Fiber optic cable manufacturing				
	All companies	91	675 829	100.0	X
	4 largest companies	X	X	66.9	X
	8 largest companies	X	X	77.9	X
	20 largest companies	X	X	88.4	X
	50 largest companies	X	X	98.4	1 517.2
335929	Other communication and energy wire manufacturing				
	All companies	259	3 993 011	100.0	X
	4 largest companies	X	X	28.1	X
	8 largest companies	X	X	44.2	X
	20 largest companies	X	X	69.4	X
	50 largest companies	X	X	87.5	338.9

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
335	Electrical equipment, appliance, and component manufacturing—Con.				
3359	Other electrical equipment and component manufacturing—Con.				
33593	Wiring device manufacturing				
	All companies	517	6 202 926	100.0	X
	4 largest companies	X	X	23.1	X
	8 largest companies	X	X	37.9	X
	20 largest companies	X	X	61.1	X
	50 largest companies	X	X	81.6	267.8
335931	Current-carrying wiring device manufacturing				
	All companies	396	3 970 216	100.0	X
	4 largest companies	X	X	28.9	X
	8 largest companies	X	X	45.8	X
	20 largest companies	X	X	67.1	X
	50 largest companies	X	X	83.6	373.1
335932	Noncurrent-carrying wiring device manufacturing				
	All companies	132	2 232 710	100.0	X
	4 largest companies	X	X	39.4	X
	8 largest companies	X	X	58.5	X
	20 largest companies	X	X	85.8	X
	50 largest companies	X	X	97.9	562.9
33599	All other electrical equipment and component manufacturing				
	All companies	1 050	5 004 950	100.0	X
	4 largest companies	X	X	15.9	X
	8 largest companies	X	X	27.3	X
	20 largest companies	X	X	45.2	X
	50 largest companies	X	X	62.6	136.7
335991	Carbon and graphite product manufacturing				
	All companies	107	933 649	100.0	X
	4 largest companies	X	X	41.1	X
	8 largest companies	X	X	61.8	X
	20 largest companies	X	X	81.8	X
	50 largest companies	X	X	96.4	608.3
335999	All other miscellaneous electrical equipment and component manufacturing				
	All companies	943	4 071 301	100.0	X
	4 largest companies	X	X	19.6	X
	8 largest companies	X	X	33.4	X
	20 largest companies	X	X	49.4	X
	50 largest companies	X	X	65.5	177.8
336	Transportation equipment manufacturing				
	All companies	10 518	253 407 335	100.0	X
	4 largest companies	X	X	36.0	X
	8 largest companies	X	X	48.1	X
	20 largest companies	X	X	63.4	X
	50 largest companies	X	X	74.0	526.9
3361	Motor vehicle manufacturing				
	All companies	308	72 090 305	100.0	X
	4 largest companies	X	X	85.0	X
	8 largest companies	X	X	94.1	X
	20 largest companies	X	X	98.9	X
	50 largest companies	X	X	99.7	D
33611	Automobile and light duty motor vehicle manufacturing				
	All companies	228	69 102 589	100.0	X
	4 largest companies	X	X	88.1	X
	8 largest companies	X	X	97.5	X
	20 largest companies	X	X	99.6	X
	50 largest companies	X	X	99.9	D
336111	Automobile manufacturing				
	All companies	164	28 494 682	100.0	X
	4 largest companies	X	X	87.3	X
	8 largest companies	X	X	96.7	X
	20 largest companies	X	X	99.4	X
	50 largest companies	X	X	99.9	2 754.0
336112	Light truck and utility vehicle manufacturing				
	All companies	69	40 607 907	100.0	X
	4 largest companies	X	X	96.7	X
	8 largest companies	X	X	99.9	X
	20 largest companies	X	X	99.9	X
	50 largest companies	X	X	99.9	D
33612	Heavy duty truck manufacturing				
	All companies	81	2 987 716	100.0	X
	4 largest companies	X	X	69.1	X
	8 largest companies	X	X	88.1	X
	20 largest companies	X	X	97.6	X
	50 largest companies	X	X	99.9	1 444.1

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
336	Transportation equipment manufacturing—Con.				
3361	Motor vehicle manufacturing—Con.				
33612	Heavy duty truck manufacturing—Con.				
336120	Heavy duty truck manufacturing				
	All companies	81	2 987 716	100.0	X
	4 largest companies	X	X	69.1	X
	8 largest companies	X	X	88.1	X
	20 largest companies	X	X	97.6	X
	50 largest companies	X	X	99.9	1 444.1
3362	Motor vehicle body and trailer manufacturing				
	All companies	1 915	8 816 510	100.0	X
	4 largest companies	X	X	19.1	X
	8 largest companies	X	X	28.2	X
	20 largest companies	X	X	46.6	X
	50 largest companies	X	X	60.1	151.6
33621	Motor vehicle body and trailer manufacturing				
	All companies	1 915	8 816 510	100.0	X
	4 largest companies	X	X	19.1	X
	8 largest companies	X	X	28.2	X
	20 largest companies	X	X	46.6	X
	50 largest companies	X	X	60.1	151.6
336211	Motor vehicle body manufacturing				
	All companies	760	2 773 610	100.0	X
	4 largest companies	X	X	21.7	X
	8 largest companies	X	X	30.5	X
	20 largest companies	X	X	47.4	X
	50 largest companies	X	X	64.9	184.4
336212	Truck trailer manufacturing				
	All companies	363	1 489 087	100.0	X
	4 largest companies	X	X	43.9	X
	8 largest companies	X	X	53.1	X
	20 largest companies	X	X	66.7	X
	50 largest companies	X	X	82.9	616.6
336213	Motor home manufacturing				
	All companies	83	1 928 258	100.0	X
	4 largest companies	X	X	57.0	X
	8 largest companies	X	X	79.4	X
	20 largest companies	X	X	95.5	X
	50 largest companies	X	X	99.9	1 051.2
336214	Travel trailer and camper manufacturing				
	All companies	733	2 625 555	100.0	X
	4 largest companies	X	X	36.2	X
	8 largest companies	X	X	43.9	X
	20 largest companies	X	X	56.5	X
	50 largest companies	X	X	71.1	419.8
3363	Motor vehicle parts manufacturing				
	All companies	4 565	86 621 620	100.0	X
	4 largest companies	X	X	29.9	X
	8 largest companies	X	X	39.7	X
	20 largest companies	X	X	54.4	X
	50 largest companies	X	X	65.9	304.4
33631	Motor vehicle gasoline engine and engine parts manufacturing				
	All companies	940	12 347 505	100.0	X
	4 largest companies	X	X	44.3	X
	8 largest companies	X	X	58.6	X
	20 largest companies	X	X	77.5	X
	50 largest companies	X	X	88.9	600.1
336311	Carburetor, piston, piston ring, and valve manufacturing				
	All companies	113	1 378 204	100.0	X
	4 largest companies	X	X	63.1	X
	8 largest companies	X	X	84.1	X
	20 largest companies	X	X	92.8	X
	50 largest companies	X	X	98.4	1 205.4
336312	Gasoline engine and engine parts manufacturing				
	All companies	835	10 969 301	100.0	X
	4 largest companies	X	X	49.9	X
	8 largest companies	X	X	64.7	X
	20 largest companies	X	X	79.5	X
	50 largest companies	X	X	90.5	725.1

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
336	Transportation equipment manufacturing—Con.				
3363	Motor vehicle parts manufacturing—Con.				
33632	Motor vehicle electrical and electronic equipment manufacturing				
	All companies	786	12 909 751	100.0	X
	4 largest companies	X	X	46.0	X
	8 largest companies	X	X	57.4	X
	20 largest companies	X	X	72.0	X
	50 largest companies	X	X	84.7	1 048.8
336321	Vehicular lighting equipment manufacturing				
	All companies	91	1 735 033	100.0	X
	4 largest companies	X	X	49.1	X
	8 largest companies	X	X	73.7	X
	20 largest companies	X	X	91.7	X
	50 largest companies	X	X	99.2	838.2
336322	Other motor vehicle electrical and electronic equipment manufacturing				
	All companies	702	11 174 718	100.0	X
	4 largest companies	X	X	50.5	X
	8 largest companies	X	X	63.3	X
	20 largest companies	X	X	76.7	X
	50 largest companies	X	X	86.8	1 352.5
33633	Motor vehicle steering and suspension component (except spring) manufacturing				
	All companies	199	4 984 666	100.0	X
	4 largest companies	X	X	53.9	X
	8 largest companies	X	X	65.8	X
	20 largest companies	X	X	83.6	X
	50 largest companies	X	X	96.4	1 316.4
336330	Motor vehicle steering and suspension component (except spring) manufacturing				
	All companies	199	4 984 666	100.0	X
	4 largest companies	X	X	53.9	X
	8 largest companies	X	X	65.8	X
	20 largest companies	X	X	83.6	X
	50 largest companies	X	X	96.4	1 316.4
33634	Motor vehicle brake system manufacturing				
	All companies	210	5 868 521	100.0	X
	4 largest companies	X	X	53.3	X
	8 largest companies	X	X	64.9	X
	20 largest companies	X	X	82.8	X
	50 largest companies	X	X	95.5	958.0
336340	Motor vehicle brake system manufacturing				
	All companies	210	5 868 521	100.0	X
	4 largest companies	X	X	53.3	X
	8 largest companies	X	X	64.9	X
	20 largest companies	X	X	82.8	X
	50 largest companies	X	X	95.5	958.0
33635	Motor vehicle transmission and power train parts manufacturing				
	All companies	434	14 407 007	100.0	X
	4 largest companies	X	X	51.0	X
	8 largest companies	X	X	71.5	X
	20 largest companies	X	X	85.5	X
	50 largest companies	X	X	94.3	838.3
336350	Motor vehicle transmission and power train parts manufacturing				
	All companies	434	14 407 007	100.0	X
	4 largest companies	X	X	51.0	X
	8 largest companies	X	X	71.5	X
	20 largest companies	X	X	85.5	X
	50 largest companies	X	X	94.3	838.3
33636	Motor vehicle seating and interior trim manufacturing				
	All companies	294	4 793 368	100.0	X
	4 largest companies	X	X	56.9	X
	8 largest companies	X	X	64.9	X
	20 largest companies	X	X	78.0	X
	50 largest companies	X	X	91.8	1 199.2
336360	Motor vehicle seating and interior trim manufacturing				
	All companies	294	4 793 368	100.0	X
	4 largest companies	X	X	56.9	X
	8 largest companies	X	X	64.9	X
	20 largest companies	X	X	78.0	X
	50 largest companies	X	X	91.8	1 199.2
33637	Motor vehicle metal stamping				
	All companies	673	12 508 768	100.0	X
	4 largest companies	X	X	44.0	X
	8 largest companies	X	X	50.8	X
	20 largest companies	X	X	59.1	X
	50 largest companies	X	X	71.0	684.0

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
336	Transportation equipment manufacturing—Con.				
3363	Motor vehicle parts manufacturing—Con.				
33637	Motor vehicle metal stamping—Con.				
336370	Motor vehicle metal stamping				
	All companies	673	12 508 768	100.0	X
	4 largest companies	X	X	44.0	X
	8 largest companies	X	X	50.8	X
	20 largest companies	X	X	59.1	X
	50 largest companies	X	X	71.0	684.0
33639	Other motor vehicle parts manufacturing				
	All companies	1 257	18 802 034	100.0	X
	4 largest companies	X	X	21.7	X
	8 largest companies	X	X	31.7	X
	20 largest companies	X	X	49.4	X
	50 largest companies	X	X	68.0	200.6
336391	Motor vehicle air-conditioning manufacturing				
	All companies	75	2 757 617	100.0	X
	4 largest companies	X	X	80.1	X
	8 largest companies	X	X	92.6	X
	20 largest companies	X	X	98.6	X
	50 largest companies	X	X	99.9	1 741.5
336399	All other motor vehicle parts manufacturing				
	All companies	1 188	16 044 417	100.0	X
	4 largest companies	X	X	17.7	X
	8 largest companies	X	X	28.5	X
	20 largest companies	X	X	46.1	X
	50 largest companies	X	X	65.5	150.9
3364	Aerospace product and parts manufacturing				
	All companies	1 260	64 151 931	100.0	X
	4 largest companies	X	X	57.1	X
	8 largest companies	X	X	76.3	X
	20 largest companies	X	X	88.2	X
	50 largest companies	X	X	93.1	1 206.5
33641	Aerospace product and parts manufacturing				
	All companies	1 260	64 151 931	100.0	X
	4 largest companies	X	X	57.1	X
	8 largest companies	X	X	76.3	X
	20 largest companies	X	X	88.2	X
	50 largest companies	X	X	93.1	1 206.5
336411	Aircraft manufacturing				
	All companies	184	29 557 132	100.0	X
	4 largest companies	X	X	80.2	X
	8 largest companies	X	X	94.6	X
	20 largest companies	X	X	98.0	X
	50 largest companies	X	X	99.7	2 947.6
336412	Aircraft engine and engine parts manufacturing				
	All companies	296	11 669 394	100.0	X
	4 largest companies	X	X	73.8	X
	8 largest companies	X	X	80.3	X
	20 largest companies	X	X	88.3	X
	50 largest companies	X	X	94.5	2 102.3
336413	Other aircraft parts and auxiliary equipment manufacturing				
	All companies	760	13 206 348	100.0	X
	4 largest companies	X	X	56.2	X
	8 largest companies	X	X	72.1	X
	20 largest companies	X	X	82.3	X
	50 largest companies	X	X	89.8	950.0
336414	Guided missile and space vehicle manufacturing				
	All companies	13	7 222 394	100.0	X
	4 largest companies	X	X	95.3	X
	8 largest companies	X	X	99.9	X
	20 largest companies	X	X	100.0	D
	50 largest companies	X	X	—	—
336415	Guided missile and space vehicle propulsion unit and propulsion unit parts manufacturing				
	All companies	16	1 848 076	100.0	X
	4 largest companies	X	X	92.3	X
	8 largest companies	X	X	99.2	X
	20 largest companies	X	X	100.0	D
	50 largest companies	X	X	—	—
336419	Other guided missile and space vehicle parts and auxiliary equipment manufacturing				
	All companies	51	648 587	100.0	X
	4 largest companies	X	X	64.5	X
	8 largest companies	X	X	77.0	X
	20 largest companies	X	X	95.6	X
	50 largest companies	X	X	D	2 515.4

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
336	Transportation equipment manufacturing—Con.				
3365	Railroad rolling stock manufacturing				
	All companies	147	3 776 018	100.0	X
	4 largest companies	X	X	54.7	X
	8 largest companies	X	X	72.2	X
	20 largest companies	X	X	90.2	X
	50 largest companies	X	X	97.3	1 037.2
33651	Railroad rolling stock manufacturing				
	All companies	147	3 776 018	100.0	X
	4 largest companies	X	X	54.7	X
	8 largest companies	X	X	72.2	X
	20 largest companies	X	X	90.2	X
	50 largest companies	X	X	97.3	1 037.2
336510	Railroad rolling stock manufacturing				
	All companies	147	3 776 018	100.0	X
	4 largest companies	X	X	54.7	X
	8 largest companies	X	X	72.2	X
	20 largest companies	X	X	90.2	X
	50 largest companies	X	X	97.3	1 037.2
3366	Ship and boat building				
	All companies	1 649	12 225 195	100.0	X
	4 largest companies	X	X	57.2	X
	8 largest companies	X	X	63.0	X
	20 largest companies	X	X	70.4	X
	50 largest companies	X	X	78.7	1 252.0
33661	Ship and boat building				
	All companies	1 649	12 225 195	100.0	X
	4 largest companies	X	X	57.2	X
	8 largest companies	X	X	63.0	X
	20 largest companies	X	X	70.4	X
	50 largest companies	X	X	78.7	1 252.0
336611	Ship building and repairing				
	All companies	586	8 390 656	100.0	X
	4 largest companies	X	X	73.8	X
	8 largest companies	X	X	78.5	X
	20 largest companies	X	X	84.6	X
	50 largest companies	X	X	90.7	2 540.0
336612	Boat building				
	All companies	1 065	3 834 539	100.0	X
	4 largest companies	X	X	38.7	X
	8 largest companies	X	X	46.4	X
	20 largest companies	X	X	59.1	X
	50 largest companies	X	X	73.6	572.9
3369	Other transportation equipment manufacturing				
	All companies	799	5 725 756	100.0	X
	4 largest companies	X	X	48.2	X
	8 largest companies	X	X	64.5	X
	20 largest companies	X	X	78.8	X
	50 largest companies	X	X	87.9	750.2
33699	Other transportation equipment manufacturing				
	All companies	799	5 725 756	100.0	X
	4 largest companies	X	X	48.2	X
	8 largest companies	X	X	64.5	X
	20 largest companies	X	X	78.8	X
	50 largest companies	X	X	87.9	750.2
336991	Motorcycle, bicycle, and parts manufacturing				
	All companies	348	2 245 145	100.0	X
	4 largest companies	X	X	67.0	X
	8 largest companies	X	X	74.5	X
	20 largest companies	X	X	83.8	X
	50 largest companies	X	X	91.8	1 866.9
336992	Military armored vehicle, tank, and tank component manufacturing				
	All companies	31	811 337	100.0	X
	4 largest companies	X	X	88.9	X
	8 largest companies	X	X	93.3	X
	20 largest companies	X	X	99.1	X
	50 largest companies	X	X	100.0	D
336999	All other transportation equipment manufacturing				
	All companies	424	2 669 274	100.0	X
	4 largest companies	X	X	59.9	X
	8 largest companies	X	X	77.0	X
	20 largest companies	X	X	87.2	X
	50 largest companies	X	X	95.1	1 643.3

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
337	Furniture and related product manufacturing				
	All companies	21 523	42 882 349	100.0	X
	4 largest companies	X	X	10.7	X
	8 largest companies	X	X	18.4	X
	20 largest companies	X	X	28.5	X
	50 largest companies	X	X	39.6	57.0
3371	Household and institutional furniture and kitchen cabinet manufacturing				
	All companies	16 475	24 961 445	100.0	X
	4 largest companies	X	X	16.6	X
	8 largest companies	X	X	22.6	X
	20 largest companies	X	X	32.2	X
	50 largest companies	X	X	43.2	92.3
33711	Wood kitchen cabinet and countertop manufacturing				
	All companies	9 452	8 586 792	100.0	X
	4 largest companies	X	X	27.7	X
	8 largest companies	X	X	33.4	X
	20 largest companies	X	X	41.1	X
	50 largest companies	X	X	48.7	290.9
337110	Wood kitchen cabinet and countertop manufacturing				
	All companies	9 452	8 586 792	100.0	X
	4 largest companies	X	X	27.7	X
	8 largest companies	X	X	33.4	X
	20 largest companies	X	X	41.1	X
	50 largest companies	X	X	48.7	290.9
33712	Household and institutional furniture manufacturing				
	All companies	7 034	16 374 653	100.0	X
	4 largest companies	X	X	18.7	X
	8 largest companies	X	X	25.6	X
	20 largest companies	X	X	37.7	X
	50 largest companies	X	X	49.6	135.9
337121	Upholstered household furniture manufacturing				
	All companies	1 679	5 240 058	100.0	X
	4 largest companies	X	X	33.3	X
	8 largest companies	X	X	41.2	X
	20 largest companies	X	X	53.2	X
	50 largest companies	X	X	66.2	405.2
337122	Nonupholstered wood household furniture manufacturing				
	All companies	3 975	6 618 933	100.0	X
	4 largest companies	X	X	23.7	X
	8 largest companies	X	X	35.7	X
	20 largest companies	X	X	52.1	X
	50 largest companies	X	X	63.7	226.7
337124	Metal household furniture manufacturing				
	All companies	353	1 025 481	100.0	X
	4 largest companies	X	X	24.8	X
	8 largest companies	X	X	38.5	X
	20 largest companies	X	X	61.2	X
	50 largest companies	X	X	83.3	272.3
337125	Household furniture (except wood and metal) manufacturing				
	All companies	178	530 618	100.0	X
	4 largest companies	X	X	68.0	X
	8 largest companies	X	X	79.9	X
	20 largest companies	X	X	89.1	X
	50 largest companies	X	X	96.5	2 912.5
337127	Institutional furniture manufacturing				
	All companies	693	2 706 764	100.0	X
	4 largest companies	X	X	22.1	X
	8 largest companies	X	X	30.3	X
	20 largest companies	X	X	44.1	X
	50 largest companies	X	X	63.8	185.1
337129	Wood television, radio, and sewing machine cabinet manufacturing				
	All companies	201	252 799	100.0	X
	4 largest companies	X	X	66.6	X
	8 largest companies	X	X	77.0	X
	20 largest companies	X	X	85.5	X
	50 largest companies	X	X	93.7	1 539.7
3372	Office furniture (including fixtures) manufacturing				
	All companies	4 129	13 801 861	100.0	X
	4 largest companies	X	X	25.8	X
	8 largest companies	X	X	33.9	X
	20 largest companies	X	X	42.1	X
	50 largest companies	X	X	50.3	196.0

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
337	Furniture and related product manufacturing—Con.				
3372	Office furniture (including fixtures) manufacturing—Con.				
33721	Office furniture (including fixtures) manufacturing				
	All companies	4 129	13 801 861	100.0	X
	4 largest companies	X	X	25.8	X
	8 largest companies	X	X	33.9	X
	20 largest companies	X	X	42.1	X
	50 largest companies	X	X	50.3	196.0
337211	Wood office furniture manufacturing				
	All companies	546	1 752 297	100.0	X
	4 largest companies	X	X	33.6	X
	8 largest companies	X	X	43.0	X
	20 largest companies	X	X	56.3	X
	50 largest companies	X	X	71.9	430.0
337212	Custom architectural woodwork and millwork manufacturing				
	All companies	1 552	2 548 499	100.0	X
	4 largest companies	X	X	8.6	X
	8 largest companies	X	X	13.0	X
	20 largest companies	X	X	21.1	X
	50 largest companies	X	X	34.4	37.0
337214	Office furniture (except wood) manufacturing				
	All companies	261	4 788 620	100.0	X
	4 largest companies	X	X	63.2	X
	8 largest companies	X	X	80.5	X
	20 largest companies	X	X	88.9	X
	50 largest companies	X	X	95.1	1 179.0
337215	Showcase, partition, shelving, and locker manufacturing				
	All companies	1 800	4 712 445	100.0	X
	4 largest companies	X	X	14.7	X
	8 largest companies	X	X	20.6	X
	20 largest companies	X	X	29.8	X
	50 largest companies	X	X	42.8	80.4
3379	Other furniture related product manufacturing				
	All companies	974	4 119 043	100.0	X
	4 largest companies	X	X	32.8	X
	8 largest companies	X	X	45.0	X
	20 largest companies	X	X	56.9	X
	50 largest companies	X	X	69.5	386.7
33791	Mattress manufacturing				
	All companies	513	2 803 114	100.0	X
	4 largest companies	X	X	45.5	X
	8 largest companies	X	X	54.8	X
	20 largest companies	X	X	66.6	X
	50 largest companies	X	X	78.4	720.6
337910	Mattress manufacturing				
	All companies	513	2 803 114	100.0	X
	4 largest companies	X	X	45.5	X
	8 largest companies	X	X	54.8	X
	20 largest companies	X	X	66.6	X
	50 largest companies	X	X	78.4	720.6
33792	Blind and shade manufacturing				
	All companies	461	1 315 929	100.0	X
	4 largest companies	X	X	41.3	X
	8 largest companies	X	X	50.2	X
	20 largest companies	X	X	64.6	X
	50 largest companies	X	X	80.3	537.9
337920	Blind and shade manufacturing				
	All companies	461	1 315 929	100.0	X
	4 largest companies	X	X	41.3	X
	8 largest companies	X	X	50.2	X
	20 largest companies	X	X	64.6	X
	50 largest companies	X	X	80.3	537.9
339	Miscellaneous manufacturing				
	All companies	31 245	78 601 785	100.0	X
	4 largest companies	X	X	10.5	X
	8 largest companies	X	X	15.8	X
	20 largest companies	X	X	25.3	X
	50 largest companies	X	X	36.0	53.2
3391	Medical equipment and supplies manufacturing				
	All companies	11 418	42 733 682	100.0	X
	4 largest companies	X	X	19.3	X
	8 largest companies	X	X	28.0	X
	20 largest companies	X	X	42.6	X
	50 largest companies	X	X	56.6	161.1

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
339	Miscellaneous manufacturing—Con.				
3391	Medical equipment and supplies manufacturing—Con.				
33911	Medical equipment and supplies manufacturing				
	All companies	11 418	42 733 682	100.0	X
	4 largest companies	X	X	19.3	X
	8 largest companies	X	X	28.0	X
	20 largest companies	X	X	42.6	X
	50 largest companies	X	X	56.6	161.1
339111	Laboratory apparatus and furniture manufacturing				
	All companies	404	3 045 076	100.0	X
	4 largest companies	X	X	35.3	X
	8 largest companies	X	X	48.3	X
	20 largest companies	X	X	64.4	X
	50 largest companies	X	X	79.6	439.9
339112	Surgical and medical instrument manufacturing				
	All companies	1 212	15 019 390	100.0	X
	4 largest companies	X	X	26.6	X
	8 largest companies	X	X	41.2	X
	20 largest companies	X	X	57.2	X
	50 largest companies	X	X	71.6	277.1
339113	Surgical appliance and supplies manufacturing				
	All companies	1 617	16 833 622	100.0	X
	4 largest companies	X	X	32.7	X
	8 largest companies	X	X	44.2	X
	20 largest companies	X	X	60.9	X
	50 largest companies	X	X	75.9	365.6
339114	Dental equipment and supplies manufacturing				
	All companies	849	2 078 964	100.0	X
	4 largest companies	X	X	37.7	X
	8 largest companies	X	X	49.0	X
	20 largest companies	X	X	65.8	X
	50 largest companies	X	X	78.0	437.2
339115	Ophthalmic goods manufacturing				
	All companies	491	3 026 628	100.0	X
	4 largest companies	X	X	40.7	X
	8 largest companies	X	X	55.4	X
	20 largest companies	X	X	77.5	X
	50 largest companies	X	X	86.7	678.4
339116	Dental laboratories				
	All companies	6 923	2 730 002	100.0	X
	4 largest companies	X	X	12.8	X
	8 largest companies	X	X	18.1	X
	20 largest companies	X	X	23.7	X
	50 largest companies	X	X	30.6	55.6
3399	Other miscellaneous manufacturing				
	All companies	19 848	35 868 103	100.0	X
	4 largest companies	X	X	7.1	X
	8 largest companies	X	X	10.7	X
	20 largest companies	X	X	18.7	X
	50 largest companies	X	X	27.7	25.8
33991	Jewelry and silverware manufacturing				
	All companies	3 015	3 952 259	100.0	X
	4 largest companies	X	X	18.5	X
	8 largest companies	X	X	25.5	X
	20 largest companies	X	X	39.1	X
	50 largest companies	X	X	52.7	142.1
339911	Jewelry (except costume) manufacturing				
	All companies	1 923	2 793 456	100.0	X
	4 largest companies	X	X	26.2	X
	8 largest companies	X	X	35.4	X
	20 largest companies	X	X	48.6	X
	50 largest companies	X	X	61.2	258.6
339912	Silverware and hollowware manufacturing				
	All companies	158	283 719	100.0	X
	4 largest companies	X	X	52.6	X
	8 largest companies	X	X	63.6	X
	20 largest companies	X	X	79.3	X
	50 largest companies	X	X	92.9	1 001.2
339913	Jewelers' material and lapidary work manufacturing				
	All companies	290	319 884	100.0	X
	4 largest companies	X	X	D	X
	8 largest companies	X	X	60.9	X
	20 largest companies	X	X	82.7	X
	50 largest companies	X	X	95.9	584.2

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NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
339	Miscellaneous manufacturing—Con.				
3399	Other miscellaneous manufacturing—Con.				
33991	Jewelry and silverware manufacturing—Con.				
339914	Costume jewelry and novelty manufacturing				
	All companies	650	555 200	100.0	X
	4 largest companies	X	X	25.3	X
	8 largest companies	X	X	36.5	X
	20 largest companies	X	X	50.2	X
	50 largest companies	X	X	67.1	238.9
33992	Sporting and athletic goods manufacturing				
	All companies	2 157	6 737 525	100.0	X
	4 largest companies	X	X	23.9	X
	8 largest companies	X	X	32.1	X
	20 largest companies	X	X	46.2	X
	50 largest companies	X	X	61.8	199.9
339920	Sporting and athletic goods manufacturing				
	All companies	2 157	6 737 525	100.0	X
	4 largest companies	X	X	23.9	X
	8 largest companies	X	X	32.1	X
	20 largest companies	X	X	46.2	X
	50 largest companies	X	X	61.8	199.9
33993	Doll, toy, and game manufacturing				
	All companies	865	2 307 990	100.0	X
	4 largest companies	X	X	39.4	X
	8 largest companies	X	X	48.0	X
	20 largest companies	X	X	61.0	X
	50 largest companies	X	X	75.3	493.9
339931	Doll and stuffed toy manufacturing				
	All companies	134	187 024	100.0	X
	4 largest companies	X	X	50.8	X
	8 largest companies	X	X	68.5	X
	20 largest companies	X	X	84.8	X
	50 largest companies	X	X	98.2	798.2
339932	Game, toy, and children's vehicle manufacturing				
	All companies	732	2 120 966	100.0	X
	4 largest companies	X	X	42.9	X
	8 largest companies	X	X	52.2	X
	20 largest companies	X	X	65.2	X
	50 largest companies	X	X	78.0	579.4
33994	Office supplies (except paper) manufacturing				
	All companies	771	2 451 378	100.0	X
	4 largest companies	X	X	41.3	X
	8 largest companies	X	X	52.1	X
	20 largest companies	X	X	65.5	X
	50 largest companies	X	X	77.5	532.2
339941	Pen and mechanical pencil manufacturing				
	All companies	87	850 804	100.0	X
	4 largest companies	X	X	74.4	X
	8 largest companies	X	X	81.5	X
	20 largest companies	X	X	91.0	X
	50 largest companies	X	X	98.9	1 956.8
339942	Lead pencil and art good manufacturing				
	All companies	138	912 849	100.0	X
	4 largest companies	X	X	61.3	X
	8 largest companies	X	X	74.7	X
	20 largest companies	X	X	87.3	X
	50 largest companies	X	X	96.0	1 590.2
339943	Marking device manufacturing				
	All companies	476	388 521	100.0	X
	4 largest companies	X	X	23.9	X
	8 largest companies	X	X	32.8	X
	20 largest companies	X	X	49.8	X
	50 largest companies	X	X	67.2	217.1
339944	Carbon paper and inked ribbon manufacturing				
	All companies	72	299 204	100.0	X
	4 largest companies	X	X	57.0	X
	8 largest companies	X	X	72.5	X
	20 largest companies	X	X	89.8	X
	50 largest companies	X	X	99.1	1 143.3

See footnotes at end of table.

Table 3. Share of Value Added Accounted for by the 4, 8, 20, and 50 Largest Companies for Industries: 2002—Con.

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

NAICS code	Industry and company size	Companies ¹	Value added (\$1,000)	Value added ² (percent)	Herfindahl-Hirschman index for 50 largest companies ³
339	Miscellaneous manufacturing—Con.				
3399	Other miscellaneous manufacturing—Con.				
33995	Sign manufacturing				
	All companies	6 125	5 745 823	100.0	X
	4 largest companies	X	X	5.4	X
	8 largest companies	X	X	8.8	X
	20 largest companies	X	X	16.0	X
	50 largest companies	X	X	26.9	19.1
339950	Sign manufacturing				
	All companies	6 125	5 745 823	100.0	X
	4 largest companies	X	X	5.4	X
	8 largest companies	X	X	8.8	X
	20 largest companies	X	X	16.0	X
	50 largest companies	X	X	26.9	19.1
33999	All other miscellaneous manufacturing				
	All companies	6 950	14 673 128	100.0	X
	4 largest companies	X	X	9.9	X
	8 largest companies	X	X	16.3	X
	20 largest companies	X	X	26.5	X
	50 largest companies	X	X	37.6	49.1
339991	Gasket, packing, and sealing device manufacturing				
	All companies	526	3 128 087	100.0	X
	4 largest companies	X	X	31.2	X
	8 largest companies	X	X	41.6	X
	20 largest companies	X	X	57.5	X
	50 largest companies	X	X	73.1	318.4
339992	Musical instrument manufacturing				
	All companies	563	1 208 416	100.0	X
	4 largest companies	X	X	42.7	X
	8 largest companies	X	X	54.3	X
	20 largest companies	X	X	70.1	X
	50 largest companies	X	X	84.6	606.0
339993	Fastener, button, needle, and pin manufacturing				
	All companies	180	417 248	100.0	X
	4 largest companies	X	X	53.1	X
	8 largest companies	X	X	63.1	X
	20 largest companies	X	X	78.7	X
	50 largest companies	X	X	92.6	1 461.8
339994	Broom, brush, and mop manufacturing				
	All companies	269	1 279 424	100.0	X
	4 largest companies	X	X	29.2	X
	8 largest companies	X	X	46.1	X
	20 largest companies	X	X	64.9	X
	50 largest companies	X	X	83.4	346.3
339995	Burial casket manufacturing				
	All companies	148	767 764	100.0	X
	4 largest companies	X	X	75.0	X
	8 largest companies	X	X	81.5	X
	20 largest companies	X	X	88.7	X
	50 largest companies	X	X	94.8	D
339999	All other miscellaneous manufacturing				
	All companies	5 270	7 872 189	100.0	X
	4 largest companies	X	X	12.2	X
	8 largest companies	X	X	18.2	X
	20 largest companies	X	X	25.9	X
	50 largest companies	X	X	34.8	56.6

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Value added concentration ratios are presented as an alternative to the traditional value of shipments concentration ratios because value of shipments typically include an immeasurable amount of duplication. However, eliminating duplication can both raise and lower the concentration ratios. Also, use of value added results in more differences than those associated with eliminating duplication and frequently results in the inclusion of different companies in the company groups.

³The Herfindahl-Hirschman index is calculated by summing the squares of the individual company percentages for the 50 largest companies or the universe, whichever is lower.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Appendix A.

Explanation of Terms

NUMBER OF EMPLOYEES

This item includes all full-time and part-time employees on the payrolls of operating manufacturing establishments during any part of the pay period that included the 12th of the months specified on the report form. Included are employees on paid sick leave, paid holidays, and paid vacations; not included are proprietors and partners of unincorporated businesses.

These individuals consist of all full-time and part-time employees who are on the payrolls of establishments who worked or received pay for any part of the pay period including the 12th of March, May, August, and November.

The “all employees” number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average for the payroll periods including the 12th of March, May, August, and November

Production Workers

The “production workers” number includes workers (up through the line-supervisor level) engaged in fabricating, processing, assembling, inspecting, receiving, storing, handling, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial and guard services, product development, auxiliary production for plant’s own use (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Employees above the working-supervisor level are excluded from this item.

All Other Employees

The “other employees” covers nonproduction employees of the manufacturing establishment including those engaged in factory supervision above the line-supervisor level. It includes sales (including driver-salespersons), sales delivery (highway truck drivers and their helpers), advertising, credit, collection, installation and servicing of own products, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional, and technical employees. Also included are employees on the payroll of the manufacturing establishment engaged in the construction of major additions or alterations utilized as a separate work force.

PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating manufacturing establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees’ social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of manufacturing establishments.

The census definition of payrolls is identical to that recommended to all federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers’ social security contributions or other nonpayroll labor costs, such as employees’ pension plans, group insurance premiums, and workers’ compensation.

The ASM provides estimates of employers' total supplemental labor costs (those required by federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

COST OF MATERIALS

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

Included in this item are:

1. Cost of parts, components, containers, etc. Includes all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year.
2. Cost of products bought and sold in the same condition.
3. Cost of fuels consumed for heat and power. Includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. Cost of purchased electricity. The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.
5. Cost of contract work. This term applies to work done by others on materials furnished by the manufacturing establishment. The actual cost of the material is to be reported on the cost of materials, parts, and containers line of this item. The term "Contract Work" refers to the fee a company pays to another company to perform a service.

Specific materials consumed

In addition to the total cost of materials, which every establishment was required to report, information also was collected for most manufacturing industries on the consumption of major materials used in manufacturing. The inquiries were restricted to those materials that were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers' records. If less than \$25,000 of a listed material was consumed by an establishment, the cost data could be reported in the "Cost of all other materials" Census material code 00970099.

Also, the cost of materials for small establishments for which administrative records or short forms were used was imputed into the "Materials not specified by kind" Census materials code 00971000.

TOTAL VALUE OF SHIPMENTS

Includes the received or receivable net selling values, "Free on Board" (FOB) plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as receipts for contract work performed for others, installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all items made by or for the establishments from material owned by it, whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for NAICS defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of product shipments:

1. reported contract work — receipts for work or services that a plant performed for others on their materials;
2. value of resales — sales of products bought and sold without further manufacture, processing, or assembly; and
3. other miscellaneous receipts — includes repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of three components of value of shipments. These components are:

1. primary product value of shipments;
2. secondary product value of shipments; and
3. total miscellaneous receipts.

Primary product shipments is used in the calculations of industry specialization ratio and industry coverage ratio.

Duplication in cost of materials and value of shipments

The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication, since the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to the paper manufacturing group of industries.

Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the annual survey.

Duplication of products within individual industries is significant within a number of industry groups, e.g., machinery and transportation industries. These industries frequently include complete machinery and their parts. In this case, the parts made for original equipment are materials consumed for assembly plants in the same industry.

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry.

Before 1962, cost of materials and value of shipments were not published for some industries that included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

Specialization and coverage ratio

An establishment is classified in a particular industry, if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.).

Specialization and coverage ratio have been developed to measure the relationship of primary product shipments to the data on shipments for a particular industry.

Specialization ratio represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments wherever classified.

VALUE ADDED

This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments (products manufactured plus receipts for services rendered). The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of merchandise sold without further manufacture, processing, or assembly) plus the net change in finished goods and work-in-process between the beginning- and end-of-year inventories.

For those industries where value of production is collected instead of value of shipments, value added is adjusted only for the change in work-in-process inventories between the beginning and end of year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

“Value added” avoids the duplication in the figure for value of shipments that results from the use of products of some establishments as materials by others. Value added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

CAPITAL EXPENDITURES FOR NEW AND USED PLANT AND EQUIPMENT

Represents the total new and used capital expenditures reported by establishments in operation and any known plants under construction.

These data include expenditures for:

1. Permanent additions and major alterations to manufacturing and mining establishments.
2. New and used machinery and equipment used for replacement and additions to plant capacity, if they are of the type for which depreciation, depletion, or (for mining establishments) Office of Minerals Exploration accounts are ordinarily maintained. In addition, for mining establishments, these data include expenditures made during the year for development and exploration of mineral properties. For manufacturing establishments, these data are broken down into three types.
 - a. Automobiles, trucks, etc. for highway use. These include vehicles acquired under a lease-purchase agreement and excludes vehicles leased or normally designed to transport materials, property, or equipment on mining, construction, petroleum development, and similar projects. These vehicles are of such size or weight as to be normally restricted by state laws or regulations from operating on public highways. It also excludes purchases of vehicles that are purchased by a company for highway use.
 - b. Computers and peripheral data processing equipment. This item includes all purchases of computers and related equipment.
 - c. All other expenditures for machinery and equipment excluding automobiles and computer equipment.

Capital expenditures include work done by contract, as well as by the establishment’s own workforce.

These data exclude expenditures for land and mineral rights and cost of maintenance and repairs charged as current operating expenses.

Appendix B.

NAICS Codes, Titles, and Descriptions

SECTOR 31-33 MANUFACTURING

The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction.

Establishments in the Manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. However, establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as bakeries, candy stores, and custom tailors, may also be included in this sector. Manufacturing establishments may process materials or may contract with other establishments to process their materials for them. Both types of establishments are included in manufacturing.

The materials, substances, or components transformed by manufacturing establishments are raw materials that are products of agriculture, forestry, fishing, mining, or quarrying as well as products of other manufacturing establishments. The materials used may be purchased directly from producers, obtained through customary trade channels, or secured without recourse to the market by transferring the product from one establishment to another, under the same ownership. The new product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become an input for an establishment engaged in further manufacturing. For example, the product of the alumina refinery is the input used in the primary production of aluminum; primary aluminum is the input to an aluminum wire drawing plant; and aluminum wire is the input for a fabricated wire product manufacturing establishment.

The subsectors in the Manufacturing sector generally reflect distinct production processes related to material inputs, production equipment, and employee skills. In the machinery area, where assembling is a key activity, parts and accessories for manufactured products are classified in the industry of the finished manufactured item when they are made for separate sale. For example, a replacement refrigerator door would be classified with refrigerators and an attachment for a piece of metal working machinery would be classified with metal working machinery. However, components, input from other manufacturing establishments, are classified based on the production function of the component manufacturer. For example, electronic components are classified in Subsector 334, Computer and Electronic Product Manufacturing and stampings are classified in Subsector 332, Fabricated Metal Product Manufacturing.

Manufacturing establishments often perform one or more activities that are classified outside the Manufacturing sector of the North American Industry Classification System (NAICS). For instance, almost all manufacturing has some captive research and development or administrative operations, such as accounting, payroll, or management. These captive services are treated the same as captive manufacturing activities. When the services are provided by separate establishments, they are classified to the NAICS sector where such services are primary, not in manufacturing.

The boundaries of manufacturing and the other sectors of the classification system can be somewhat blurry. The establishments in the manufacturing sector are engaged in the transformation of materials into new products. Their output is a new product. However, the definition of what constitutes a new product can be somewhat subjective. As clarification, the following activities are considered manufacturing in NAICS: Milk bottling and pasteurizing; Water bottling and processing;

Fresh fish packaging (oyster shucking, fish filleting); Apparel jobbing (assigning of materials to contract factories or shops for fabrication or other contract operations) as well as contracting on materials owned by others; Printing and related activities; Ready-mixed concrete production; Leather converting; Grinding of lenses to prescription; Wood preserving; Electroplating, plating, metal heat treating, and polishing for the trade; Lapidary work for the trade; Fabricating signs and advertising displays; Rebuilding or remanufacturing machinery (i.e., automotive parts) Ship repair and renovation; Machine shops; and Tire retreading. Conversely, there are activities that are sometimes considered manufacturing, but which for NAICS are classified in another sector (i.e., not classified as manufacturing).

They include: (1) Logging, classified in Sector 11, Agriculture, Forestry, Fishing and Hunting is considered a harvesting operation; (2) The beneficiating of ores and other minerals, classified in Sector 21, Mining, is considered part of the activity of mining; (3) The construction of structures and fabricating operations performed at the site of construction by contractors, is classified in Sector 23, Construction; (4) Establishments engaged in breaking of bulk and redistribution in smaller lots, including packaging, repackaging, or bottling products, such as liquors or chemicals; the customized assembly of computers; sorting of scrap; mixing paints to customer order; and cutting metals to customer order, classified in Sector 42, Wholesale Trade or Sector 44-45, Retail Trade, produce a modified version of the same product, not a new product; and (5) Publishing and the combined activity of publishing and printing, classified in Sector 51, Information, perform the transformation of information into a product where as the value of the product to the consumer lies in the information content, not in the format in which it is distributed (i.e., the book or software diskette).

311 FOOD MANUFACTURING

Industries in the Food Manufacturing subsector transform livestock and agricultural products into products for intermediate or final consumption. The industry groups are distinguished by the raw materials (generally of animal or vegetable origin) processed into food products.

The food products manufactured in these establishments are typically sold to wholesalers or retailers for distribution to consumers, but establishments primarily engaged in retailing bakery and candy products made on the premises not for immediate consumption are included.

Establishments primarily engaged in manufacturing beverages are classified in Subsector 312, Beverage and Tobacco Product Manufacturing.

3111 ANIMAL FOOD MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing food and feed for animals from ingredients, such as grains, oilseed mill products, and meat products.

31111 ANIMAL FOOD MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing food and feed for animals from ingredients, such as grains, oilseed mill products, and meat products.

311111 DOG AND CAT FOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing dog and cat food from ingredients, such as grains, oilseed mill products, and meat products.

311119 OTHER ANIMAL FOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing animal food (except dog and cat) from ingredients, such as grains, oilseed mill products, and meat products.

3112 GRAIN AND OILSEED MILLING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

-
1. milling flour or meal from grains or vegetables;
 2. preparing flour mixes or doughs from flour milled in the same establishment;
 3. milling, cleaning, and polishing rice; and
 4. malt from barley, rye, or other grains.

31121 FLOUR MILLING AND MALT MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. milling flour or meal from grains or vegetables;
2. preparing flour mixes or doughs from flour milled in the same establishment;
3. milling, cleaning, and polishing rice; and
4. malt from barley, rye, or other grains.

311211 FLOUR MILLING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. milling flour or meal from grains (except rice) or vegetables and/or
2. milling flour and preparing flour mixes or doughs.

311212 RICE MILLING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. milling rice;
2. cleaning and polishing rice; or
3. milling, cleaning, and polishing rice.

The establishments in this industry may package the rice they mill with other ingredients.

311213 MALT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing malt from barley, rye, or other grains.

31122 STARCH AND VEGETABLE FATS AND OILS MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. wet milling corn and vegetables;
2. crushing oilseeds and tree nuts;
3. refining and/or blending vegetable oils;
4. shortening and margarine; and
5. blending purchased animal fats with vegetable fats.

311221 WET CORN MILLING

This U.S. industry comprises establishments primarily engaged in wet milling corn and other vegetables (except to make ethyl alcohol). Examples of products made in these establishments are corn sweeteners, such as glucose, dextrose, and fructose; corn oil; and starches (except laundry).

311222 SOYBEAN PROCESSING

This U.S. industry comprises establishments engaged in crushing soybeans. Examples of products produced in these establishments are soybean oil, soybean cake and meal, and soybean protein isolates and concentrates.

311223 OTHER OILSEED PROCESSING

This U.S. industry comprises establishments engaged in crushing oilseeds (except soybeans) and tree nuts, such as cottonseeds, linseeds, peanuts, and sunflower seeds.

311225 FATS AND OILS REFINING AND BLENDING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. shortening and margarine from purchased fats and oils;
2. refining and/or blending vegetable, oilseed, and tree nut oils from purchased oils; and
3. blending purchased animal fats with purchased vegetable fats.

31123 BREAKFAST CEREAL MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing breakfast cereal foods.

311230 BREAKFAST CEREAL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing breakfast cereal foods.

3113 SUGAR AND CONFECTIONERY PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. process agricultural inputs, such as sugarcane, beet, and cacao, to give rise to a new product (sugar or chocolate), and
2. those that begin with sugar and chocolate and process these further.

31131 SUGAR MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing raw sugar, liquid sugar, and refined sugar from sugarcane, raw cane sugar and sugarbeets.

311311 SUGARCANE MILLS

This U.S. industry comprises establishments primarily engaged in processing sugarcane.

311312 CANE SUGAR REFINING

This U.S. industry comprises establishments primarily engaged in refining cane sugar from raw cane sugar.

311313 BEET SUGAR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing refined beet sugar from sugarbeets.

31132 CHOCOLATE AND CONFECTIONERY MANUFACTURING FROM CACAO BEANS

This industry comprises establishments primarily engaged in shelling, roasting, and grinding cacao beans and making chocolate cacao products and chocolate confectioneries.

311320 CHOCOLATE AND CONFECTIONERY MANUFACTURING FROM CACAO BEANS

This U.S. industry comprises establishments primarily engaged in shelling, roasting, and grinding cacao beans and making chocolate cacao products and chocolate confectioneries.

31133 CONFECTIONERY MANUFACTURING FROM PURCHASED CHOCOLATE

This industry comprises establishments primarily engaged in manufacturing chocolate confectioneries from chocolate produced elsewhere. Included in this industry are establishments primarily engaged in retailing chocolate confectionery products not for immediate consumption made on the premises from chocolate made elsewhere.

311330 CONFECTIONERY MANUFACTURING FROM PURCHASED CHOCOLATE

This U.S. industry comprises establishments primarily engaged in manufacturing chocolate confectioneries from chocolate produced elsewhere. Included in this industry are establishments primarily engaged in retailing chocolate confectionery products not for immediate consumption made on the premises from chocolate made elsewhere.

31134 NONCHOCOLATE CONFECTIONERY MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing nonchocolate confectioneries. Included in this industry are establishments primarily engaged in retailing nonchocolate confectionery products not for immediate consumption made on the premises.

311340 NONCHOCOLATE CONFECTIONERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing nonchocolate confectioneries. Included in this industry are establishments primarily engaged in retailing nonchocolate confectionery products not for immediate consumption made on the premises.

3114 FRUIT AND VEGETABLE PRESERVING AND SPECIALTY FOOD MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. frozen fruit, frozen juices, frozen vegetables, and frozen specialty foods and
2. canned, pickled, and dried fruits, vegetables, and specialty foods.

Both types begin their production process with inputs of vegetable or animal origin.

31141 FROZEN FOOD MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing frozen fruit, frozen juices, frozen vegetables, and frozen specialty foods (except seafood), such as frozen dinners, entrees, and side dishes; frozen pizza; frozen whipped toppings; and frozen waffles, pancakes, and french toast.

311411 FROZEN FRUIT, JUICE, AND VEGETABLE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing frozen fruits; frozen vegetables; and frozen fruit juices, ades, drinks, cocktail mixes and concentrates.

311412 FROZEN SPECIALTY FOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing frozen specialty foods (except seafood), such as frozen dinners, entrees, and side dishes; frozen pizza; frozen whipped topping; and frozen waffles, pancakes, and french toast.

31142 FRUIT AND VEGETABLE CANNING, PICKLING, AND DRYING

This industry comprises establishments primarily engaged in manufacturing canned, pickled, and dried fruits, vegetables, and specialty foods. Establishments in this industry may package the dried or dehydrated ingredients they make with other purchased ingredients. Examples of products made by these establishments are canned juices; canned baby foods; canned soups (except seafood); canned dry beans; canned tomato-based sauces, such as catsup, salsa, chili, spaghetti, barbeque, and tomato paste, pickles, relishes, jams and jellies, dried soup mixes and bullions, and sauerkraut.

311421 FRUIT AND VEGETABLE CANNING

This U.S. industry comprises establishments primarily engaged in manufacturing canned, pickled, and brined fruits and vegetables. Examples of products made in these establishments are canned juices; canned jams and jellies; canned tomato-based sauces, such as catsup, salsa, chili, spaghetti, barbeque, and tomato paste; pickles, relishes, and sauerkraut.

311422 SPECIALTY CANNING

This U.S. industry comprises establishments primarily engaged in manufacturing canned specialty foods. Examples of products made in these establishments are canned baby food, canned baked beans, canned soups (except seafood), canned spaghetti, and other canned nationality foods.

311423 DRIED AND DEHYDRATED FOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. drying (including freeze-dried) and/or dehydrating fruits, vegetables, and soup mixes and bouillon and/or
2. drying and/or dehydrating ingredients and packaging them with other purchased ingredients, such as rice and dry pasta.

3115 DAIRY PRODUCT MANUFACTURING

This industry group comprises establishments that manufacture dairy products from raw milk, processed milk, and dairy substitutes.

31151 DAIRY PRODUCT (EXCEPT FROZEN) MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. dairy products (except frozen) from raw milk and/or processed milk products;
2. dairy substitutes (except frozen) from soybeans and other nondairy substances; and
3. dry, condensed, concentrated, and evaporated dairy and dairy substitute products.

311511 FLUID MILK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. processed milk products, such as pasteurized milk or cream and sour cream and/or
2. fluid milk dairy substitutes from soybeans and other nondairy substances.

311512 CREAMERY BUTTER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing creamery butter from milk and/or processed milk products.

311513 CHEESE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. cheese products (except cottage cheese) from raw milk and/or processed milk products and/or
2. cheese substitutes from soybean and other nondairy substances.

311514 DRY, CONDENSED, AND EVAPORATED DAIRY PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing dry, condensed, and evaporated milk and dairy substitute products.

31152 ICE CREAM AND FROZEN DESSERT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing ice cream, frozen yogurts, frozen ices, sherbets, frozen tofu, and other frozen desserts (except bakery products).

311520 ICE CREAM AND FROZEN DESSERT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing ice cream, frozen yogurts, frozen ices, sherbets, frozen tofu, and other frozen desserts (except bakery products).

3116 ANIMAL SLAUGHTERING AND PROCESSING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. slaughtering animals;
2. preparing processed meats and meat byproducts; and
3. rendering and/or refining animal fat, bones, and meat scraps.

This industry includes establishments primarily engaged in assembly cutting and packing of meats (i.e., boxed meats) from purchased carcasses.

31161 ANIMAL SLAUGHTERING AND PROCESSING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. slaughtering animals;
2. preparing processed meats and meat byproducts; and
3. rendering and/or refining animal fat, bones, and meat scraps.

This industry includes establishments primarily engaged in assembly cutting and packing of meats (i.e., boxed meats) from purchased carcasses.

311611 ANIMAL (EXCEPT POULTRY) SLAUGHTERING

This U.S. industry comprises establishments primarily engaged in slaughtering animals (except poultry and small game). Establishments that slaughter and prepare meats are included in this industry.

311612 MEAT PROCESSED FROM CARCASSES

This U.S. industry comprises establishments primarily engaged in processing or preserving meat and meat byproducts (except poultry and small game) from purchased meats. This industry includes establishments primarily engaged in assembly cutting and packing of meats (i.e., boxed meats) from purchased meats.

311613 RENDERING AND MEAT BYPRODUCT PROCESSING

This U.S. industry comprises establishments primarily engaged in rendering animal fat, bones, and meat scraps.

311615 POULTRY PROCESSING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. slaughtering poultry and small game and/or
2. preparing processed poultry and small game meat and meat byproducts.

3117 SEAFOOD PRODUCT PREPARATION AND PACKAGING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. canning seafood (including soup);
2. smoking, salting, and drying seafood;
3. eviscerating fresh fish by removing heads, fins, scales, bones, and entrails;
4. shucking and packing fresh shellfish;
5. processing marine fats and oils; and
6. freezing seafood.

Establishments known as “floating factory ships” that are engaged in the gathering and processing of seafood into canned seafood products are also included in this industry group.

31171 SEAFOOD PRODUCT PREPARATION AND PACKAGING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. canning seafood (including soup);
2. smoking, salting, and drying seafood;
3. eviscerating fresh fish by removing heads, fins, scales, bones, and entrails;
4. shucking and packing fresh shellfish;
5. processing marine fats and oils; and
6. freezing seafood.

Establishments known as “floating factory ships” that are engaged in the gathering and processing of seafood into canned seafood products are also included in this industry.

311711 SEAFOOD CANNING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. canning seafood (including soup) and marine fats and oils and/or

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2. smoking, salting, and drying seafood.

Establishments known as “floating factory ships” that are engaged in the gathering and processing of seafood into canned seafood products are also included in this industry.

311712 FRESH AND FROZEN SEAFOOD PROCESSING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. eviscerating fresh fish by removing heads, fins, scales, bones, and entrails;
2. shucking and packing fresh shellfish;
3. frozen seafood; and
4. processing fresh and frozen marine fats and oils.

3118 BAKERIES AND TORTILLA MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. bread and bakery products;
2. cookies, crackers, and pastas; and
3. tortillas.

31181 BREAD AND BAKERY PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing fresh and frozen bread and other bakery products.

311811 RETAIL BAKERIES

This U.S. industry comprises establishments primarily engaged in retailing bread and other bakery products not for immediate consumption made on the premises from flour, not from prepared dough.

311812 COMMERCIAL BAKERIES

This U.S. industry comprises establishments primarily engaged in manufacturing fresh and frozen bread and bread-type rolls and other fresh bakery (except cookies and crackers) products.

311813 FROZEN CAKES, PIES, AND OTHER PASTRIES MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing frozen bakery products (except bread), such as cakes, pies, and doughnuts.

31182 COOKIE, CRACKER, AND PASTA MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. cookies and crackers;
2. preparing flour and dough mixes and dough from flour ground elsewhere; and
3. dry pasta.

The establishments in this industry may package the dry pasta they manufacture with other ingredients.

311821 COOKIE AND CRACKER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing cookies, crackers, and other products, such as ice cream cones.

311822 FLOUR MIXES AND DOUGH MANUFACTURING FROM PURCHASED FLOUR

This U.S. industry comprises establishments primarily engaged in manufacturing prepared flour mixes or dough mixes from flour ground elsewhere.

311823 DRY PASTA MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing dry pasta. The establishments in this industry may package the dry pasta they manufacture with other ingredients.

31183 TORTILLA MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing tortillas.

311830 TORTILLA MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing tortillas.

3119 OTHER FOOD MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing food (except animal food; grain and oilseed milling; sugar and confectionery products; preserved fruit, vegetable, and specialty foods; dairy products; meat products; seafood products; and bakeries and tortillas). The industry group includes industries with different productive processes, such as snack food manufacturing; coffee and tea manufacturing; concentrate, syrup, condiment, and spice manufacturing; and, in general, an entire range of other miscellaneous food product manufacturing.

31191 SNACK FOOD MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. salting, roasting, drying, cooking, or canning nuts;
2. processing grains or seeds into snacks;
3. peanut butter; and
4. potato chips, corn chips, popped popcorn, pretzels (except soft), pork rinds, and similar snacks.

311911 ROASTED NUTS AND PEANUT BUTTER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. salting, roasting, drying, cooking, or canning nuts;
2. processing grains or seeds into snacks; and
3. peanut butter.

311919 OTHER SNACK FOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing snack foods (except roasted nuts and peanut butter).

31192 COFFEE AND TEA MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. roasting coffee;
2. coffee and tea concentrates (including instant and freeze-dried);
3. blending tea;
4. herbal tea; and
5. coffee extracts, flavorings, and syrups.

311920 COFFEE AND TEA MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. roasting coffee;
2. coffee and tea concentrates (including instant and freeze-dried);
3. blending tea;
4. herbal tea; and
5. coffee extracts, flavorings, and syrups.

31193 FLAVORING SYRUP AND CONCENTRATE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing flavoring syrup drink concentrates and related products for soda fountain use or for the manufacture of soft drinks.

311930 FLAVORING SYRUP AND CONCENTRATE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing flavoring syrup drink concentrates and related products for soda fountain use or for the manufacture of soft drinks.

31194 SEASONING AND DRESSING MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. dressings and sauces, such as mayonnaise, salad dressing, vinegar, mustard, horseradish, soy sauce, tarter sauce, Worcestershire sauce, and other prepared sauces (except tomato-based and gravies);
2. spices, table salt, seasonings, and flavoring extracts (except coffee and meat), and natural food colorings; and
3. dry mix food preparations, such as salad dressing mixes, gravy and sauce mixes, frosting mixes, and other dry mix preparations.

311941 MAYONNAISE, DRESSING, AND OTHER PREPARED SAUCE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing mayonnaise, salad dressing, vinegar, mustard, horseradish, soy sauce, tarter sauce, Worcestershire sauce, and other prepared sauces (except tomato-based and gravy).

311942 SPICE AND EXTRACT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

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1. spices, table salt, seasonings, flavoring extracts (except coffee and meat), and natural food colorings and/or
 2. dry mix food preparations, such as salad dressing mixes, gravy and sauce mixes, frosting mixes, and other dry mix preparations.

31199 ALL OTHER FOOD MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing food (except animal food; grain and oilseed milling; sugar and confectionery products; preserved fruits, vegetables, and specialties; dairy products; meat products; seafood products; bakeries and tortillas; snack foods; coffee and tea; flavoring syrups and concentrates; seasonings; and dressings). Included in this industry are establishments primarily engaged in mixing purchased dried and/or dehydrated ingredients including those mixing purchased dried and/or dehydrated ingredients for soup mixes and bouillon.

311991 PERISHABLE PREPARED FOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing perishable prepared foods, such as salads, sandwiches, prepared meals, fresh pizza, fresh pasta, and peeled or cut vegetables.

311999 ALL OTHER MISCELLANEOUS FOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing food (except animal food; grain and oilseed milling; sugar and confectionery products; preserved fruits, vegetables, and specialties; dairy products; meat products; seafood products; bakery and tortillas products; snack foods; coffee and tea; flavoring syrups and concentrates; seasonings and dressings; and perishable prepared food). Included in this industry are establishments primarily engaged in mixing purchased dried and/or dehydrated ingredients including those mixing purchased dried and/or dehydrated ingredients for soup mixes and bouillon.

312 BEVERAGE AND TOBACCO PRODUCT MANUFACTURING

Industries in the Beverage and Tobacco Product Manufacturing subsector manufacture beverages and tobacco products. The industry group, Beverage Manufacturing, includes three types of establishments:

1. those that manufacture nonalcoholic beverages;
2. those that manufacture alcoholic beverages through the fermentation process; and
3. those that produce distilled alcoholic beverages.

Ice manufacturing, while not a beverage, is included with nonalcoholic beverage manufacturing because it uses the same production process as water purification.

In the case of activities related to the manufacture of beverages, the structure follows the defined productive processes. Brandy, a distilled beverage, was not placed under distillery product manufacturing, but rather under the North American Industry Classification System (NAICS) class for winery product manufacturing since the productive process used in the manufacturing of alcoholic grape-based beverages produces both wines (fermented beverage) and brandies (distilled beverage).

The industry group, Tobacco Manufacturing, includes two types of establishments:

1. those engaged in redrying and stemming tobacco and
2. those that manufacture tobacco products, such as cigarettes and cigars.

3121 BEVERAGE MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing soft drinks, ice, and bottled water; breweries; wineries; and/or distilleries.

31211 SOFT DRINK AND ICE MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. soft drinks;
2. ice; and
3. purifying and bottling water.

312111 SOFT DRINK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing soft drinks and artificially carbonated waters.

312112 BOTTLED WATER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in purifying and bottling water (including naturally carbonated).

312113 ICE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing ice.

31212 BREWERIES

This industry comprises establishments primarily engaged in brewing beer, ale, malt liquors, and nonalcoholic beer.

312120 BREWERIES

This U.S. industry comprises establishments primarily engaged in brewing beer, ale, malt liquors, and nonalcoholic beer.

31213 WINERIES

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. wine and brandies from grown grapes;
2. wine and brandies from grapes and other fruits grown elsewhere; and
3. blending wines and brandies.

312130 WINERIES

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. wine and brandies from grown grapes;
2. wine and brandies from grapes and other fruits grown elsewhere; and
3. blending wines and brandies.

31214 DISTILLERIES

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

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1. distilling potable liquors (except brandies);
 2. distilling and blending liquors; and
 3. blending and mixing liquors and other ingredients.

312140 DISTILLERIES

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. distilling potable liquors (except brandies);
2. distilling and blending liquors; and
3. blending and mixing liquors and other ingredients.

3122 TOBACCO MANUFACTURING

This industry group comprises establishments primarily engaged in the stemming and redrying of tobacco, and in the manufacturing of tobacco products.

31221 TOBACCO STEMMING AND REDRYING

This industry comprises establishments primarily engaged in the stemming and redrying of tobacco.

312210 TOBACCO STEMMING AND REDRYING

This U.S. industry comprises establishments primarily engaged in the stemming and redrying of tobacco.

31222 TOBACCO PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing cigarettes, cigars, smoking and chewing tobacco, and reconstituted tobacco.

312221 CIGARETTE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing cigarettes.

312229 OTHER TOBACCO PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing tobacco products (except cigarettes).

313 TEXTILE MILLS

Industries in the Textile Mills subsector group establishments that transform a basic fiber (natural or synthetic) into a product, such as yarn or fabric, that is further manufactured into usable items, such as apparel, sheets, towels, and textile bags for individual or industrial consumption. The further manufacturing may be performed in the same establishment and classified in this subsector, or it may be performed at a separate establishment and be classified elsewhere in manufacturing.

The main processes in this subsector include preparation and spinning of fiber, knitting or weaving of fabric, and the finishing of the textile. The North American Industry Classification System (NAICS) structure follows and captures this process flow. Major industries in this flow, such as preparation of fibers, weaving of fabric, knitting of fabric, and fiber and fabric finishing, are uniquely identified. Texturizing, throwing, twisting, and winding of yarn contains aspects of both fiber preparation and fiber finishing and is classified with preparation of fibers rather than with finishing of fiber.

NAICS separates the manufacturing of primary textiles and the manufacturing of textile products (except apparel) when the textile product is produced from purchased primary textiles, such as fabric. The manufacturing of textile products (except apparel) from purchased fabric is classified in Subsector 314, Textile Product Mills, and apparel from purchased fabric is classified in Subsector 315, Apparel Manufacturing.

Excluded from this subsector are establishments that weave or knit fabric and make garments. These establishments are included in Subsector 315, Apparel Manufacturing.

3131 FIBER, YARN, AND THREAD MILLS

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. spinning yarn;
2. thread of any fiber;
3. texturizing, throwing, twisting, and winding purchased yarn or manmade fiber filaments; and
4. producing hemp yarn and further processing into rope or bags.

31311 FIBER, YARN, AND THREAD MILLS

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. spinning yarn;
2. thread of any fiber;
3. texturizing, throwing, twisting, and winding purchased yarn or manmade fiber filaments; and
4. producing hemp yarn and further processing into rope or bags.

313111 YARN SPINNING MILLS

This U.S. industry comprises establishments primarily engaged in spinning yarn from any fiber and/or producing hemp yarn and further processing into rope or bags.

313112 YARN TEXTURIZING, THROWING, AND TWISTING MILLS

This U.S. industry comprises establishments primarily engaged in texturizing, throwing, twisting, spooling, or winding purchased yarns or manmade fiber filaments.

313113 THREAD MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing thread (e.g., sewing, hand-knitting, crochet) of all fibers.

3132 FABRIC MILLS

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. weaving broadwoven fabrics and felts;
2. weaving or braiding narrow fabrics and schiffli machine embroideries;
3. nonwoven fabrics and felts; and
4. milling knit fabrics.

31321 BROADWOVEN FABRIC MILLS

This industry comprises establishments primarily engaged in weaving broadwoven fabrics and felts (except tire fabrics and rugs). Establishments in this industry may weave only, weave and finish, or weave, finish, and further fabricate fabric products.

313210 BROADWOVEN FABRIC MILLS

This U.S. industry comprises establishments primarily engaged in weaving broadwoven fabrics and felts (except tire fabrics and rugs). Establishments in this industry may weave only, weave and finish, or weave, finish, and further fabricate fabric products.

31322 NARROW FABRIC MILLS AND SCHIFFLI MACHINE EMBROIDERY

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. weaving or braiding narrow fabrics;
2. Schiffl machine embroideries; and
3. making fabric-covered elastic yarn and thread.

313221 NARROW FABRIC MILLS

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. weaving or braiding narrow fabrics in their final form or initially made in wider widths that are specially constructed for narrower widths and/or
2. making fabric-covered elastic yarn and thread.

Establishments in this industry may weave only; weave and finish; or weave, finish, and further fabricate fabric products.

313222 SCHIFFLI MACHINE EMBROIDERY

This U.S. industry comprises establishments primarily engaged in manufacturing Schiffl machine embroideries.

31323 NONWOVEN FABRIC MILLS

This industry comprises establishments primarily engaged in manufacturing nonwoven fabrics and felts. Processes used include bonding and/or interlocking fibers by mechanical, chemical, thermal, or solvent means, or by combinations thereof.

313230 NONWOVEN FABRIC MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing nonwoven fabrics and felts. Processes used include bonding and/or interlocking fibers by mechanical, chemical, thermal, or solvent means, or by combinations thereof.

31324 KNIT FABRIC MILLS

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. knitting weft (i.e., circular) and warp (i.e., flat) fabric;
2. knitting and finishing weft and warp fabric;
3. lace; and

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4. dyeing and finishing lace and lace goods. Establishments in this industry may knit only; knit and finish; or knit, finish, and further fabricate fabric products (except apparel).

313241 WEFT KNIT FABRIC MILLS

This U.S. industry comprises establishments primarily engaged in knitting weft (i.e., circular) fabric or knitting and finishing weft fabric. Establishments in this industry may knit only; knit and finish; or knit, finish, and further fabricate fabric products (except apparel).

313249 OTHER KNIT FABRIC AND LACE MILLS

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. knitting warp (i.e., flat) fabric;
2. knitting and finishing warp fabric;
3. lace; or
4. dyeing or finishing lace and lace goods.

Establishments in this industry may knit only; knit and finish; or knit, finish, and further fabricate fabric products (except apparel).

3133 TEXTILE AND FABRIC FINISHING AND FABRIC COATING MILLS

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. finishing of textiles, fabrics, and apparel and
2. coating, laminating, varnishing, waxing, and rubberizing textiles and apparel.

31331 TEXTILE AND FABRIC FINISHING MILLS

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. finishing of textiles, fabrics, and apparel and
2. converters who buy fabric goods in the grey, have them finished on contract, and sell at wholesale. Finishing operations include bleaching, dyeing, printing (e.g., roller, screen, flock, plisse), stonewashing, and other mechanical finishing, such as preshrinking, shrinking, sponging, calendering, mercerizing and napping; as well as cleaning, scouring, and the preparation of natural fibers and raw stock.

313311 BROADWOVEN FABRIC FINISHING MILLS

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. finishing of broadwoven fabrics and
2. converters who buy broadwoven fabrics in the grey, have them finished on contract, and sell at wholesale.

313312 TEXTILE AND FABRIC FINISHING (EXCEPT BROADWOVEN FABRIC) MILLS

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. dyeing, bleaching, printing, and other finishing of textiles, apparel, and fabrics (except broadwoven) and

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2. converters who buy fabrics (except broadwoven) in the grey, have them finished on contract, and sell at wholesale. Finishing operations include bleaching, dyeing, printing (e.g., roller, screen, flock, plisse), stonewashing, and other mechanical finishing, such as preshrinking, shrinking, sponging, calendaring, mercerizing and napping; as well as cleaning, scouring, and the preparation of natural fibers and raw stock.

31332 FABRIC COATING MILLS

This industry comprises establishments primarily engaged in coating, laminating, varnishing, waxing, and rubberizing textiles and apparel.

313320 FABRIC COATING MILLS

This U.S. industry comprises establishments primarily engaged in coating, laminating, varnishing, waxing, and rubberizing textiles and apparel.

314 TEXTILE PRODUCT MILLS

Industries in the Textile Product Mills subsector group establishments that make textile products (except apparel). With a few exceptions, processes used in these industries are generally cut and sew (i.e., purchasing fabric and cutting and sewing to make nonapparel textile products, such as sheets and towels).

3141 TEXTILE FURNISHINGS MILLS

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. carpets and rugs and
2. curtains and linens.

31411 CARPET AND RUG MILLS

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. woven, tufted, and other carpets and rugs, such as art squares, floor mattings, needlepunch carpeting, and door mats and mattings, from textile materials or from twisted paper, grasses, reeds, sisal, jute, or rags and/or
2. finishing carpets and rugs.

314110 CARPET AND RUG MILLS

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. woven, tufted, and other carpets and rugs, such as art squares, floor mattings, needlepunch carpeting, and door mats and mattings, from textile materials or from twisted paper, grasses, reeds, sisal, jute, or rags and/or
2. finishing carpets and rugs.

31412 CURTAIN AND LINEN MILLS

This industry comprises establishments primarily engaged in manufacturing household textile products, such as curtains, draperies, linens, bedspreads, sheets, tablecloths, towels, and shower curtains, from purchased materials.

314121 CURTAIN AND DRAPERY MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing window curtains and draperies from purchased fabrics or sheet goods. The curtains and draperies may be made on a stock or custom basis for sale to individual retail customers.

314129 OTHER HOUSEHOLD TEXTILE PRODUCT MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing household textile products (except window curtains and draperies), such as bedspreads, sheets, tablecloths, towels, and shower curtains, from purchased materials.

3149 OTHER TEXTILE PRODUCT MILLS

This industry group comprises establishments primarily engaged in making textile products, (except carpets and rugs, curtains and draperies, and other household textile products) from purchased materials.

31491 TEXTILE BAG AND CANVAS MILLS

This industry comprises establishments primarily engaged in manufacturing textile bags, awnings, tents, and related products from purchased textile fabrics.

314911 TEXTILE BAG MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing bags from purchased textile fabrics or yarns.

314912 CANVAS AND RELATED PRODUCT MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing canvas and canvas-like products, such as awnings, sails, tarpaulins, and tents, from purchased fabrics.

31499 ALL OTHER TEXTILE PRODUCT MILLS

This industry comprises establishments primarily engaged in manufacturing nonapparel textile products (except carpet, rugs, curtains, linens, bags, and canvas products) from purchased materials.

314991 ROPE, CORDAGE, AND TWINE MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing rope, cable, cordage, twine, and related products from all materials (e.g., abaca, sisal, henequen, hemp, cotton, paper, jute, flax, manmade fibers including glass).

314992 TIRE CORD AND TIRE FABRIC MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing cord and fabric of polyester, rayon, cotton, glass, steel, or other materials for use in reinforcing rubber tires, industrial belting, and similar uses.

314999 ALL OTHER MISCELLANEOUS TEXTILE PRODUCT MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing textile products (except carpets and rugs; curtains and linens; textile bags and canvas products; rope, cordage, and twine; and tire cords and tire fabrics) from purchased materials.

315 APPAREL MANUFACTURING

Industries in the Apparel Manufacturing subsector group establishments with two distinct manufacturing processes:

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1. cut and sew (i.e., purchasing fabric and cutting and sewing to make a garment), and
 2. the manufacture of garments in establishments that first knit fabric and then cut and sew the fabric into a garment.

The Apparel Manufacturing subsector includes a diverse range of establishments manufacturing full lines of ready-to-wear apparel and custom apparel: apparel contractors, performing cutting or sewing operations on materials owned by others; jobbers performing entrepreneurial functions involved in apparel manufacture; and tailors, manufacturing custom garments for individual clients are all included. Knitting, when done alone, is classified in the Textile Mills subsector, but when knitting is combined with the production of complete garments, the activity is classified in Apparel Manufacturing.

3151 APPAREL KNITTING MILLS

This industry group comprises establishments primarily engaged in knitting apparel or knitting fabric and then manufacturing apparel. This industry group includes jobbers performing entrepreneurial functions involved in knitting apparel and accessories. Knitting fabric, without manufacturing apparel, is classified in Subsector 313, Textile Mills.

31511 HOSIERY AND SOCK MILLS

This industry comprises establishments primarily engaged in knitting or knitting and finishing hosiery and socks.

315111 SHEER HOSIERY MILLS

This U.S. industry comprises establishments primarily engaged in knitting or knitting and finishing women's, misses', and girls' full-length and knee-length sheer hosiery (except socks).

315119 OTHER HOSIERY AND SOCK MILLS

This U.S. industry comprises establishments primarily engaged in knitting or knitting and finishing hosiery (except women's, misses', and girls' sheer hosiery).

31519 OTHER APPAREL KNITTING MILLS

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. knitting underwear, outerwear, and/or nightwear;
2. knitting fabric and manufacturing underwear, outerwear, and/or nightwear; or
3. knitting, manufacturing, and finishing knit underwear, outerwear, and/or nightwear.

315191 OUTERWEAR KNITTING MILLS

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. knitting outerwear;
2. knitting fabric and manufacturing outerwear; and
3. knitting, manufacturing, and finishing knit outerwear.

Examples of products made in knit outerwear mills are shirts, shorts, sweat suits, sweaters, gloves, and pants.

315192 UNDERWEAR AND NIGHTWEAR KNITTING MILLS

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

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1. knitting underwear and nightwear;
 2. knitting fabric and manufacturing underwear and nightwear; or
 3. knitting, manufacturing, and finishing knit underwear and nightwear.

Examples of products produced in underwear and nightwear knitting mills are briefs, underwear T-shirts, pajamas, nightshirts, foundation garments, and panties.

3152 CUT AND SEW APPAREL MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing cut and sew apparel from woven fabric or purchased knit fabric. Included in this industry group is a diverse range of establishments manufacturing full lines of ready-to-wear apparel and custom apparel: apparel contractors, performing cutting or sewing operations on materials owned by others; jobbers performing entrepreneurial functions involved in apparel manufacture; and tailors, manufacturing custom garments for individual clients. Establishments weaving or knitting fabric, without manufacturing apparel, are classified in Subsector 313, Textile Mills.

31521 CUT AND SEW APPAREL CONTRACTORS

This industry comprises establishments commonly referred to as contractors primarily engaged in one or more of the following manufacturing activities:

1. cutting materials owned by others for apparel and accessories and/or
2. sewing materials owned by others for apparel and accessories.

315211 MEN'S AND BOYS' CUT AND SEW APPAREL CONTRACTORS

This U.S. industry comprises establishments commonly referred to as contractors primarily engaged in one or more of the following manufacturing activities:

1. cutting materials owned by others for men's and boys' apparel and/or
2. sewing materials owned by others for men's and boys' apparel.

315212 WOMEN'S, GIRLS', AND INFANTS' CUT AND SEW APPAREL CONTRACTORS

This U.S. industry comprises establishments commonly referred to as contractors primarily engaged in one or more of the following manufacturing activities:

1. cutting materials owned by others for women's, girls', and infants' apparel and accessories and/or
2. sewing materials owned by others for women's, girls', and infants' apparel and accessories.

31522 MEN'S AND BOYS' CUT AND SEW APPAREL MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing men's and boys' cut and sew apparel from purchased fabric. Men's and boys' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

315221 MEN'S AND BOYS' CUT AND SEW UNDERWEAR AND NIGHTWEAR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' underwear and nightwear from purchased fabric. Men's and boys' underwear and nightwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are briefs, bathrobes, underwear T-shirts and shorts, nightshirts, and pajamas.

315222 MEN'S AND BOYS' CUT AND SEW SUIT, COAT, AND OVERCOAT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' suits, overcoats, sport coats, tuxedos, dress uniforms, and other tailored apparel (except fur and leather) from purchased fabric. Men's and boys' suit, coat, and overcoat jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

315223 MEN'S AND BOYS' CUT AND SEW SHIRT (EXCEPT WORK SHIRT) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' outerwear shirts from purchased fabric. Men's and boys' shirt (except work shirt) jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Unisex outerwear shirts, such as T-shirts and sweatshirts that are sized without specific reference to gender (i.e., adult S, M, L, XL) are included in this industry.

315224 MEN'S AND BOYS' CUT AND SEW TROUSER, SLACK, AND JEAN MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' jeans, dungarees, and other separate trousers and slacks (except work pants) from purchased fabric. Men's and boys' trouser, slack, and jean jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

315225 MEN'S AND BOYS' CUT AND SEW WORK CLOTHING MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' work shirts, work pants (excluding jeans and dungarees), other work clothing, and washable service apparel from purchased fabric. Men's and boys' work clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are washable service apparel, laboratory coats, work shirts, work pants (except jeans and dungarees), and hospital apparel.

315228 MEN'S AND BOYS' CUT AND SEW OTHER OUTERWEAR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' cut and sew outerwear from purchased fabric (except underwear, nightwear, shirts, suits, overcoats and tailored coats, separate trousers and slacks, and work clothing). Men's and boys' other outerwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Unisex sweatpants and similar garments that are sized without specific reference to gender (i.e., adult S, M, L, XL) are also included in this industry. Examples of products made by these establishments are athletic clothing (except athletic uniforms), bathing suits, down coats, outerwear shorts, windbreakers and jackets, and jogging suits.

31523 WOMEN'S AND GIRLS' CUT AND SEW APPAREL MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing women's and girls' apparel from purchased fabric. Women's and girls' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

315231 WOMEN'S AND GIRLS' CUT AND SEW LINGERIE, LOUNGEWEAR, AND NIGHTWEAR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' bras, girdles, and other underwear; lingerie; loungewear; and nightwear from purchased fabric. Women's and girls' lingerie, loungewear, and nightwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are bathrobes, foundation garments, nightgowns, pajamas, panties, and slips.

315232 WOMEN'S AND GIRLS' CUT AND SEW BLOUSE AND SHIRT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' blouses and shirts from purchased fabric. Women's and girls' blouse and shirt jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

315233 WOMEN'S AND GIRLS' CUT AND SEW DRESS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' dresses from purchased fabric. Women's and girls' dress jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

315234 WOMEN'S AND GIRLS' CUT AND SEW SUIT, COAT, TAILORED JACKET, AND SKIRT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' suits, pantsuits, skirts, tailored jackets, vests, raincoats, and other tailored coats, (except fur and leather coats) from purchased fabric. Women's and girls' suit, coat, tailored jacket, and skirt jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

315239 WOMEN'S AND GIRLS' CUT AND SEW OTHER OUTERWEAR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' cut and sew apparel from purchased fabric (except underwear, lingerie, nightwear, blouses, shirts, dresses, suits, tailored coats, tailored jackets, and skirts). Women's and girls' other outerwear clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are bathing suits, down coats, sweaters, jogging suits, outerwear pants and shorts, and windbreakers.

31529 OTHER CUT AND SEW APPAREL MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing cut and sew apparel from purchased fabric (except men's, boys', women's, and girls' apparel). This industry includes establishments manufacturing apparel, such as fur apparel, leather apparel, infants' apparel, costumes, and clerical vestments.

315291 INFANTS' CUT AND SEW APPAREL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing infants' dresses, blouses, shirts, and all other infants' wear from purchased fabric. Infants' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. For the purposes of classification, the term "infants' apparel" includes apparel for young children of an age not exceeding 24 months.

315292 FUR AND LEATHER APPAREL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew fur and leather apparel, and sheep-lined clothing. Fur and leather apparel jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

315299 ALL OTHER CUT AND SEW APPAREL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew apparel from purchased fabric (except cut and sew apparel contractors; men's and boys' cut and sew underwear, nightwear, suits, coats, shirts, trousers, work clothing, and other outerwear; women's and girls' lingerie, blouses, shirts, dresses, suits, coats, and other outerwear; infants' apparel; and fur and leather apparel). Clothing jobbers for these products, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Examples of products made by these establishments are team athletic uniforms, band uniforms, academic caps and gowns, clerical vestments, and costumes.

3159 APPAREL ACCESSORIES AND OTHER APPAREL MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing apparel accessories and other apparel (except apparel knitting mills, apparel contractors, men's and boys' cut and sew apparel, women's and girls' cut and sew apparel, infants' cut and sew apparel, fur and leather apparel, and all other cut and sew apparel). This industry group includes jobbers performing entrepreneurial functions involved in manufacturing apparel accessories.

31599 APPAREL ACCESSORIES AND OTHER APPAREL MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing apparel and accessories (except apparel knitting mills, cut and sew apparel contractors, men's and boys' cut and sew apparel, women's and girls' cut and sew apparel, and other cut and sew apparel). Jobbers, who perform entrepreneurial functions involved in apparel accessories manufacture, including buying raw materials, designing and preparing samples, arranging for apparel accessories to be made from their materials, and marketing finished apparel accessories, are included. Examples of products made by these establishments are belts, caps, gloves (except medical, sporting, safety), hats, and neckties.

315991 HAT, CAP, AND MILLINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew hats, caps, millinery, and hat bodies from purchased fabric. Jobbers, who perform entrepreneurial functions involved in hat, cap, and millinery manufacture, including buying raw materials, designing and preparing samples, arranging for hats, caps, and millinery to be made from their materials, and marketing finished hats, caps, and millinery, are included.

315992 GLOVE AND MITTEN MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing cut and sew gloves (except rubber, metal, and athletic gloves) and mittens from purchased fabric, fur, leather, or from combinations of fabric, fur, or leather. Jobbers, who perform entrepreneurial functions involved in glove and mitten manufacture, including buying raw materials, designing and preparing samples, arranging for gloves and mittens to be made from their materials, and marketing finished gloves and mittens, are included.

315993 MEN'S AND BOYS' NECKWEAR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' cut and sew neckties, scarves, and mufflers from purchased fabric, leather, or from combinations of leather and fabric. Men's and boys' neckwear jobbers, who perform entrepreneurial functions involved in neckwear manufacture, including buying raw materials, designing and preparing samples, arranging for neckwear to be made from their materials, and marketing finished neckwear, are included.

315999 OTHER APPAREL ACCESSORIES AND OTHER APPAREL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing apparel and apparel accessories (except apparel knitting mills; cut and sew apparel contractors; cut and sew apparel; hats and caps; mittens and gloves; and men's and boys' neckwear). Jobbers for these products, who perform entrepreneurial functions involved in other apparel and accessory manufacture, including buying raw materials, designing and preparing samples, arranging for other apparel and accessories to be made from their materials, and marketing finished other apparel and accessories, are included. Examples of products made by these establishments are apparel trimmings and findings, belts, women's scarves, and suspenders.

316 LEATHER AND ALLIED PRODUCT MANUFACTURING

Establishments in the Leather and Allied Product Manufacturing subsector transform hides into leather by tanning or curing and fabricating the leather into products for final consumption. It also includes the manufacture of similar products from other materials, including products (except apparel) made from "leather substitutes," such as rubber, plastics, or textiles. Rubber footwear, textile luggage, and plastics purses or wallets are examples of "leather substitute" products included in this group. The products made from leather substitutes are included in this subsector because they are made in similar ways leather products are made (e.g., luggage). They are made in the same establishments, so it is not practical to separate them.

The inclusion of leather making in this subsector is partly because leather tanning is a relatively small industry that has few close neighbors as a production process, partly because leather is an input to some of the other products classified in this subsector and partly for historical reasons.

3161 LEATHER AND HIDE TANNING AND FINISHING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. tanning, currying, and finishing hides and skins;
2. having others process hides and skins on a contract basis; and
3. dyeing or dressing furs.

31611 LEATHER AND HIDE TANNING AND FINISHING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. tanning, currying, and finishing hides and skins;
2. having others process hides and skins on a contract basis; and
3. dyeing or dressing furs.

316110 LEATHER AND HIDE TANNING AND FINISHING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. tanning, currying, and finishing hides and skins;
2. having others process hides and skins on a contract basis; and
3. dyeing or dressing furs.

3162 FOOTWEAR MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing rubber and plastics footwear with vulcanized rubber or plastics soles, molded or cemented to rubber, plastics, or fabric uppers, and rubber and plastics protective footwear.

31621 FOOTWEAR MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing footwear (except orthopedic extension footwear).

316211 RUBBER AND PLASTICS FOOTWEAR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing rubber and plastics footwear with vulcanized rubber or plastics soles, molded or cemented to rubber, plastics, or fabric uppers, and rubber and plastics protective footwear.

316212 HOUSE SLIPPER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing house slippers and slipper socks, regardless of material.

316213 MEN'S FOOTWEAR (EXCEPT ATHLETIC) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing men's footwear designed primarily for dress, street, and work. This industry includes men's shoes with rubber or plastics soles and leather or vinyl uppers.

316214 WOMEN'S FOOTWEAR (EXCEPT ATHLETIC) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing women's footwear designed for dress, street, and work. This industry includes women's shoes with rubber or plastics soles and leather or vinyl uppers.

316219 OTHER FOOTWEAR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing other footwear (except rubber and plastics footwear; house slippers; men's footwear (except athletic); and women's footwear (except athletic)).

3169 OTHER LEATHER AND ALLIED PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing leather products (except footwear and apparel) from purchased leather or leather substitutes (e.g., fabric, plastics).

31699 OTHER LEATHER AND ALLIED PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing leather products (except footwear and apparel) from purchased leather or leather substitutes (e.g., fabric, plastics).

316991 LUGGAGE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing luggage of any material.

316992 WOMEN'S HANDBAG AND PURSE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing women's handbags and purses of any material (except precious metal).

316993 PERSONAL LEATHER GOOD (EXCEPT WOMEN'S HANDBAG AND PURSE) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing personal leather goods (i.e., small articles of any material (except metal) normally carried on or about the person or in a handbag). Examples of personal leather goods made by these establishments are billfolds, coin purses, key cases, toilet kits, and watchbands (except metal).

316999 ALL OTHER LEATHER GOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing leather goods (except footwear, luggage, handbags, purses, and personal leather goods).

321 WOOD PRODUCT MANUFACTURING

Industries in the Wood Product Manufacturing subsector manufacture wood products, such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, manufactured homes (i.e., mobile home), and prefabricated wood buildings. The production processes of the Wood Product Manufacturing subsector include sawing, planing, shaping, laminating, and assembling of wood products starting from logs that are cut into bolts, or lumber that then may be further cut, or shaped by lathes or other shaping tools. The lumber or other transformed wood shapes may also be subsequently planed or smoothed, and assembled into finished products, such as wood containers. The Wood Product Manufacturing subsector includes establishments that make wood products from logs and bolts that are sawed and shaped, and establishments that purchase sawed lumber and make wood products. With the exception of sawmills and wood preservation establishments, the establishments are grouped into industries mainly based on the specific products manufactured.

3211 SAWMILLS AND WOOD PRESERVATION

This industry group comprises establishments whose primary production process begins with logs or bolts that are transformed into boards, dimension lumber, beams, timbers, poles, ties, shingles, shakes, siding, and wood chips. Establishments that cut and treat round wood and/or treat wood products made in other establishments to prevent rotting by impregnation with creosote or other chemical compounds are also included in this industry group.

32111 SAWMILLS AND WOOD PRESERVATION

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. sawing dimension lumber, boards, beams, timber, poles, ties, shingles, shakes, siding, and wood chips from logs or bolts;
2. sawing round wood poles, pilings, and posts and treating them with preservatives; and
3. treating wood sawed, planed, or shaped in other establishments with creosote or other preservatives to prevent decay and to protect against fire and insects.

Sawmills may plane the rough lumber that they make with a planing machine to achieve smoothness and uniformity of size.

321113 SAWMILLS

This U.S. industry comprises establishments primarily engaged in sawing dimension lumber, boards, beams, timbers, poles, ties, shingles, shakes, siding, and wood chips from logs or bolts. Sawmills may plane the rough lumber that they make with a planing machine to achieve smoothness and uniformity of size.

321114 WOOD PRESERVATION

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. treating wood sawed, planed, or shaped in other establishments with creosote or other preservatives, such as chromated copper arsenate, to prevent decay and to protect against fire and insects and/or
2. sawing round wood poles, pilings, and posts and treating them with preservatives.

3212 VENEER, PLYWOOD, AND ENGINEERED WOOD PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. veneer and/or plywood;
2. engineered wood members; and
3. reconstituted wood products.

This industry includes manufacturing plywood from veneer made in the same establishment or from veneer made in other establishments, and manufacturing plywood faced with nonwood materials, such as plastics or metal.

32121 VENEER, PLYWOOD, AND ENGINEERED WOOD PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. veneer and/or plywood;
2. engineered wood members; and
3. reconstituted wood products.

This industry includes manufacturing plywood from veneer made in the same establishment or from veneer made in other establishments, and manufacturing plywood faced with nonwood materials, such as plastics or metal.

321211 HARDWOOD VENEER AND PLYWOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing hardwood veneer and/or hardwood plywood.

321212 SOFTWOOD VENEER AND PLYWOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing softwood veneer and/or softwood plywood.

321213 ENGINEERED WOOD MEMBER (EXCEPT TRUSS) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated or laminated wood arches and/or other fabricated or laminated wood structural members.

321214 TRUSS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing laminated or fabricated wood roof and floor trusses.

321219 RECONSTITUTED WOOD PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing reconstituted wood sheets and boards.

3219 OTHER WOOD PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing wood products (except establishments operating sawmills and wood preservation facilities; and establishments manufacturing veneer, plywood, or engineered wood products).

32191 MILLWORK

This industry comprises establishments primarily engaged in manufacturing hardwood and softwood cut stock and dimension stock (i.e., shapes); wood windows and wood doors; and other millwork including wood flooring. Dimension stock or cut stock is defined as lumber and worked wood products cut or shaped to specialized sizes. These establishments generally use woodworking machinery, such as jointers, planers, lathes, and routers to shape wood.

321911 WOOD WINDOW AND DOOR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing window and door units, sash, window and door frames, and doors from wood or wood clad with metal or plastics.

321912 CUT STOCK, RESAWING LUMBER, AND PLANING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. dimension lumber from purchased lumber;
2. dimension stock (i.e., shapes) or cut stock;
3. resawing the output of sawmills; and
4. planing purchased lumber.

These establishments generally use woodworking machinery, such as jointers, planers, lathes, and routers to shape wood.

321918 OTHER MILLWORK (INCLUDING FLOORING)

This U.S. industry comprises establishments primarily engaged in manufacturing millwork (except wood windows, wood doors, and cut stock).

32192 WOOD CONTAINER AND PALLET MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing wood pallets, wood box shoo, wood boxes, other wood containers, and wood parts for pallets and containers.

321920 WOOD CONTAINER AND PALLET MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing wood pallets, wood box shoo, wood boxes, other wood containers, and wood parts for pallets and containers.

32199 ALL OTHER WOOD PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing wood products (except establishments operating sawmills and wood preservation facilities; and establishments manufacturing veneer, plywood, engineered wood products, millwork, wood containers, or pallets).

321991 MANUFACTURED HOME (MOBILE HOME) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in making manufactured homes (i.e., mobile homes) and nonresidential mobile buildings. Manufactured homes are designed to accept permanent water, sewer, and utility connections and although equipped with wheels, they are not intended for regular highway movement.

321992 PREFABRICATED WOOD BUILDING MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing prefabricated wood buildings and wood sections and panels for prefabricated wood buildings.

321999 ALL OTHER MISCELLANEOUS WOOD PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing wood products (except establishments operating sawmills and preservation facilities; establishments manufacturing veneer, engineered wood products, millwork, wood containers, pallets, and wood container parts; and establishments making manufactured homes (i.e., mobile homes) and prefabricated buildings and components).

322 PAPER MANUFACTURING

Industries in the Paper Manufacturing subsector make pulp, paper, or converted paper products. The manufacturing of these products is grouped together because they constitute a series of vertically connected processes. More than one is often carried out in a single establishment. There are essentially three activities. The manufacturing of pulp involves separating the cellulose fibers from other impurities in wood or used paper. The manufacturing of paper involves matting these fibers into a sheet. Converted paper products are made from paper and other materials by various cutting and shaping techniques and includes coating and laminating activities.

The Paper Manufacturing subsector is subdivided into two industry groups, the first for the manufacturing of pulp and paper and the second for the manufacturing of converted paper products. Paper making is treated as the core activity of the subsector. Therefore, any establishment that makes paper (including paperboard), either alone or in combination with pulp manufacturing or paper converting, is classified as a paper or paperboard mill. Establishments that make pulp without making paper are classified as pulp mills. Pulp mills, paper mills and paperboard mills comprise the first industry group.

Establishments that make products from purchased paper and other materials make up the second industry group, Converted Paper Product Manufacturing. This general activity is then subdivided based, for the most part, on process distinctions. Paperboard container manufacturing uses corrugating, cutting, and shaping machinery to form paperboard into containers. Paper bag and coated and treated paper manufacturing establishments cut and coat paper and foil. Stationery product manufacturing establishments make a variety of paper products used for writing, filing, and similar applications. Other converted paper product manufacturing includes, in particular, the conversion of sanitary paper stock into such things as tissue paper and disposable diapers.

An important process used in the Paper Bag and Coated and Treated Paper Manufacturing industry is lamination, often combined with coating. Lamination and coating makes a composite material with improved properties of strength, impermeability, and so on. The laminated materials may be paper, metal foil, or plastics film. While paper is often one of the components, it is not always. Lamination of plastics film to plastics film is classified in the North American Industry Classification System (NAICS) Subsector 326, Plastics and Rubber Products Manufacturing, because establishments that do this often first make the film. The same situation holds with respect to bags. The manufacturing of bags from plastics only, whether or not laminated, is classified in Subsector 326, Plastics and Rubber Products Manufacturing, but all other bag manufacturing is classified in this subsector.

Excluded from this subsector are photosensitive papers. These papers are chemically treated and are classified in Industry 32599, All Other Chemical Product and Preparation Manufacturing.

3221 PULP, PAPER, AND PAPERBOARD MILLS

This industry group comprises establishments primarily engaged in manufacturing pulp, paper, or paperboard.

32211 PULP MILLS

This industry comprises establishments primarily engaged in manufacturing pulp without manufacturing paper or paperboard. The pulp is made by separating the cellulose fibers from the other impurities in wood or other materials, such as used or recycled rags, linters, scrap paper, and straw.

322110 PULP MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing pulp without manufacturing paper or paperboard. The pulp is made by separating the cellulose fibers from the other impurities in wood or other materials, such as used or recycled rags, linters, scrap paper, and straw.

32212 PAPER MILLS

This industry comprises establishments primarily engaged in manufacturing paper from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may convert the paper they make. The activity of making paper classifies an establishment into this industry regardless of the output.

322121 PAPER (EXCEPT NEWSPRINT) MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing paper (except newsprint and uncoated groundwood paper) from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paper they make.

322122 NEWSPRINT MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing newsprint and uncoated groundwood paper from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paper they make.

32213 PAPERBOARD MILLS

This industry comprises establishments primarily engaged in manufacturing paperboard from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paperboard they make.

322130 PAPERBOARD MILLS

This U.S. industry comprises establishments primarily engaged in manufacturing paperboard from pulp. These establishments may manufacture or purchase pulp. In addition, the establishments may also convert the paperboard they make.

3222 CONVERTED PAPER PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in converting paper or paperboard without manufacturing paper or paperboard.

32221 PAPERBOARD CONTAINER MANUFACTURING

This industry comprises establishments primarily engaged in converting paperboard into containers without manufacturing paperboard. These establishments use corrugating, cutting, and shaping machinery to form paperboard into containers. Products made by these establishments include boxes; corrugated sheets, pads, and pallets; paper dishes; and fiber drums and reels.

322211 CORRUGATED AND SOLID FIBER BOX MANUFACTURING

This U.S. industry comprises establishments primarily engaged in laminating purchased paper or paperboard into corrugated or solid fiber boxes and related products, such as pads, partitions, pallets, and corrugated paper without manufacturing paperboard. These boxes are generally used for shipping.

322212 FOLDING PAPERBOARD BOX MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting paperboard (except corrugated) into folding paperboard boxes without manufacturing paper and paperboard.

322213 SETUP PAPERBOARD BOX MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting paperboard into setup paperboard boxes (i.e., rigid-sided boxes not shipped flat) without manufacturing paperboard.

322214 FIBER CAN, TUBE, DRUM, AND SIMILAR PRODUCTS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting paperboard into fiber cans, tubes, drums, and similar products without manufacturing paperboard.

322215 NONFOLDING SANITARY FOOD CONTAINER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting sanitary foodboard into food containers (except folding).

32222 PAPER BAG AND COATED AND TREATED PAPER MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. cutting and coating paper and paperboard;
2. cutting and laminating paper and paperboard and other flexible materials (except plastics film to plastics film);
3. bags or multiwall bags or sacks of paper, metal foil, coated paper, or laminates or coated combinations of paper and foil with plastics film;
4. laminated aluminum and other converted metal foils from purchased foils; and
5. surface coating paper or paperboard.

322221 COATED AND LAMINATED PACKAGING PAPER AND PLASTICS FILM MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. cutting and coating paper and
2. cutting and laminating paper with other flexible materials (except plastics to plastics or foil to paper laminates).

The products made in this industry are made from purchased sheet materials and may be printed in the same establishment.

322222 COATED AND LAMINATED PAPER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in performing one or more of the following manufacturing activities associated with making products designed for purposes other than packaging:

1. cutting and coating paper;
2. cutting and laminating paper and other flexible materials (except plastics film to plastics film); and
3. laminating aluminum and other metal foils for nonpackaging uses from purchased foils.

The products made in this industry are made from purchased sheet materials and may be printed in the same establishment.

322223 PLASTICS, FOIL, AND COATED PAPER BAG MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing bags of coated paper, of metal foil, or of laminated or coated combinations of plastics, foil, and paper, whether or not printed.

322224 UNCOATED PAPER AND MULTIWALL BAG MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing uncoated paper bags or multiwall bags and sacks.

322225 LAMINATED ALUMINUM FOIL MANUFACTURING FOR FLEXIBLE PACKAGING USES

This U.S. industry comprises establishments primarily engaged in laminating aluminum and other metal foil into products with flexible packaging uses or gift wrap and other packaging wrap applications.

322226 SURFACE-COATED PAPERBOARD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in laminating, lining, or surface coating purchased paperboard to make other paperboard products.

32223 STATIONERY PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in converting paper or paperboard into products used for writing, filing, art work, and similar applications.

322231 DIE-CUT PAPER AND PAPERBOARD OFFICE SUPPLIES MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting paper rollstock or paperboard into die-cut paper or paperboard office supplies. For the purpose of this industry, office supplies are defined as office products, such as filing folders, index cards, rolls for adding machines, file separators and dividers, tabulating cards, and other paper and paperboard office supplies.

322232 ENVELOPE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing envelopes for mailing or stationery of any material including combinations.

322233 STATIONERY, TABLET, AND RELATED PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting paper and paperboard into products used for writing and similar applications (e.g., looseleaf fillers, notebooks, pads, stationery, and tablets).

32229 OTHER CONVERTED PAPER PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in one of the following manufacturing activities:

1. converting paper and paperboard into products (except containers, bags, coated and treated paper and paperboard, and stationery products), or
2. converting pulp into pulp products, such as disposable diapers, or molded pulp egg cartons, food trays, and dishes.

Processes used include laminating or lining purchased paper or paperboard.

322291 SANITARY PAPER PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting purchased sanitary paper stock or wadding into sanitary paper products, such as facial tissues and handkerchiefs, table napkins, toilet paper, towels, disposable diapers, sanitary napkins, and tampons.

322299 ALL OTHER CONVERTED PAPER PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting paper or paperboard into products (except containers, bags, coated and treated paper, stationery products, and sanitary paper products) or converting pulp into pulp products, such as egg cartons, food trays, and other food containers from molded pulp.

323 PRINTING AND RELATED SUPPORT ACTIVITIES

Industries in the Printing and Related Support Activities subsector print products, such as newspapers, books, labels, business cards, stationery, business forms, and other materials, and perform support activities, such as data imaging, platemaking services, and bookbinding. The support activities included here are an integral part of the printing industry, and a product (a printing plate, a bound book, or a computer disk or file) that is an integral part of the printing industry is almost always provided by these operations.

Processes used in printing include a variety of methods used to transfer an image from a plate, screen, film, or computer file to some medium, such as paper, plastics, metal, textile articles, or wood. The most prominent of these methods is to transfer the image from a plate or screen to the medium (lithographic, gravure, screen, and flexographic printing). A rapidly growing new technology uses a computer file to directly “drive” the printing mechanism to create the image and new electrostatic and other types of equipment (digital or nonimpact printing).

In contrast to many other classification systems that locate publishing of printed materials in manufacturing, the North American Industry Classification System (NAICS) classifies the publishing of printed products in Subsector 511, Publishing Industries (except Internet). Though printing and publishing are often carried out by the same enterprise (a newspaper, for example), it is less and less the case that these distinct activities are carried out in the same establishment. When publishing and printing are done in the same establishment, the establishment is classified in Sector 51, Information, in the appropriate NAICS industry even if the receipts for printing exceed those for publishing.

This subsector includes printing on clothing because the production process for that activity is printing, not clothing manufacturing. For instance, the printing of T-shirts is included in this subsector. In contrast, printing on fabric (or grey goods) is not included. This activity is part of the process of finishing the fabric and is included in the NAICS Textile Mills subsector in Industry 31331, Textile and Fabric Finishing Mills.

3231 PRINTING AND RELATED SUPPORT ACTIVITIES

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. printing on apparel and textile products, paper, metal, glass, plastics, and other materials, except fabric (grey goods) and/or
2. performing prepress (e.g., platemaking, typesetting) and postpress services (e.g., book binding) in support of printing activities.

32311 PRINTING

This industry comprises establishments primarily engaged in printing on apparel and textile products, paper, metal, glass, plastics, and other materials, except fabric (grey goods). The printing processes employed include, but are not limited to, lithographic, gravure, screen, flexographic, digital, and letterpress. Establishments in this industry do not manufacture the stock that they print but may perform postprinting activities, such as folding, cutting, or laminating the materials they print, and mailing.

323110 COMMERCIAL LITHOGRAPHIC PRINTING

This U.S. industry comprises establishments primarily engaged in lithographic (i.e., offset) printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in lithographic printing on purchased stock materials, such as stationery, letterhead, invitations, labels, and similar items, on a job order basis.

323111 COMMERCIAL GRAVURE PRINTING

This U.S. industry comprises establishments primarily engaged in gravure printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in gravure printing on purchased stock materials, such as stationery, letterhead, invitations, labels, and similar items, on a job order basis.

323112 COMMERCIAL FLEXOGRAPHIC PRINTING

This U.S. industry comprises establishments primarily engaged in flexographic printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in flexographic printing on purchased stock materials, such as stationery, invitations, labels, and similar items, on a job order basis.

323113 COMMERCIAL SCREEN PRINTING

This U.S. industry comprises establishments primarily engaged in screen printing without publishing (except books, grey goods, and manifold business forms). This industry includes establishments engaged in screen printing on purchased stock materials, such as stationery, invitations, labels, and similar items, on a job order basis. Establishments primarily engaged in printing on apparel and textile products, such as T-shirts, caps, jackets, towels, and napkins, are included in this industry.

323114 QUICK PRINTING

This U.S. industry comprises establishments primarily engaged in traditional printing activities, such as short-run offset printing or prepress services, in combination with providing document photocopying service. Prepress services include receiving documents in electronic format and directly duplicating from the electronic file and formatting, colorizing, and otherwise modifying the original document to improve presentation. These establishments, known as quick printers, generally provide short-run printing and copying with fast turnaround times.

323115 DIGITAL PRINTING

This U.S. industry comprises establishments primarily engaged in printing graphical materials using digital printing equipment. Establishments known as digital printers typically provide sophisticated prepress services including using scanners to input images and computers to manipulate and format the graphic images prior to printing.

323116 MANIFOLD BUSINESS FORMS PRINTING

This U.S. industry comprises establishments primarily engaged in printing special forms, including checkbooks, for use in the operation of a business. The forms may be in single and multiple sets, including carbonized, interleaved with carbon, or otherwise processed for multiple reproduction.

323117 BOOKS PRINTING

This U.S. industry comprises establishments primarily engaged in printing or printing and binding books and pamphlets without publishing.

323118 BLANKBOOK, LOOSELEAF BINDERS, AND DEVICES MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing blankbooks, looseleaf devices, and binders. Establishments in this industry may print or print and bind.

323119 OTHER COMMERCIAL PRINTING

This U.S. industry comprises establishments primarily engaged in commercial printing (except lithographic, gravure, screen, or flexographic printing) without publishing (except books, grey goods, and manifold business forms). Printing processes included in this industry are letterpress printing and engraving printing. This industry includes establishments engaged in commercial printing on purchased stock materials, such as stationery, invitations, labels, and similar items, on a job order basis.

32312 SUPPORT ACTIVITIES FOR PRINTING

This industry comprises establishments primarily engaged in performing prepress (e.g., platemaking, typesetting) and postpress services (e.g., book binding) in support of printing activities.

323121 TRADEBINDING AND RELATED WORK

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. tradebinding;
2. sample mounting; and
3. postpress services (e.g., book or paper bronzing, die-cutting, edging, embossing, folding, gilding, gluing, indexing).

323122 PREPRESS SERVICES

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. prepress services, such as imagesetting or typesetting, for printers and
2. preparing film or plates for printing purposes.

324 PETROLEUM AND COAL PRODUCTS MANUFACTURING

The Petroleum and Coal Products Manufacturing subsector is based on the transformation of crude petroleum and coal into usable products. The dominant process is petroleum refining that involves the separation of crude petroleum into component products through such techniques as cracking and distillation.

In addition, this subsector includes establishments that primarily further process refined petroleum and coal products and produce products, such as asphalt coatings and petroleum lubricating oils. However, establishments that manufacture petrochemicals from refined petroleum are classified in Industry 32511, Petrochemical Manufacturing.

3241 PETROLEUM AND COAL PRODUCTS MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. refining crude petroleum into refined petroleum;
2. asphalt paving, roofing, and saturated materials; and/or
3. other petroleum and coal products.

32411 PETROLEUM REFINERIES

This industry comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following manufacturing activities:

1. fractionation;

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2. straight distillation of crude oil; and
 3. cracking.

324110 PETROLEUM REFINERIES

This U.S. industry comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following manufacturing activities:

1. fractionation;
2. straight distillation of crude oil; and
3. cracking.

32412 ASPHALT PAVING, ROOFING, AND SATURATED MATERIALS MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. asphalt and tar paving mixtures and blocks and roofing cements and coatings from purchased asphaltic materials and/or
2. saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials.

324121 ASPHALT PAVING MIXTURE AND BLOCK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing asphalt and tar paving mixtures and blocks from purchased asphaltic materials.

324122 ASPHALT SHINGLE AND COATING MATERIALS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials and
2. asphalt and tar and roofing cements and coatings from purchased asphaltic materials.

32419 OTHER PETROLEUM AND COAL PRODUCTS MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing petroleum products (except asphalt paving, roofing and saturated materials) from refined petroleum or coal products made in coke ovens not integrated with a steel mill.

324191 PETROLEUM LUBRICATING OIL AND GREASE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in blending or compounding refined petroleum to make lubricating oils and greases and/or re-refining used petroleum lubricating oils.

324199 ALL OTHER PETROLEUM AND COAL PRODUCTS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing petroleum products (except asphalt paving, roofing, and saturated materials and lubricating oils and greases) from refined petroleum and coal products made in coke ovens not integrated with a steel mill.

325 CHEMICAL MANUFACTURING

The Chemical Manufacturing subsector is based on the transformation of organic and inorganic raw materials by a chemical process and the formulation of products. This subsector distinguishes the production of basic chemicals that comprise the first industry group from the production of intermediate and end products produced by further processing of basic chemicals that make up the remaining industry groups.

This subsector does not include all industries transforming raw materials by a chemical process. It is common for some chemical processing to occur during mining operations. These beneficiating operations, such as copper concentrating, are classified in Sector 21, Mining. Furthermore, the refining of crude petroleum is included in Subsector 324, Petroleum and Coal Products Manufacturing. In addition, the manufacturing of aluminum oxide is included in Subsector 331, Primary Metal Manufacturing; and beverage distilleries are classified in Subsector 312, Beverage and Tobacco Product Manufacturing. As in the case of these two activities, the grouping of industries into subsectors may take into account the association of the activities performed with other activities in the subsector.

3251 BASIC CHEMICAL MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing chemicals using basic processes, such as thermal cracking and distillation. Chemicals manufactured in this industry group are usually separate chemical elements or separate chemically-defined compounds.

32511 PETROCHEMICAL MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. acyclic (i.e., aliphatic) hydrocarbons such as ethylene, propylene, and butylene made from refined petroleum or liquid hydrocarbon and/or
2. cyclic aromatic hydrocarbons such as benzene, toluene, styrene, xylene, ethyl benzene, and cumene made from refined petroleum or liquid hydrocarbons.

325110 PETROCHEMICAL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. acyclic (i.e., aliphatic) hydrocarbons such as ethylene, propylene, and butylene made from refined petroleum or liquid hydrocarbon and/or
2. cyclic aromatic hydrocarbons such as benzene, toluene, styrene, xylene, ethyl benzene, and cumene made from refined petroleum or liquid hydrocarbons.

32512 INDUSTRIAL GAS MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing industrial organic and inorganic gases in compressed, liquid, and solid forms.

325120 INDUSTRIAL GAS MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing industrial organic and inorganic gases in compressed, liquid, and solid forms.

32513 SYNTHETIC DYE AND PIGMENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing synthetic organic and inorganic dyes and pigments, such as lakes and toners (except electrostatic and photographic).

325131 INORGANIC DYE AND PIGMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing inorganic dyes and pigments.

325132 SYNTHETIC ORGANIC DYE AND PIGMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing synthetic organic dyes and pigments, such as lakes and toners (except electrostatic and photographic).

32518 OTHER BASIC INORGANIC CHEMICAL MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing basic inorganic chemicals (except industrial gases and synthetic dyes and pigments).

325181 ALKALIES AND CHLORINE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing chlorine, sodium hydroxide (i.e., caustic soda), and other alkalies often using an electrolysis process.

325182 CARBON BLACK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing carbon black, bone black, and lamp black.

325188 ALL OTHER BASIC INORGANIC CHEMICAL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing basic inorganic chemicals (except industrial gases, inorganic dyes and pigments, alkalies and chlorine, and carbon black).

32519 OTHER BASIC ORGANIC CHEMICAL MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing basic organic chemicals (except petrochemicals, industrial gases, and synthetic dyes and pigments).

325191 GUM AND WOOD CHEMICAL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. distilling wood or gum into products, such as tall oil and wood distillates and
2. wood or gum chemicals, such as naval stores, natural tanning materials, charcoal briquettes, and charcoal (except activated).

325192 CYCLIC CRUDE AND INTERMEDIATE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. distilling coal tars and/or
2. cyclic crudes or, cyclic intermediates (i.e., hydrocarbons, except aromatic petrochemicals) from refined petroleum or natural gas.

325193 ETHYL ALCOHOL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing nonpotable ethyl alcohol.

325199 ALL OTHER BASIC ORGANIC CHEMICAL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing basic organic chemical products (except aromatic petrochemicals, industrial gases, synthetic organic dyes and pigments, gum and wood chemicals, cyclic crudes and intermediates, and ethyl alcohol).

3252 RESIN, SYNTHETIC RUBBER, AND ARTIFICIAL AND SYNTHETIC FIBERS AND FILAMENTS MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. resins and synthetic rubber and
2. artificial and synthetic fibers and filaments.

32521 RESIN AND SYNTHETIC RUBBER MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. synthetic resins, plastics materials, and nonvulcanizable elastomers and mixing and blending resins on a custom basis;
2. noncustomized synthetic resins; and
3. synthetic rubber.

325211 PLASTICS MATERIAL AND RESIN MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. resins, plastics materials, and nonvulcanizable thermoplastic elastomers and mixing and blending resins on a custom basis and/or
2. noncustomized synthetic resins.

325212 SYNTHETIC RUBBER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing synthetic rubber.

32522 ARTIFICIAL AND SYNTHETIC FIBERS AND FILAMENTS MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. cellulosic (i.e., rayon and acetate) and noncellulosic (i.e., nylon, polyolefin, and polyester) fibers and filaments in the form of monofilament, filament yarn, staple, or tow or
2. manufacturing and texturing cellulosic and noncellulosic fibers and filaments.

325221 CELLULOSIC ORGANIC FIBER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. cellulosic (i.e., rayon and acetate) fibers and filaments in the form of monofilament, filament yarn, staple, or tow or
2. manufacturing and texturizing cellulosic fibers and filaments.

325222 NONCELLULOSIC ORGANIC FIBER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

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1. noncellulosic (i.e., nylon, polyolefin, and polyester) fibers and filaments in the form of monofilament, filament yarn, staple, or tow, or
 2. manufacturing and texturizing noncellulosic fibers and filaments.

3253 PESTICIDE, FERTILIZER, AND OTHER AGRICULTURAL CHEMICAL MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. fertilizers and/or
2. pesticides and other agricultural chemicals.

32531 FERTILIZER MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. nitrogenous or phosphatic fertilizer materials;
2. fertilizers from sewage or animal waste;
3. nitrogenous or phosphatic materials and mixing with other ingredients into fertilizers; and
4. mixing ingredients made elsewhere into fertilizers.

325311 NITROGENOUS FERTILIZER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. nitrogenous fertilizer materials and mixing ingredients into fertilizers;
2. fertilizers from sewage or animal waste; and
3. nitrogenous materials and mixing them into fertilizers.

325312 PHOSPHATIC FERTILIZER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. phosphatic fertilizer materials or
2. phosphatic materials and mixing them into fertilizers.

325314 FERTILIZER (MIXING ONLY) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in mixing ingredients made elsewhere into fertilizers.

32532 PESTICIDE AND OTHER AGRICULTURAL CHEMICAL MANUFACTURING

This industry comprises establishments primarily engaged in the formulation and preparation of agricultural and household pest control chemicals (except fertilizers).

325320 PESTICIDE AND OTHER AGRICULTURAL CHEMICAL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in the formulation and preparation of agricultural and household pest control chemicals (except fertilizers).

3254 PHARMACEUTICAL AND MEDICINE MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. biological and medicinal products;
2. processing (i.e., grading, grinding, and milling) botanical drugs and herbs;
3. isolating active medicinal principals from botanical drugs and herbs; and
4. pharmaceutical products intended for internal and external consumption in such forms as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

32541 PHARMACEUTICAL AND MEDICINE MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. biological and medicinal products;
2. processing (i.e., grading, grinding, and milling) botanical drugs and herbs;
3. isolating active medicinal principals from botanical drugs and herbs; and
4. pharmaceutical products intended for internal and external consumption in such forms as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

325411 MEDICINAL AND BOTANICAL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. uncompounded medicinal chemicals and their derivatives (i.e., generally for use by pharmaceutical preparation manufacturers) and/or
2. grading, grinding, and milling uncompounded botanicals.

325412 PHARMACEUTICAL PREPARATION MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing in-vivo diagnostic substances and pharmaceutical preparations (except biological) intended for internal and external consumption in dose forms, such as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

325413 IN-VITRO DIAGNOSTIC SUBSTANCE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing in-vitro (i.e., not taken internally) diagnostic substances, such as chemical, biological, or radioactive substances. The substances are used for diagnostic tests that are performed in test tubes, petri dishes, machines, and other diagnostic test-type devices.

325414 BIOLOGICAL PRODUCT (EXCEPT DIAGNOSTIC) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing vaccines, toxoids, blood fractions, and culture media of plant or animal origin (except diagnostic).

3255 PAINT, COATING, AND ADHESIVE MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. paints and coatings and/or
2. adhesives.

32551 PAINT AND COATING MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. mixing pigments, solvents, and binders into paints and other coatings, such as stains, varnishes, lacquers, enamels, shellacs, and water repellent coatings for concrete and masonry, and/or
2. allied paint products, such as putties, paint and varnish removers, paint brush cleaners, and frit.

325510 PAINT AND COATING MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. mixing pigments, solvents, and binders into paints and other coatings, such as stains, varnishes, lacquers, enamels, shellacs, and water repellent coatings for concrete and masonry and/or
2. allied paint products, such as putties, paint and varnish removers, paint brush cleaners, and frit.

32552 ADHESIVE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing adhesives, glues, and caulking compounds.

325520 ADHESIVE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing adhesives, glues, and caulking compounds.

3256 SOAP, CLEANING COMPOUND, AND TOILET PREPARATION MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. soap and cleaning compounds and/or
2. toilet preparations.

32561 SOAP AND CLEANING COMPOUND MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing and packaging soap and other cleaning compounds, surface active agents, and textile and leather finishing agents used to reduce tension or speed the drying process.

325611 SOAP AND OTHER DETERGENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing and packaging soaps and other detergents, such as laundry detergents, dishwashing detergents, toothpaste gels and tooth powders and natural glycerin.

325612 POLISH AND OTHER SANITATION GOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing and packaging polishes and specialty cleaning preparations.

325613 SURFACE ACTIVE AGENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

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1. bulk surface active agents for use as wetting agents, emulsifiers, and penetrants, and/or
 2. textiles and leather finishing agents used to reduce tension or speed the drying process.

32562 TOILET PREPARATION MANUFACTURING

This industry comprises establishments primarily engaged in preparing, blending, compounding, and packaging toilet preparations, such as perfumes, shaving preparations, hair preparations, face creams, lotions (including sunscreens), and other cosmetic preparations.

325620 TOILET PREPARATION MANUFACTURING

This U.S. industry comprises establishments primarily engaged in preparing, blending, compounding, and packaging toilet preparations, such as perfumes, shaving preparations, hair preparations, face creams, lotions (including sunscreens), and other cosmetic preparations.

3259 OTHER CHEMICAL PRODUCT AND PREPARATION MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals; resins, synthetic rubber, cellulosic and noncellulosic fibers and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; soaps and cleaning compounds; and toilet preparations).

32591 PRINTING INK MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing printing and inkjet inks and inkjet cartridges.

325910 PRINTING INK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing printing and inkjet inks and inkjet cartridges.

32592 EXPLOSIVES MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing explosives.

325920 EXPLOSIVES MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing explosives.

32599 ALL OTHER CHEMICAL PRODUCT AND PREPARATION MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals, resins, and synthetic rubber; cellulosic and noncellulosic fibers and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; and soaps, cleaning compounds, and toilet preparations; printing inks; and explosives).

325991 CUSTOM COMPOUNDING OF PURCHASED RESINS

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. custom mixing and blending plastics resins made elsewhere or
2. reformulating plastics resins from recycled plastics products.

325992 PHOTOGRAPHIC FILM, PAPER, PLATE, AND CHEMICAL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing sensitized film, sensitized paper, sensitized cloth, sensitized plates, toners (i.e., for photocopiers, laser printers, and similar electrostatic printing devices), toner cartridges, and photographic chemicals.

325998 ALL OTHER MISCELLANEOUS CHEMICAL PRODUCT AND PREPARATION MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals, resins, synthetic rubber; cellulosic and noncellulosic fiber and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings and adhesives; soap, cleaning compounds, and toilet preparations; printing inks; explosives; custom compounding of purchased resins; and photographic films, papers, plates, and chemicals).

326 PLASTICS AND RUBBER PRODUCTS MANUFACTURING

Industries in the Plastics and Rubber Products Manufacturing subsector make goods by processing plastics materials and raw rubber. The core technology employed by establishments in this subsector is that of plastics or rubber product production. Plastics and rubber are combined in the same subsector because plastics are increasingly being used as a substitute for rubber; however the subsector is generally restricted to the production of products made of just one material, either solely plastics or rubber.

Many manufacturing activities use plastics or rubber, for example the manufacture of footwear, or furniture. Typically, the production process of these products involves more than one material. In these cases, technologies that allow disparate materials to be formed and combined are of central importance in describing the manufacturing activity. In the North American Industry Classification System (NAICS), such activities (the footwear and furniture manufacturing) are not classified in the Plastics and Rubber Products Manufacturing subsector because the core technologies for these activities are diverse and involve multiple materials.

Within the Plastics and Rubber Products Manufacturing subsector, a distinction is made between plastics and rubber products at the industry group level, although it is not a rigid distinction, as can be seen from the definition of Industry 32622, Rubber and Plastics Hoses and Belting Manufacturing. As materials technology progresses, plastics are increasingly being used as a substitute for rubber; and eventually, the distinction may disappear as a basis for establishment classification.

In keeping with the core technology focus of plastics, lamination of plastics film to plastics film as well as the production of bags from plastics only is classified in this subsector. Lamination and bag production involving plastics and materials other than plastics are classified in the NAICS Subsector 322, Paper Manufacturing.

3261 PLASTICS PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in processing new or spent (i.e., recycled) plastics resins into intermediate or final products, using such processes as compression molding; extrusion molding; injection molding; blow molding; and casting. Within most of these industries, the production process is such that a wide variety of products can be made.

32611 PLASTICS PACKAGING MATERIALS AND UNLAMINATED FILM AND SHEET MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. converting plastics resins into unsupported plastics film and sheet and/or
2. forming, coating or laminating plastics film and sheet into plastics bags.

326111 PLASTICS BAG MANUFACTURING

This U.S. industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. converting plastics resins into plastics bags or

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2. forming, coating, or laminating plastics film and sheet into single wall or multiwall plastics bags.

Establishments in this industry may print on the bags they manufacture.

326112 PLASTICS PACKAGING FILM AND SHEET (INCLUDING LAMINATED) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting plastics resins into plastics packaging (flexible) film and packaging sheet.

326113 UNLAMINATED PLASTICS FILM AND SHEET (EXCEPT PACKAGING) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting plastics resins into plastics film and un laminated sheet (except packaging).

32612 PLASTICS PIPE, PIPE FITTING, AND UNLAMINATED PROFILE SHAPE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing plastics pipes and pipe fittings, and plastics profile shapes such as rod, tube, and sausage casings.

326121 UNLAMINATED PLASTICS PROFILE SHAPE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting plastics resins into nonrigid plastics profile shapes (except film, sheet, and bags), such as rod, tube, and sausage casings.

326122 PLASTICS PIPE AND PIPE FITTING MANUFACTURING

This U.S. industry comprises establishments primarily engaged in converting plastics resins into rigid plastics pipes and pipe fittings.

32613 LAMINATED PLASTICS PLATE, SHEET (EXCEPT PACKAGING), AND SHAPE MANUFACTURING

This industry comprises establishments primarily engaged in laminating plastics profile shapes such as plate, sheet (except packaging), and rod. The lamination process generally involves bonding or impregnating profiles with plastics resins and compressing them under heat.

326130 LAMINATED PLASTICS PLATE, SHEET (EXCEPT PACKAGING), AND SHAPE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in laminating plastics profile shapes such as plate, sheet (except packaging), and rod. The lamination process generally involves bonding or impregnating profiles with plastics resins and compressing them under heat.

32614 POLYSTYRENE FOAM PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing polystyrene foam products.

326140 POLYSTYRENE FOAM PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing polystyrene foam products.

32615 URETHANE AND OTHER FOAM PRODUCT (EXCEPT POLYSTYRENE) MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing plastics foam products (except polystyrene).

326150 URETHANE AND OTHER FOAM PRODUCT (EXCEPT POLYSTYRENE) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing plastics foam products (except polystyrene).

32616 PLASTICS BOTTLE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing plastics bottles.

326160 PLASTICS BOTTLE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing plastics bottles.

32619 OTHER PLASTICS PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing resilient floor covering and other plastics products (except film, sheet, bags, profile shapes, pipes, pipe fittings, laminates, foam products, and bottles).

326191 PLASTICS PLUMBING FIXTURE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing plastics or fiberglass plumbing fixtures. Examples of products made by these establishments are plastics or fiberglass bathtubs, hot tubs, portable toilets, and shower stalls.

326192 RESILIENT FLOOR COVERING MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing resilient floor coverings for permanent installation.

326199 ALL OTHER PLASTICS PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing plastics products (except film, sheet, bags, profile shapes, pipes, pipe fittings, laminates, foam products, bottles, plumbing fixtures, and resilient floor coverings).

3262 RUBBER PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in processing natural, and synthetic or reclaimed rubber materials into intermediate or final products using processes such as vulcanizing, cementing, molding, extruding, and lathe-cutting.

32621 TIRE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing tires and inner tubes from natural and synthetic rubber and retreading or rebuilding tires.

326211 TIRE MANUFACTURING (EXCEPT RETREADING)

This U.S. industry comprises establishments primarily engaged in manufacturing tires and inner tubes from natural and synthetic rubber.

326212 TIRE RETREADING

This U.S. industry comprises establishments primarily engaged in retreading or rebuilding tires.

32622 RUBBER AND PLASTICS HOSES AND BELTING MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing rubber hose and/or plastics (reinforced) hose and belting from natural and synthetic rubber and/or plastics resins. Establishments manufacturing garden hoses from purchased hose are included in this industry.

326220 RUBBER AND PLASTICS HOSES AND BELTING MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing rubber hose and/or plastics (reinforced) hose and belting from natural and synthetic rubber and/or plastics resins. Establishments manufacturing garden hoses from purchased hose are included in this industry.

32629 OTHER RUBBER PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing rubber products (except tires, hoses, and belting) from natural and synthetic rubber.

326291 RUBBER PRODUCT MANUFACTURING FOR MECHANICAL USE

This U.S. industry comprises establishments primarily engaged in molding, extruding, or lathe-cutting rubber to manufacture rubber goods (except tubing) for mechanical applications. Products of this industry are generally parts for motor vehicles, machinery, and equipment.

326299 ALL OTHER RUBBER PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing rubber products (except tires; hoses and belting; and molded, extruded, and lathe-cut rubber goods for mechanical applications) from natural and synthetic rubber.

327 NONMETALLIC MINERAL PRODUCT MANUFACTURING

The Nonmetallic Mineral Product Manufacturing subsector transforms mined or quarried nonmetallic minerals, such as sand, gravel, stone, clay, and refractory materials, into products for intermediate or final consumption. Processes used include grinding, mixing, cutting, shaping, and honing. Heat often is used in the process and chemicals are frequently mixed to change the composition, purity, and chemical properties for the intended product. For example, glass is produced by heating silica sand to the melting point (sometimes combined with cullet or recycled glass) and then drawn, floated, or blow molded to the desired shape or thickness. Refractory materials are heated and then formed into bricks or other shapes for use in industrial applications. The Nonmetallic Mineral Product Manufacturing subsector includes establishments that manufacture products, such as bricks, refractories, ceramic products, and glass and glass products, such as plate glass and containers. Also included are cement and concrete products, lime, gypsum and other nonmetallic mineral products including abrasive products, ceramic plumbing fixtures, statuary, cut stone products, and mineral wool. The products are used in a wide range of activities from construction and heavy and light manufacturing to articles for personal use.

Mining, beneficiating, and manufacturing activities often occur in a single location. Separate receipts will be collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals, beneficiate the nonmetallic minerals and further process the nonmetallic minerals into a more finished manufactured product are classified based on the primary activity of the establishment. A mine that manufactures a small amount of finished products will be classified in Sector 21, Mining. An establishment that mines whose primary output is a more-finished manufactured product will be classified in the Manufacturing Sector.

Excluded from the Nonmetallic Mineral Product Manufacturing subsector are establishments that primarily beneficiate mined nonmetallic minerals. Beneficiation is the process whereby the extracted material is reduced to particles that can be separated into mineral and waste, the former suitable for further processing or direct use. Beneficiation establishments are included in Sector 21, Mining.

3271 CLAY PRODUCT AND REFRACTORY MANUFACTURING

This industry group comprises establishments primarily engaged in shaping, molding, glazing, and firing pottery, ceramics, and plumbing fixtures made entirely or partly of clay or other ceramic materials and/or shaping, molding, baking, burning, or hardening clay refractories, non-clay refractories, ceramic tile, structural clay tile, brick, and other structural clay building materials.

32711 POTTERY, CERAMICS, AND PLUMBING FIXTURE MANUFACTURING

This industry comprises establishments primarily engaged in shaping, molding, glazing, and firing pottery, ceramics, and plumbing fixtures made entirely or partly of clay or other ceramic materials.

327111 VITREOUS CHINA PLUMBING FIXTURE AND CHINA AND EARTHENWARE BATHROOM ACCESSORIES MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing vitreous china plumbing fixtures and china and earthenware bathroom accessories, such as faucet handles, towel bars, and soap dishes.

327112 VITREOUS CHINA, FINE EARTHENWARE, AND OTHER POTTERY PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing table and kitchen articles, art and ornamental items, and similar vitreous china, fine earthenware, stoneware, coarse earthenware, and pottery products.

327113 PORCELAIN ELECTRICAL SUPPLY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing porcelain electrical insulators, molded porcelain parts for electrical devices, ferrite or ceramic magnets, and electronic and electrical supplies from nonmetallic minerals, such as clay and ceramic materials.

32712 CLAY BUILDING MATERIAL AND REFRACTORIES MANUFACTURING

This industry comprises establishments primarily engaged in shaping, molding, baking, burning, or hardening clay refractories, nonclay refractories, ceramic tile, structural clay tile, brick, and other structural clay building materials.

327121 BRICK AND STRUCTURAL CLAY TILE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing brick and structural clay tiles.

327122 CERAMIC WALL AND FLOOR TILE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing ceramic wall and floor tiles.

327123 OTHER STRUCTURAL CLAY PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing clay sewer pipe, drain tile, flue lining tile, architectural terra-cotta, and other structural clay products.

327124 CLAY REFRACTORY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing clay refractory, mortar, brick, block, tile, and fabricated clay refractories, such as melting pots. A refractory is a material that will retain its shape and chemical identity when subjected to high temperatures and is used in applications that require extreme resistance to heat, such as furnace linings.

327125 NONCLAY REFRACTORY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing nonclay refractory, mortar, brick, block, tile, and fabricated nonclay refractories such as graphite, magnesite, silica, or alumina crucibles. A refractory is a material that will retain its shape and chemical identity when subjected to high temperatures and is used in applications that require extreme resistance to heat, such as furnace linings.

3272 GLASS AND GLASS PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing glass and/or glass products. Establishments in this industry may manufacture glass and/or glass products by melting silica sand or cullet, or purchasing glass.

32721 GLASS AND GLASS PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing glass and/or glass products. Establishments in this industry may manufacture glass and/or glass products by melting silica sand or cullet, or purchasing glass.

327211 FLAT GLASS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. flat glass by melting silica sand or cullet, or
2. both flat glass and laminated glass by melting silica sand or cullet.

327212 OTHER PRESSED AND BLOWN GLASS AND GLASSWARE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing glass by melting silica sand or cullet and making pressed, blown, or shaped glass or glassware (except glass packaging containers).

327213 GLASS CONTAINER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing glass packaging containers.

327215 GLASS PRODUCT MANUFACTURING MADE OF PURCHASED GLASS

This U.S. industry comprises establishments primarily engaged in coating, laminating, tempering, or shaping purchased glass.

3273 CEMENT AND CONCRETE PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. cement;
2. ready-mix concrete;
3. concrete pipe, brick, and block; and/or
4. other concrete products.

32731 CEMENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing portland, natural, masonry, pozzalanic, and other hydraulic cements. Cement manufacturing establishments may calcine earths or mine, quarry, manufacture, or purchase lime.

327310 CEMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing portland, natural, masonry, pozzalanic, and other hydraulic cements. Cement manufacturing establishments may calcine earths or mine, quarry, manufacture, or purchase lime.

32732 READY-MIX CONCRETE MANUFACTURING

This industry comprises establishments, such as batch plants or mix plants, primarily engaged in manufacturing concrete delivered to a purchaser in a plastic and unhardened state. Ready-mix concrete manufacturing establishments may mine, quarry, or purchase sand and gravel.

327320 READY-MIX CONCRETE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing concrete delivered to a purchaser, such as batch plants or mix plants, in a plastic and unhardened state. Ready-mix concrete manufacturing establishments may mine, quarry, or purchase sand and gravel.

32733 CONCRETE PIPE, BRICK, AND BLOCK MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing concrete pipe, brick, and block.

327331 CONCRETE BLOCK AND BRICK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing concrete block and brick.

327332 CONCRETE PIPE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing concrete pipe.

32739 OTHER CONCRETE PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing concrete products (except block, brick, and pipe).

327390 OTHER CONCRETE PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing concrete products (except block, brick, and pipe).

3274 LIME AND GYPSUM PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing lime from calcitic limestone, dolomitic limestone, or other calcareous materials, such as coral, chalk, and shells and/or gypsum products such as wallboard, plaster, plasterboard, molding, ornamental moldings, statuary, and architectural plaster work.

32741 LIME MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing lime from calcitic limestone, dolomitic limestone, or other calcareous materials, such as coral, chalk, and shells. Lime manufacturing establishments may mine, quarry, collect, or purchase the sources of calcium carbonate.

327410 LIME MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing lime from calcitic limestone, dolomitic limestone, or other calcareous materials, such as coral, chalk, and shells. Lime manufacturing establishments may mine, quarry, collect, or purchase the sources of calcium carbonate.

32742 GYPSUM PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing gypsum products such as wallboard, plaster, plasterboard, molding, ornamental moldings, statuary, and architectural plaster work. Gypsum product manufacturing establishments may mine, quarry, or purchase gypsum.

327420 GYPSUM PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing gypsum products such as wallboard, plaster, plasterboard, molding, ornamental moldings, statuary, and architectural plaster work. Gypsum product manufacturing establishments may mine, quarry, or purchase gypsum.

3279 OTHER NONMETALLIC MINERAL PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing nonmetallic mineral products (except clay products, refractory products, glass products, cement and concrete products, lime, and gypsum products).

32791 ABRASIVE PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing abrasive grinding wheels of natural or synthetic materials, abrasive-coated products, and other abrasive products.

327910 ABRASIVE PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing abrasive grinding wheels of natural or synthetic materials, abrasive-coated products, and other abrasive products.

32799 ALL OTHER NONMETALLIC MINERAL PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing nonmetallic mineral products (except pottery, ceramics, and plumbing fixtures; clay building materials and refractories; glass and glass products; cement; ready-mix concrete; concrete products; lime; gypsum products; and abrasive products).

327991 CUT STONE AND STONE PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in cutting, shaping, and finishing granite, marble, limestone, slate, and other stone for building and miscellaneous uses. Stone product manufacturing establishments may mine, quarry, or purchase stone.

327992 GROUND OR TREATED MINERAL AND EARTH MANUFACTURING

This U.S. industry comprises establishments primarily engaged in calcining, dead burning, or otherwise processing beyond beneficiation, clays, ceramic and refractory minerals, barite, and miscellaneous nonmetallic minerals.

327993 MINERAL WOOL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing mineral wool and mineral wool (i.e., fiberglass) insulation products made of such siliceous materials as rock, slag, and glass or combinations thereof.

327999 ALL OTHER MISCELLANEOUS NONMETALLIC MINERAL PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing nonmetallic mineral products (except pottery, ceramics, and plumbing fixtures; clay building materials and refractories; glass and glass products; cement; ready-mix concrete; concrete products; lime; gypsum products; abrasive products; cut stone and stone products; ground and treated minerals and earth; and mineral wool).

331 PRIMARY METAL MANUFACTURING

Industries in the Primary Metal Manufacturing subsector smelt and/or refine ferrous and nonferrous metals from ore, pig or scrap, using electrometallurgical and other process metallurgical techniques. Establishments in this subsector also manufacture metal alloys and superalloys by introducing other chemical elements to pure metals. The output of smelting and refining, usually in ingot form, is used in rolling, drawing, and extruding operations to make sheet, strip, bar, rod, or wire, and in molten form to make castings and other basic metal products.

Primary manufacturing of ferrous and nonferrous metals begins with ore or concentrate as the primary input. Establishments manufacturing primary metals from ore and/or concentrate remain classified in the primary smelting, primary refining, or iron and steel mill industries regardless of the form of their output. Establishments primarily engaged in secondary smelting and/or secondary refining recover ferrous and nonferrous metals from scrap and/or dross. The output of the secondary smelting and/or secondary refining industries is limited to shapes, such as ingot or billet, that will be further processed. Recovery of metals from scrap often occurs in establishments that are primarily engaged in activities, such as rolling, drawing, extruding, or similar processes.

Excluded from the Primary Metal Manufacturing subsector are establishments primarily engaged in manufacturing ferrous and nonferrous forgings (except ferrous forgings made in steel mills) and stampings. Although forging, stamping, and casting are all methods used to make metal shapes, forging and stamping do not use molten metals and are included in Subsector 332, Fabricated Metal Product Manufacturing. Establishments primarily engaged in operating coke ovens are classified in Industry 32419, Other Petroleum and Coal Products Manufacturing.

3311 IRON AND STEEL MILLS AND FERROALLOY MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. direct reduction of iron ore;
2. pig iron in molten or solid form;
3. converting pig iron into steel;
4. ferroalloys;
5. making steel;
6. making steel and shapes (e.g., bar, plate, rod, sheet, strip, and wire); and
7. making steel and forming pipe and tube.

33111 IRON AND STEEL MILLS AND FERROALLOY MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. direct reduction of iron ore;
2. pig iron in molten or solid form;
3. converting pig iron into steel;
4. ferroalloys;
5. making steel;
6. making steel and shapes (e.g., bar, plate, rod, sheet, strip, and wire); and
7. making steel and forming pipe and tube.

331111 IRON AND STEEL MILLS

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. direct reduction of iron ore;
2. pig iron in molten or solid form;
3. converting pig iron into steel;
4. making steel;
5. making steel and shapes (e.g., bar, plate, rod, sheet, strip, wire); and
6. making steel and forming tube and pipe.

331112 ELECTROMETALLURGICAL FERROALLOY PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electrometallurgical ferroalloys. Ferroalloys add critical elements, such as silicon and manganese for carbon steel and chromium, vanadium, tungsten, titanium, and molybdenum for low- and high-alloy metals. Ferroalloys include iron-rich alloys and more pure forms of elements added during the steel manufacturing process that alter or improve the characteristics of the metal being made.

3312 STEEL PRODUCT MANUFACTURING FROM PURCHASED STEEL

This industry group comprises establishments primarily engaged in manufacturing iron and steel tube and pipe; drawing steel wire; and rolling or drawing shapes from purchased iron or steel.

33121 IRON AND STEEL PIPE AND TUBE MANUFACTURING FROM PURCHASED STEEL

This industry comprises establishments primarily engaged in manufacturing welded, riveted, or seamless pipe and tube from purchased iron or steel.

331210 IRON AND STEEL PIPE AND TUBE MANUFACTURING FROM PURCHASED STEEL

This U.S. industry comprises establishments primarily engaged in manufacturing welded, riveted, or seamless pipe and tube from purchased iron or steel.

33122 ROLLING AND DRAWING OF PURCHASED STEEL

This industry comprises establishments primarily engaged in rolling and/or drawing steel shapes, such as plate, sheet, strip, rod, and bar, from purchased steel.

331221 ROLLED STEEL SHAPE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in rolling or drawing shapes (except wire), such as plate, sheet, strip, rod, and bar, from purchased steel.

331222 STEEL WIRE DRAWING

This U.S. industry comprises establishments primarily engaged in drawing wire from purchased steel.

3313 ALUMINA AND ALUMINUM PRODUCTION AND PROCESSING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. refining alumina;
2. making (i.e., the primary production) aluminum from alumina;
3. recovering aluminum from scrap or dross;

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4. alloying purchased aluminum; and
 5. aluminum primary forms (e.g., bar, foil, pipe, plate, rod, sheet, tube, and wire).

33131 ALUMINA AND ALUMINUM PRODUCTION AND PROCESSING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. refining alumina;
2. making (i.e., the primary production) aluminum from alumina;
3. recovering aluminum from scrap or dross;
4. alloying purchased aluminum; and
5. aluminum primary forms (e.g., bar, foil, pipe, plate, rod, sheet, tube, and wire).

331311 ALUMINA REFINING

This U.S. industry comprises establishments primarily engaged in refining alumina (i.e., aluminum oxide) generally from bauxite.

331312 PRIMARY ALUMINUM PRODUCTION

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. making aluminum from alumina and/or
2. making aluminum from alumina and rolling, drawing, extruding, or casting the aluminum they make into primary forms (e.g., bar, billet, ingot, plate, rod, sheet, and strip).

Establishments in this industry may make primary aluminum or aluminum-based alloys from alumina.

331314 SECONDARY SMELTING AND ALLOYING OF ALUMINUM

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. recovering aluminum and aluminum alloys from scrap and/or dross (i.e., secondary smelting) and making billet or ingot (except by rolling) and/or
2. alloys, powder, paste, or flake from purchased aluminum.

331315 ALUMINUM SHEET, PLATE, AND FOIL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. flat rolling or continuous casting sheet, plate, foil and welded tube from purchased aluminum and/or
2. recovering aluminum from scrap and flat rolling or continuous casting sheet, plate, foil, and welded tube in integrated mills.

331316 ALUMINUM EXTRUDED PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. extruding aluminum bar, pipe, and tube blooms or extruding or drawing tube from purchased aluminum and/or

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2. recovering aluminum from scrap and extruding bar, pipe, and tube blooms or drawing tube in integrated mills.

331319 OTHER ALUMINUM ROLLING AND DRAWING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. rolling, drawing, or extruding shapes (except flat rolled sheet, plate, foil, and welded tube; extruded rod, bar, pipe, and tube blooms; and drawn or extruded tube) from purchased aluminum and/or
2. recovering aluminum from scrap and rolling, drawing or extruding shapes (except flat rolled sheet, plate, foil, and welded tube; extruded rod, bar, pipe, and tube blooms; and drawn or extruded tube) in integrated mills.

3314 NONFERROUS METAL (EXCEPT ALUMINUM) PRODUCTION AND PROCESSING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. smelting and refining nonferrous metal (except aluminum);
2. rolling, drawing, extruding, and alloying copper; and/or
3. rolling, drawing, extruding, and alloying nonferrous metals (except copper and aluminum).

33141 NONFERROUS METAL (EXCEPT ALUMINUM) SMELTING AND REFINING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. smelting ores into nonferrous metals and/or
2. the primary refining of nonferrous metals (except aluminum) using electrolytic or other processes.

331411 PRIMARY SMELTING AND REFINING OF COPPER

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. smelting copper ore and/or
2. the primary refining of copper by electrolytic methods or other processes.

Establishments in this industry make primary copper and copper-based alloys, such as brass and bronze, from ore or concentrates.

331419 PRIMARY SMELTING AND REFINING OF NONFERROUS METAL (EXCEPT COPPER AND ALUMINUM)

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. making (primary production) nonferrous metals by smelting ore and/or
2. the primary refining of nonferrous metals by electrolytic methods or other processes.

33142 COPPER ROLLING, DRAWING, EXTRUDING, AND ALLOYING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. recovering copper or copper alloys from scraps;

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2. alloying purchased copper;
 3. rolling, drawing, or extruding shapes, (e.g., bar, plate, sheet, strip, tube, wire) from purchased copper; and
 4. recovering copper or copper alloys from scrap and rolling drawing, or extruding shapes (e.g., bar, plate, sheet, strip, tube, wire).

331421 COPPER ROLLING, DRAWING, AND EXTRUDING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, and tube (except bare or insulated copper communication or energy wire)) from purchased copper and/or
2. recovering copper from scrap and rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, and tube (except bare or insulated copper communication or energy wire)) in integrated mills.

331422 COPPER WIRE (EXCEPT MECHANICAL) DRAWING

This U.S. industry comprises establishments primarily engaged in drawing or drawing and insulating communication and energy wire and cable from purchased copper or in integrated secondary smelting and wire drawing plants.

331423 SECONDARY SMELTING, REFINING, AND ALLOYING OF COPPER

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. recovering copper and copper alloys from scrap and/or
2. alloying purchased copper.

Establishments in this industry make primary forms, such as ingot, wire bar, cake, and slab from copper or copper alloys, such as brass and bronze.

33149 NONFERROUS METAL (EXCEPT COPPER AND ALUMINUM) ROLLING, DRAWING, EXTRUDING, AND ALLOYING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. recovering nonferrous metals (except copper and aluminum) and nonferrous metal alloys from scrap;
2. alloying purchased nonferrous metals (except copper and aluminum);
3. rolling, drawing, and extruding shapes from purchased nonferrous metals (except copper and aluminum); and
4. recovering nonferrous metals from scrap (except copper and aluminum) and rolling, drawing, or extruding shapes in integrated facilities.

331491 NONFERROUS METAL (EXCEPT COPPER AND ALUMINUM) ROLLING, DRAWING, AND EXTRUDING

This U.S. industry comprises establishments primarily engaged in:

1. rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, and tube) from purchased nonferrous metals and/or
2. recovering nonferrous metals from scrap and rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, and tube) in integrated mills.

331492 SECONDARY SMELTING, REFINING, AND ALLOYING OF NONFERROUS METAL (EXCEPT COPPER AND ALUMINUM)

This U.S. industry comprises establishments primarily engaged in:

1. alloying purchased nonferrous metals and/or
2. recovering nonferrous metals from scrap.

Establishments in this industry make primary forms (e.g., bar, billet, bloom, cake, ingot, slab, slug, and wire) using smelting or refining processes.

3315 FOUNDRIES

This industry group comprises establishments primarily engaged in pouring molten metal into molds or dies to form castings. Establishments making castings and further manufacturing, such as machining or assembling, a specific manufactured product are classified in the industry of the finished product. Foundries may perform operations, such as cleaning and deburring, on the castings they manufacture. More involved processes, such as tapping, threading, milling, or machining to tight tolerances, that transform castings into more finished products are classified elsewhere in the manufacturing sector based on the product being made.

Establishments in this industry group make castings from purchased metals or in integrated secondary smelting and casting facilities. When the production of primary metals is combined with making castings, the establishment is classified in 331 with the primary metal being made.

33151 FERROUS METAL FOUNDRIES

This industry comprises establishments primarily engaged in pouring molten iron and steel into molds of a desired shape to made castings. Establishments in this industry purchase iron and steel made in other establishments.

331511 IRON FOUNDRIES

This U.S. industry comprises establishments primarily engaged in pouring molten pig iron or iron alloys into molds to manufacture castings (e.g., cast iron manhole covers, cast iron pipe, cast iron skillets). Establishments in this industry purchase iron made in other establishments.

331512 STEEL INVESTMENT FOUNDRIES

This U.S. industry comprises establishments primarily engaged in manufacturing steel investment castings. Investment molds are formed by covering a wax shape with a refractory slurry. After the refractory slurry hardens, the wax is melted, leaving a seamless mold. Investment molds provide highly detailed, consistent castings. Establishments in this industry purchase steel made in other establishments.

331513 STEEL FOUNDRIES (EXCEPT INVESTMENT)

This U.S. industry comprises establishments primarily engaged in manufacturing steel castings (except steel investment castings). Establishments in this industry purchase steel made in other establishments.

33152 NONFERROUS METAL FOUNDRIES

This industry comprises establishments primarily engaged in pouring and/or introducing molten nonferrous metal, under high pressure, into metal molds or dies to manufacture castings. Establishments in this industry purchase nonferrous metals made in other establishments.

331521 ALUMINUM DIE-CASTING FOUNDRIES

This U.S. industry comprises establishments primarily engaged in introducing molten aluminum, under high pressure, into molds or dies to make aluminum die-castings. Establishments in this industry purchase aluminum made in other establishments.

331522 NONFERROUS (EXCEPT ALUMINUM) DIE-CASTING FOUNDRIES

This U.S. industry comprises establishments primarily engaged in introducing molten nonferrous metal (except aluminum), under high pressure, into molds to make nonferrous metal die-castings. Establishments in this industry purchase nonferrous metals made in other establishments.

331524 ALUMINUM FOUNDRIES (EXCEPT DIE-CASTING)

This U.S. industry comprises establishments primarily engaged in pouring molten aluminum into molds to manufacture aluminum castings. Establishments in this industry purchase aluminum made in other establishments.

331525 COPPER FOUNDRIES (EXCEPT DIE-CASTING)

This U.S. industry comprises establishments primarily engaged in pouring molten copper into molds to manufacture copper castings. Establishments in this industry purchase copper made in other establishments.

331528 OTHER NONFERROUS FOUNDRIES (EXCEPT DIE-CASTING)

This U.S. industry comprises establishments primarily engaged in pouring molten nonferrous metals (except aluminum and copper) into molds to manufacture nonferrous castings (except aluminum die-castings, nonferrous (except aluminum) die-castings, aluminum castings, and copper castings). Establishments in this industry purchase nonferrous metals, such as nickel, lead, and zinc, made in other establishments.

332 FABRICATED METAL PRODUCT MANUFACTURING

Industries in the Fabricated Metal Product Manufacturing subsector transform metal into intermediate or end products, other than machinery, computers and electronics, and metal furniture or treating metals and metal formed products fabricated elsewhere. Important fabricated metal processes are forging, stamping, bending, forming, and machining, used to shape individual pieces of metal; and other processes, such as welding and assembling, used to join separate parts together. Establishments in this subsector may use one of these processes or a combination of these processes.

The North American Industry Classification System (NAICS) structure for this subsector distinguishes the forging and stamping processes in a single industry. The remaining industries, in the subsector, group establishments based on similar combinations of processes used to make products.

The manufacturing performed in the Fabricated Metal Product Manufacturing subsector begins with manufactured metal shapes. The establishments in this sector further fabricate the purchased metal shapes into a product. For instance, the Spring and Wire Product Manufacturing industry starts with wire and fabricates such items.

Within manufacturing there are other establishments that make the same products made by this subsector; only these establishments begin production further back in the production process. These establishments have a more integrated operation. For instance, one establishment may manufacture steel, draw it into wire, and make wire products in the same establishment. Such operations are classified in the Primary Metal Manufacturing subsector.

3321 FORGING AND STAMPING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

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1. forgings from purchased metals;
 2. metal custom roll forming products;
 3. metal stamped and spun products (except automotive, cans, and coins); and
 4. powder metallurgy products.

Establishments making metal forgings, metal stampings, and metal spun products and further manufacturing (e.g., machining and assembling) a specific manufactured product are classified in the industry of the finished product. Metal forging, metal stamping, and metal spun products establishments may perform surface finishing operations, such as cleaning and deburring, on the products they manufacture.

33211 FORGING AND STAMPING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. forgings from purchased metals;
2. metal custom roll forming products;
3. metal stamped and spun products (except automotive, cans, and coins); and
4. powder metallurgy products.

Establishments making metal forgings, metal stampings, and metal spun products and further manufacturing (e.g., machining and assembling) a specific manufactured product are classified in the industry of the finished product. Metal forging, metal stamping, and metal spun products establishments may perform surface finishing operations, such as cleaning and deburring, on the products they manufacture.

332111 IRON AND STEEL FORGING

This U.S. industry comprises establishments primarily engaged in manufacturing iron and steel forgings from purchased iron and steel by hammering mill shapes. Establishments making iron and steel forgings and further manufacturing (e.g., machining, assembling) a specific manufactured product are classified in the industry of the finished product. Iron and steel forging establishments may perform surface finishing operations, such as cleaning and deburring, on the forgings they manufacture.

332112 NONFERROUS FORGING

This U.S. industry comprises establishments primarily engaged in manufacturing nonferrous forgings from purchased nonferrous metals by hammering mill shapes. Establishments making nonferrous forgings and further manufacturing (e.g., machining, assembling) a specific manufactured product are classified in the industry of the finished product. Nonferrous forging establishments may perform surface finishing operations, such as cleaning and deburring, on the forgings they manufacture.

332114 CUSTOM ROLL FORMING

This U.S. industry comprises establishments primarily engaged in custom roll forming metal products by use of rotary motion of rolls with various contours to bend or shape the products.

332115 CROWN AND CLOSURE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in stamping metal crowns and closures, such as bottle caps and home canning lids and rings.

332116 METAL STAMPING

This U.S. industry comprises establishments primarily engaged in manufacturing unfinished metal stampings and spinning unfinished metal products (except crowns, cans, closures, automotive, and coins). Establishments making metal stampings and metal spun products and further manufacturing (e.g., machining, assembling) a specific product are classified in the industry of the finished product. Metal stamping and metal spun products establishments may perform surface finishing operations, such as cleaning and deburring, on the products they manufacture.

332117 POWDER METALLURGY PART MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing powder metallurgy products by compacting them in a shaped die and sintering. Establishments in this industry generally make a wide range of parts on a job or order basis.

3322 CUTLERY AND HANDTOOL MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. nonprecious and precious plated metal cutlery and flatware;
2. nonpowered hand and edge tools;
3. nonpowered handsaws;
4. saw blades, all types (including those for sawing machines); and
5. metal kitchen utensils (except cutting-type) and pots and pans (except those manufactured by casting (e.g., cast iron skillets) or stamped without further fabrication).

33221 CUTLERY AND HANDTOOL MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. nonprecious and precious plated metal cutlery and flatware;
2. nonpowered hand and edge tools;
3. nonpowered handsaws;
4. saw blades, all types (including those for sawing machines); and
5. metal kitchen utensils (except cutting-type) and pots and pans (except those manufactured by casting (e.g., cast iron skillets) or stamped without further fabrication).

332211 CUTLERY AND FLATWARE (EXCEPT PRECIOUS) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing nonprecious and precious plated metal cutlery and flatware.

332212 HAND AND EDGE TOOL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing nonpowered hand and edge tools (except saws).

332213 SAW BLADE AND HANDSAW MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. nonpowered handsaws and/or
2. saw blades, all types (including those for power sawing machines).

332214 KITCHEN UTENSIL, POT, AND PAN MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal kitchen utensils (except cutting-type), pots, and pans (except those manufactured by casting (e.g., cast iron skillets) or stamped without further fabrication).

3323 ARCHITECTURAL AND STRUCTURAL METALS MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. plate work and fabricated structural products and
2. ornamental and architectural metal products.

33231 PLATE WORK AND FABRICATED STRUCTURAL PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. prefabricated metal buildings, panels and sections;
2. structural metal products; and
3. metal plate work products.

332311 PREFABRICATED METAL BUILDING AND COMPONENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing prefabricated metal buildings, panels, and sections.

332312 FABRICATED STRUCTURAL METAL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in fabricating structural metal products, such as concrete reinforcing bars and fabricated bar joists.

332313 PLATE WORK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated metal plate work by cutting, punching, bending, shaping, and welding purchased metal plate.

33232 ORNAMENTAL AND ARCHITECTURAL METAL PRODUCTS MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. metal framed windows (i.e., typically using purchased glass) and metal doors;
2. sheet metal work; and
3. ornamental and architectural metal products.

332321 METAL WINDOW AND DOOR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal framed windows (typically using purchased glass) and metal doors. Examples of products made by these establishments are: metal door frames; metal framed window and door screens; and metal molding and trim (except automotive).

332322 SHEET METAL WORK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing sheet metal work (except stampings).

332323 ORNAMENTAL AND ARCHITECTURAL METAL WORK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing ornamental and architectural metal work, such as staircases, metal open steel flooring, fire escapes, railings, and scaffolding.

3324 BOILER, TANK, AND SHIPPING CONTAINER MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. power boilers and heat exchangers;
2. metal tanks (heavy gauge); and
3. metal cans, boxes, and other metal containers (light gauge).

33241 POWER BOILER AND HEAT EXCHANGER MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing power boilers and heat exchangers. Establishments in this industry may perform installation in addition to manufacturing power boilers and heat exchangers.

332410 POWER BOILER AND HEAT EXCHANGER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing power boilers and heat exchangers. Establishments in this industry may perform installation in addition to manufacturing power boilers and heat exchangers.

33242 METAL TANK (HEAVY GAUGE) MANUFACTURING

This industry comprises establishments primarily engaged in cutting, forming, and joining heavy gauge metal to manufacture tanks, vessels, and other containers.

332420 METAL TANK (HEAVY GAUGE) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in cutting, forming, and joining heavy gauge metal to manufacture tanks, vessels, and other containers.

33243 METAL CAN, BOX, AND OTHER METAL CONTAINER (LIGHT GAUGE) MANUFACTURING

This industry comprises establishments primarily engaged in forming light gauge metal containers.

332431 METAL CAN MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal cans, lids, and ends.

332439 OTHER METAL CONTAINER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal (light gauge) containers (except cans).

3325 HARDWARE MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing metal hardware, such as metal hinges, metal handles, keys, and locks (except coin-operated and time locks).

33251 HARDWARE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing metal hardware, such as metal hinges, metal handles, keys, and locks (except coin-operated and time locks).

332510 HARDWARE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal hardware, such as metal hinges, metal handles, keys, and locks (except coin-operated and time locks).

3326 SPRING AND WIRE PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. steel springs by forming, such as cutting, bending, and heat winding, metal rod or strip stock, and/or
2. wire springs and fabricated wire products from wire drawn elsewhere (except watch and clock springs).

33261 SPRING AND WIRE PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. steel springs by forming, such as cutting, bending, and heat winding, metal rod or strip stock, and/or
2. wire springs and fabricated wire products from wire drawn elsewhere (except watch and clock springs).

332611 SPRING (HEAVY GAUGE) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing heavy gauge springs by forming, such as cutting, bending, and heat winding, rod or strip stock.

332612 SPRING (LIGHT GAUGE) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing light gauge springs from purchased wire or strip.

332618 OTHER FABRICATED WIRE PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated wire products (except springs) made from purchased wire.

3327 MACHINE SHOPS; TURNED PRODUCT; AND SCREW, NUT, AND BOLT MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. machine shops and/or
2. turned products and screws, nuts, and bolts.

33271 MACHINE SHOPS

This industry comprises establishments primarily engaged in machining metal parts on a job or order basis (known as machine shops). Generally machine shop jobs are low volume using machine tools, such as lathes (including computer numerically controlled); automatic screw machines; and machines for boring, grinding, and milling.

332710 MACHINE SHOPS

This U.S. industry comprises establishments primarily engaged in machining metal parts on a job or order basis (known as machine shops). Generally machine shop jobs are low volume using machine tools, such as lathes (including computer numerically controlled); automatic screw machines; and machines for boring, grinding, and milling.

33272 TURNED PRODUCT AND SCREW, NUT, AND BOLT MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. precision turned products or
2. metal bolts, nuts, screws, rivets, and other industrial fasteners.

Included in this industry are establishments primarily engaged in manufacturing parts for machinery and equipment on a customized basis.

332721 PRECISION TURNED PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in machining precision products of all materials on a job or order basis (known as precision turned manufacturers). Generally precision turned product jobs are large volume using machines, such as automatic screw machines, rotary transfer machines, computer numerically controlled (CNC) lathes, or turning centers.

332722 BOLT, NUT, SCREW, RIVET, AND WASHER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal bolts, nuts, screws, rivets, washers, and other industrial fasteners using machines, such as headers, threaders, and nut forming machines.

3328 COATING, ENGRAVING, HEAT TREATING, AND ALLIED ACTIVITIES

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. heat treating metals and metal products;
2. enameling, lacquering, and varnishing metals and metal products;
3. hot dip galvanizing metals and metal products;
4. engraving, chasing, or etching metals and metal products (except jewelry; personal goods carried on or about the person, such as compacts and cigarette cases; precious metal products (except precious plated flatware and other plated ware); and printing plates);
5. powder coating metals and metal products;
6. electroplating, plating, anodizing, coloring, and finishing metals and metal products; and
7. providing other metal surfacing services for the trade.

Included in this industry are establishments that coat engravings and heat treat metals and metal formed products fabricated elsewhere.

33281 COATING, ENGRAVING, HEAT TREATING, AND ALLIED ACTIVITIES

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. heat treating metals and metal products;
2. enameling, lacquering, and varnishing metals and metal products;
3. hot dip galvanizing metals and metal products;

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4. engraving, chasing, or etching metals and metal products (except jewelry; personal goods carried on or about the person, such as compacts and cigarette cases; precious metal products (except precious plated flatware and other plated ware); and printing plates);
 5. powder coating metals and metal products;
 6. electroplating, plating, anodizing, coloring, and finishing metals and metal products; and
 7. providing other metal surfacing services for the trade.

Included in this industry are establishments that coat engravings and heat treat metals and metal formed products fabricated elsewhere.

332811 METAL HEAT TREATING

This U.S. industry comprises establishments primarily engaged in heat treating, such as annealing, tempering, and brazing, metals and metal products for the trade.

332812 METAL COATING, ENGRAVING (EXCEPT JEWELRY AND SILVERWARE), AND ALLIED SERVICES TO MANUFACTURERS

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. enameling, lacquering, and varnishing metals and metal products;
2. hot dip galvanizing metals and metal products;
3. engraving, chasing, or etching metals and metal products (except jewelry; personal goods carried on or about the person, such as compacts and cigarette cases; precious metal products (except precious plated flatware and other plated ware); and printing plates);
4. powder coating metals and metal products; and
5. providing other metal surfacing services for the trade.

332813 ELECTROPLATING, PLATING, POLISHING, ANODIZING, AND COLORING

This U.S. industry comprises establishments primarily engaged in electroplating, plating, anodizing, coloring, buffing, polishing, cleaning, and sandblasting metals and metal products for the trade.

3329 OTHER FABRICATED METAL PRODUCT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metals, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, and nuts and bolts).

33291 METAL VALVE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing one or more of the following metal valves:

1. industrial valves;
2. fluid power valves and hose fittings;
3. plumbing fixture fittings and trim; and
4. other metal valves and pipe fittings.

332911 INDUSTRIAL VALVE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing industrial valves and valves for water works and municipal water systems.

332912 FLUID POWER VALVE AND HOSE FITTING MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power valves and hose fittings.

332913 PLUMBING FIXTURE FITTING AND TRIM MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal and plastics plumbing fixture fittings and trim, such as faucets, flush valves, and shower heads.

332919 OTHER METAL VALVE AND PIPE FITTING MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal valves (except industrial valves, fluid power valves, fluid power hose fittings, and plumbing fixture fittings and trim).

33299 ALL OTHER FABRICATED METAL PRODUCT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metal products, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, nuts and bolts, and metal valves).

332991 BALL AND ROLLER BEARING MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing ball and roller bearings of all materials.

332992 SMALL ARMS AMMUNITION MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing small arms ammunition.

332993 AMMUNITION (EXCEPT SMALL ARMS) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing ammunition (except small arms). Examples of products made by these establishments are bombs, depth charges, rockets (except guided missiles), grenades, mines, and torpedoes.

332994 SMALL ARMS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing small firearms that are carried and fired by the individual.

332995 OTHER ORDNANCE AND ACCESSORIES MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing ordnance (except small arms) and accessories.

332996 FABRICATED PIPE AND PIPE FITTING MANUFACTURING

This U.S. industry comprises establishments primarily engaged in fabricating, such as cutting, threading, and bending metal pipes and pipe fittings made from purchased metal pipe.

332997 INDUSTRIAL PATTERN MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing industrial patterns.

332998 ENAMELED IRON AND METAL SANITARY WARE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing enameled iron and metal sanitary ware.

332999 ALL OTHER MISCELLANEOUS FABRICATED METAL PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metals, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, nuts and bolts, metal valves, ball and roller bearings, ammunition, small arms and other ordnances, fabricated pipes and pipe fittings, industrial patterns, and enameled iron and metal sanitary ware).

333 MACHINERY MANUFACTURING

Industries in the Machinery Manufacturing subsector create end products that apply mechanical force, for example, the application of gears and levers, to perform work. Some important processes for the manufacture of machinery are forging, stamping, bending, forming, and machining that are used to shape individual pieces of metal. Processes, such as welding and assembling are used to join separate parts together. Although these processes are similar to those used in metal fabricating establishments, machinery manufacturing is different because it typically employs multiple metal forming processes in manufacturing the various parts of the machine. Moreover, complex assembly operations are an inherent part of the production process.

In general, design considerations are very important in machinery production. Establishments specialize in making machinery designed for particular applications. Thus, design is considered to be part of the production process for the purpose of implementing the North American Industry Classification System (NAICS). The NAICS structure reflects this by defining industries and industry groups that make machinery for different applications. A broad distinction exists between machinery that is generally used in a variety of industrial applications (i.e., general purpose machinery) and machinery that is designed to be used in a particular industry (i.e., special purpose machinery). Three industry groups consist of special purpose machinery—Agricultural, Construction, and Mining Machinery Manufacturing; Industrial Machinery Manufacturing; and Commercial and Service Industry Machinery Manufacturing. The other industry groups make general-purpose machinery: Ventilation, Heating, Air Conditioning, and Commercial Refrigeration Equipment Manufacturing; Metalworking Machinery Manufacturing; Engine, Turbine, and Power Transmission Equipment Manufacturing; and Other General Purpose Machinery Manufacturing.

3331 AGRICULTURE, CONSTRUCTION, AND MINING MACHINERY MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. agricultural implements;
2. construction machinery; and
3. mining and oil and gas field machinery.

33311 AGRICULTURAL IMPLEMENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing farm machinery and equipment, powered mowing equipment, and other powered home lawn and garden equipment.

333111 FARM MACHINERY AND EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing agricultural and farm machinery and equipment and other turf and grounds care equipment, including planting, harvesting, and grass mowing equipment (except lawn and garden-type).

333112 LAWN AND GARDEN TRACTOR AND HOME LAWN AND GARDEN EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing powered lawn-mowers, lawn and garden tractors, and other home lawn and garden equipment, such as tillers, shredders, and yard vacuums and blowers.

33312 CONSTRUCTION MACHINERY MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing construction machinery, surface mining machinery, and logging equipment.

333120 CONSTRUCTION MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing construction machinery, surface mining machinery, and logging equipment.

33313 MINING AND OIL AND GAS FIELD MACHINERY MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing oil and gas field and underground mining machinery and equipment.

333131 MINING MACHINERY AND EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. underground mining machinery and equipment, such as coal breakers, mining cars, core drills, coal cutters, and rock drills and
2. mineral beneficiating machinery and equipment used in surface or underground mines.

333132 OIL AND GAS FIELD MACHINERY AND EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. oil and gas field machinery and equipment, such as oil and gas field drilling machinery and equipment; oil and gas field production machinery and equipment; and oil and gas field derricks; and
2. water well drilling machinery.

3332 INDUSTRIAL MACHINERY MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. sawmill and woodworking machinery;
2. plastics and rubber industry machinery; and
3. other industrial machinery.

33321 SAWMILL AND WOODWORKING MACHINERY MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing sawmill and woodworking machinery (except handheld), such as circular and band sawing equipment, planing machinery, and sanding machinery.

333210 SAWMILL AND WOODWORKING MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing sawmill and woodworking machinery (except handheld), such as circular and band sawing equipment, planing machinery, and sanding machinery.

33322 PLASTICS AND RUBBER INDUSTRY MACHINERY MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing plastics and rubber products making machinery, such as plastics compression, extrusion and injection molding machinery and equipment, and tire building and recapping machinery and equipment.

333220 PLASTICS AND RUBBER INDUSTRY MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing plastics and rubber products making machinery, such as plastics compression, extrusion and injection molding machinery and equipment, and tire building and recapping machinery and equipment.

33329 OTHER INDUSTRIAL MACHINERY MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing industrial machinery (except agricultural and farm-type, construction, mining, sawmill and woodworking, and plastics and rubber products making machinery).

333291 PAPER INDUSTRY MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing paper industry machinery for making paper and paper products, such as pulp making machinery, paper and paperboard making machinery, and paper and paperboard converting machinery.

333292 TEXTILE MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing textile machinery for making thread, yarn, and fiber.

333293 PRINTING MACHINERY AND EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing printing and bookbinding machinery and equipment, such as printing presses, typesetting machinery, and bindery machinery.

333294 FOOD PRODUCT MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing food and beverage manufacturing-type machinery and equipment, such as dairy product plant machinery and equipment (e.g., homogenizers, pasteurizers, ice cream freezers), bakery machinery and equipment (e.g., dough mixers, bake ovens, pastry rolling machines), meat and poultry processing and preparation machinery, and other commercial food products machinery (e.g., slicers, choppers, and mixers).

333295 SEMICONDUCTOR MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing wafer processing equipment, semiconductor assembly and packaging equipment, and other semiconductor making machinery.

333298 ALL OTHER INDUSTRIAL MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing industrial machinery (except agricultural and farm-type, construction and mining machinery, sawmill and woodworking machinery, plastics and rubber making machinery, paper and paperboard making machinery, textile machinery, printing machinery and equipment, food manufacturing-type machinery, and semiconductor making machinery).

3333 COMMERCIAL AND SERVICE INDUSTRY MACHINERY MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing commercial and service machinery, such as automatic vending machinery, commercial laundry and dry-cleaning machinery, office machinery, photographic and photocopying machinery, optical instruments and machinery, automotive maintenance equipment (except mechanic's handtools), industrial vacuum cleaners, and commercial-type cooking equipment.

33331 COMMERCIAL AND SERVICE INDUSTRY MACHINERY MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing commercial and service machinery, such as automatic vending machinery, commercial laundry and dry-cleaning machinery, office machinery, photographic and photocopying machinery, optical instruments and machinery, automotive maintenance equipment (except mechanic's handtools), industrial vacuum cleaners, and commercial-type cooking equipment.

333311 AUTOMATIC VENDING MACHINE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. coin, token, currency, or magnetic card operated vending machines; and/or
2. coin operated mechanism for machines, such as vending machines, lockers, and laundry machines.

333312 COMMERCIAL LAUNDRY, DRYCLEANING, AND PRESSING MACHINE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing commercial and industrial laundry and drycleaning equipment and pressing machines.

333313 OFFICE MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing office machinery (except computers and photocopying equipment), such as mailhandling machinery and equipment, calculators, typewriters, and dedicated word processing equipment.

333314 OPTICAL INSTRUMENT AND LENS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. optical instruments and lens, such as binoculars, microscopes (except electron and proton), telescopes, prisms, and lenses (except ophthalmic);
2. coating or polishing lenses (except ophthalmic); and
3. mounting lenses (except ophthalmic).

333315 PHOTOGRAPHIC AND PHOTOCOPYING EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing photographic and photocopying equipment, such as cameras (except television, video, and digital), projectors, film developing equipment, photocopying equipment, and microfilm equipment.

333319 OTHER COMMERCIAL AND SERVICE INDUSTRY MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing commercial and service industry equipment (except automatic vending machines, commercial laundry, drycleaning and pressing machines, office machinery, optical instruments and lenses, and photographic and photocopying equipment).

3334 VENTILATION, HEATING, AIR-CONDITIONING, AND COMMERCIAL REFRIGERATION EQUIPMENT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing ventilation, heating, air-conditioning, and commercial and industrial refrigeration and freezer equipment.

33341 VENTILATION, HEATING, AIR-CONDITIONING, AND COMMERCIAL REFRIGERATION EQUIPMENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing ventilation, heating, air-conditioning, and commercial and industrial refrigeration and freezer equipment.

333411 AIR PURIFICATION EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing stationary air purification equipment, such as industrial dust and fume collection equipment, electrostatic precipitation equipment, warm air furnace filters, air washers, and other dust collection equipment.

333412 INDUSTRIAL AND COMMERCIAL FAN AND BLOWER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing attic fans and industrial and commercial fans and blowers, such as commercial exhaust fans and commercial ventilating fans.

333414 HEATING EQUIPMENT (EXCEPT WARM AIR FURNACES) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing heating equipment (except electric and warm air furnaces), such as heating boilers, heating stoves, floor and wall furnaces, and wall and baseboard heating units.

333415 AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT AND COMMERCIAL AND INDUSTRIAL REFRIGERATION EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. air-conditioning (except motor vehicle) and warm air furnace equipment and/or
2. commercial and industrial refrigeration and freezer equipment.

3335 METALWORKING MACHINERY MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing metalworking machinery, such as metal cutting and metal forming machine tools; cutting tools; and accessories for metalworking machinery; special dies, tools, jigs, and fixtures; industrial molds; rolling mill machinery; assembly machinery; coil handling, conversion, or straightening equipment; and wire drawing and fabricating machines.

33351 METALWORKING MACHINERY MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing metalworking machinery, such as metal cutting and metal forming machine tools; cutting tools; and accessories for metalworking machinery; special dies, tools, jigs, and fixtures; industrial molds; rolling mill machinery; assembly machinery; coil handling, conversion, or straightening equipment; and wire drawing and fabricating machines.

333511 INDUSTRIAL MOLD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing industrial molds for casting metals or forming other materials, such as plastics, glass, or rubber.

333512 MACHINE TOOL (METAL CUTTING TYPES) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal cutting machine tools (except handtools).

333513 MACHINE TOOL (METAL FORMING TYPES) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal forming machine tools (except handtools), such as punching, sheering, bending, forming, pressing, forging, and die-casting machines.

333514 SPECIAL DIE AND TOOL, DIE SET, JIG, AND FIXTURE MANUFACTURING

This U.S. industry comprises establishments, known as tool and die shops, primarily engaged in manufacturing special tools and fixtures, such as cutting dies and jigs.

333515 CUTTING TOOL AND MACHINE TOOL ACCESSORY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing accessories and attachments for metal cutting and metal forming machine tools.

333516 ROLLING MILL MACHINERY AND EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing rolling mill machinery and equipment for metal production.

333518 OTHER METALWORKING MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal working machinery (except industrial molds; metal cutting machine tools; metal forming machine tools; special dies and tools, die sets, jigs, and fixtures; cutting tools and machine tool accessories; and rolling mill machinery and equipment).

3336 ENGINE, TURBINE, AND POWER TRANSMISSION EQUIPMENT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing turbines, power transmission equipment, and internal combustion engines (except automotive, gasoline, and aircraft).

33361 ENGINE, TURBINE, AND POWER TRANSMISSION EQUIPMENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing turbines, power transmission equipment, and internal combustion engines (except automotive, gasoline, and aircraft).

333611 TURBINE AND TURBINE GENERATOR SET UNITS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing turbines (except aircraft) and complete turbine generator set units, such as steam, hydraulic, gas, and wind.

333612 SPEED CHANGER, INDUSTRIAL HIGH-SPEED DRIVE, AND GEAR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing gears, speed changers, and industrial high-speed drives (except hydrostatic).

333613 MECHANICAL POWER TRANSMISSION EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing mechanical power transmission equipment (except motor vehicle and aircraft), such as plain bearings, clutches (except motor vehicle and electromagnetic industrial control), couplings, joints, and drive chains.

333618 OTHER ENGINE EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing internal combustion engines (except automotive gasoline and aircraft).

3339 OTHER GENERAL PURPOSE MACHINERY MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. pumps and compressors;
2. material handling equipment; and
3. all other general purpose machinery.

33391 PUMP AND COMPRESSOR MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing pumps and compressors, such as general purpose air and gas compressors, nonagricultural spraying and dusting equipment, general purpose pumps and pumping equipment (except fluid power pumps and motors), and measuring and dispensing pumps.

333911 PUMP AND PUMPING EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing general purpose pumps and pumping equipment (except fluid power pumps and motors), such as reciprocating pumps, turbine pumps, centrifugal pumps, rotary pumps, diaphragm pumps, domestic water system pumps, oil well and oil field pumps, and sump pumps.

333912 AIR AND GAS COMPRESSOR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing general purpose air and gas compressors, such as reciprocating compressors, centrifugal compressors, vacuum pumps (except laboratory), and nonagricultural spraying and dusting compressors and spray gun units.

333913 MEASURING AND DISPENSING PUMP MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing measuring and dispensing pumps, such as gasoline pumps and lubricating oil measuring and dispensing pumps.

33392 MATERIAL HANDLING EQUIPMENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing material handling equipment, such as elevators and moving stairs; conveyors and conveying equipment; overhead traveling cranes, hoists, and monorail systems; and industrial trucks, tractors, trailers, and stacker machinery.

333921 ELEVATOR AND MOVING STAIRWAY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing elevators and moving stairways.

333922 CONVEYOR AND CONVEYING EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing conveyors and conveying equipment, such as gravity conveyors, trolley conveyors, tow conveyors, pneumatic tube conveyors, carousel conveyors, farm conveyors, and belt conveyors.

333923 OVERHEAD TRAVELING CRANE, HOIST, AND MONORAIL SYSTEM MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing overhead traveling cranes, hoists, and monorail systems.

333924 INDUSTRIAL TRUCK, TRACTOR, TRAILER, AND STACKER MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing industrial trucks, tractors, trailers, and stackers (i.e., truck-type), such as forklifts, pallet loaders and unloaders, and portable loading docks.

33399 ALL OTHER GENERAL PURPOSE MACHINERY MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing general purpose machinery (except ventilation, heating, air-conditioning, and commercial refrigeration equipment; metal working machinery; engines, turbines, and power transmission equipment; pumps and compressors; and material handling equipment).

333991 POWER-DRIVEN HANDTOOL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing power-driven (e.g., battery, corded, and pneumatic) handtools, such as drills, screwguns, circular saws, chain saws, staplers, and nailers.

333992 WELDING AND SOLDERING EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing welding and soldering equipment and accessories (except transformers), such as arc, resistance, gas, plasma, laser, electron beam, and ultrasonic welding equipment; welding electrodes; coated or cored welding wire; and soldering equipment (except handheld).

333993 PACKAGING MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing packaging machinery, such as wrapping, bottling, canning, and labeling machinery.

333994 INDUSTRIAL PROCESS FURNACE AND OVEN MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing industrial process furnaces, ovens, induction and dielectric heating equipment, and kilns (except cement, chemical, and wood).

333995 FLUID POWER CYLINDER AND ACTUATOR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power (i.e., hydraulic and pneumatic) cylinders and actuators.

333996 FLUID POWER PUMP AND MOTOR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power (i.e., hydraulic and pneumatic) pumps and motors.

333997 SCALE AND BALANCE (EXCEPT LABORATORY) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing scales and balances (except laboratory).

333999 ALL OTHER MISCELLANEOUS GENERAL PURPOSE MACHINERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing general purpose machinery (except ventilating, heating, air-conditioning, and commercial refrigeration equipment; metal working machinery; engines, turbines, and power transmission equipment; pumps and compressors; material handling equipment; power-driven handtools; welding and soldering equipment; packaging machinery; industrial process furnaces and ovens; fluid power cylinders and actuators; fluid power pumps and motors; and scales and balances).

334 COMPUTER AND ELECTRONIC PRODUCT MANUFACTURING

Industries in the Computer and Electronic Product Manufacturing subsector group establishments that manufacture computers, computer peripherals, communications equipment, and similar electronic products, and establishments that manufacture components for such products. The Computer and Electronic Product Manufacturing industries have been combined in the hierarchy of the North American Industry Classification System (NAICS) because of the economic significance they have attained. Their rapid growth suggests that they will become even more important to the economies of all three North American countries in the future, and in addition their manufacturing processes are fundamentally different from the manufacturing processes of other machinery and equipment. The design and use of integrated circuits and the application of highly specialized miniaturization technologies are common elements in the production technologies of the computer and electronic subsector. Convergence of technology motivates this NAICS subsector. Digitalization of sound recording, for example, causes both the medium (the compact disc) and the equipment to resemble the technologies for recording, storing, transmitting, and manipulating data. Communications technology and equipment have been converging with computer technology. When technologically-related components are in the same sector, it makes it easier to adjust the classification for future changes, without needing to redefine its basic structure. The creation of the Computer and Electronic Product Manufacturing subsector will assist in delineating new and emerging industries because the activities that will serve as the probable sources of new industries, such as computer manufacturing and communications equipment manufacturing, or computers and audio equipment, are brought together. As new activities emerge, they are less likely therefore, to cross the subsector boundaries of the classification.

3341 COMPUTER AND PERIPHERAL EQUIPMENT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing and/or assembling electronic computers, such as mainframes, personal computers, workstations, laptops, and computer servers; and computer peripheral equipment, such as storage devices, printers, monitors, input/output devices and terminals. Computers can be analog, digital, or hybrid. Digital computers, the most common type, are devices that do all of the following:

1. store the processing program or programs and the data immediately necessary for the execution of the program;
2. can be freely programmed in accordance with the requirements of the user;
3. perform arithmetical computations specified by the user; and
4. execute, without human intervention, a processing program that requires the computer to modify its execution by logical decision during the processing run.

Analog computers are capable of simulating mathematical models and comprise at least analog, control, and programming elements.

33411 COMPUTER AND PERIPHERAL EQUIPMENT MANUFACTURING

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Analog computers are capable of simulating mathematical models and comprise at least analog, control, and programming elements.

334111 ELECTRONIC COMPUTER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing and/or assembling electronic computers, such as mainframes, personal computers, workstations, laptops, and computer servers. Computers can be analog, digital, or hybrid. Digital computers, the most common type, are devices that do all of the following:

1. store the processing program or programs and the data immediately necessary for the execution of the program;
2. can be freely programmed in accordance with the requirements of the user;
3. perform arithmetical computations specified by the user; and
4. execute, without human intervention, a processing program that requires the computer to modify its execution by logical decision during the processing run.

Analog computers are capable of simulating mathematical models and contain at least analog, control, and programming elements. The manufacture of computers includes the assembly or integration of processors, coprocessors, memory, storage, and input/output devices into a user-programmable final product.

334112 COMPUTER STORAGE DEVICE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing computer storage devices that allow the storage and retrieval of data from a phase change, magnetic, optical, or magnetic/optical media. Examples of products made by these establishments are CD-ROM drives, floppy disk drives, hard disk drives, and tape storage and backup units.

334113 COMPUTER TERMINAL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing computer terminals. Computer terminals are input/output devices that connect with a central computer for processing.

334119 OTHER COMPUTER PERIPHERAL EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing computer peripheral equipment (except storage devices and computer terminals).

3342 COMMUNICATIONS EQUIPMENT MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. telephone equipment;
2. radio and television broadcasting and wireless communications equipment; and
3. other communications equipment.

33421 TELEPHONE APPARATUS MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing wire telephone and data communications equipment. These products may be standalone or board-level components of a larger system. Examples of products made by these establishments are central office switching equipment, cordless telephones (except cellular), PBX equipment, telephones, telephone answering machines, LAN modems, multi-user modems, and other data communications equipment, such as bridges, routers, and gateways.

334210 TELEPHONE APPARATUS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing wire telephone and data communications equipment. These products may be stand-alone or board-level components of a larger system. Examples of products made by these establishments are central office switching equipment, cordless telephones (except cellular), PBX equipment, telephones, telephone answering machines, and data communications equipment, such as bridges, routers, and gateways.

33422 RADIO AND TELEVISION BROADCASTING AND WIRELESS COMMUNICATIONS EQUIPMENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.

334220 RADIO AND TELEVISION BROADCASTING AND WIRELESS COMMUNICATIONS EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.

33429 OTHER COMMUNICATIONS EQUIPMENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, and radio and television broadcast, and wireless communications equipment).

334290 OTHER COMMUNICATIONS EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, radio and television broadcast, and wireless communications equipment).

3343 AUDIO AND VIDEO EQUIPMENT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing electronic audio and video equipment for home entertainment, motor vehicle, public address and musical instrument amplifications. Examples of products made by these establishments are video cassette recorders, televisions, stereo equipment, speaker systems, household-type video cameras, jukeboxes, and amplifiers for musical instruments and public address systems.

33431 AUDIO AND VIDEO EQUIPMENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing electronic audio and video equipment for home entertainment, motor vehicle, public address and musical instrument amplifications. Examples of products made by these establishments are video cassette recorders, televisions, stereo equipment, speaker systems, household-type video cameras, jukeboxes, and amplifiers for musical instruments and public address systems.

334310 AUDIO AND VIDEO EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electronic audio and video equipment for home entertainment, motor vehicle, public address and musical instrument amplifications. Examples of products made by these establishments are video cassette recorders, televisions, stereo equipment, speaker systems, household-type video cameras, jukeboxes, and amplifiers for musical instruments and public address systems.

3344 SEMICONDUCTOR AND OTHER ELECTRONIC COMPONENT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing semiconductors and other components for electronic applications. Examples of products made by these establishments are capacitors, resistors, microprocessors, bare and loaded printed circuit boards, electron tubes, electronic connectors, and computer modems.

33441 SEMICONDUCTOR AND OTHER ELECTRONIC COMPONENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing semiconductors and other components for electronic applications. Examples of products made by these establishments are capacitors, resistors, microprocessors, bare and loaded printed circuit boards, electron tubes, electronic connectors, and computer modems.

334411 ELECTRON TUBE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electron tubes and parts (except glass blanks). Examples of products made by these establishments are cathode ray tubes (i.e., picture tubes), klystron tubes, magnetron tubes, and traveling wave tubes.

334412 BARE PRINTED CIRCUIT BOARD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing bare (i.e., rigid or flexible) printed circuit boards without mounted electronic components. These establishments print, perforate, plate, screen, etch, or photoprint interconnecting pathways for electric current on laminates.

334413 SEMICONDUCTOR AND RELATED DEVICE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing semiconductors and related solid state devices. Examples of products made by these establishments are integrated circuits, memory chips, microprocessors, diodes, transistors, solar cells and other optoelectronic devices.

334414 ELECTRONIC CAPACITOR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electronic fixed and variable capacitors and condensers.

334415 ELECTRONIC RESISTOR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electronic resistors, such as fixed and variable resistors, resistor networks, thermistors, and varistors.

334416 ELECTRONIC COIL, TRANSFORMER, AND OTHER INDUCTOR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electronic inductors, such as coils and transformers.

334417 ELECTRONIC CONNECTOR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electronic connectors, such as coaxial; cylindrical; rack and panel; pin and sleeve; printed circuit; and fiber optic.

334418 PRINTED CIRCUIT ASSEMBLY (ELECTRONIC ASSEMBLY) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in loading components onto printed circuit boards or who manufacture and ship loaded printed circuit boards. Also known as printed circuit assemblies, electronics assemblies, or modules, these products are printed circuit boards that have some or all of the semiconductor and electronic components inserted or mounted and are inputs to a wide variety of electronic systems and devices.

334419 OTHER ELECTRONIC COMPONENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electronic components (except electron tubes; bare printed circuit boards; semiconductors and related devices; electronic capacitors; electronic resistors; coils, transformers, and other inductors; connectors; and loaded printed circuit boards).

3345 NAVIGATIONAL, MEASURING, ELECTROMEDICAL, AND CONTROL INSTRUMENTS MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing navigational, measuring, electromedical, and control instruments. Examples of products made by these establishments are aeronautical instruments, appliance regulators and controls (except switches), laboratory analytical instruments, navigation and guidance systems, and physical properties testing equipment.

33451 NAVIGATIONAL, MEASURING, ELECTROMEDICAL, AND CONTROL INSTRUMENTS MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing navigational, measuring, electromedical, and control instruments. Examples of products made by these establishments are aeronautical instruments, appliance regulators and controls (except switches), laboratory analytical instruments, navigation and guidance systems, and physical properties testing equipment.

334510 ELECTROMEDICAL AND ELECTROTHERAPEUTIC APPARATUS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electromedical and electrotherapeutic apparatus, such as magnetic resonance imaging equipment, medical ultrasound equipment, pacemakers, hearing aids, electrocardiographs, and electromedical endoscopic equipment.

334511 SEARCH, DETECTION, NAVIGATION, GUIDANCE, AERONAUTICAL, AND NAUTICAL SYSTEM AND INSTRUMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing search, detection, navigation, guidance, aeronautical, and nautical systems and instruments. Examples of products made by these establishments are aircraft instruments (except engine), flight recorders, navigational instruments and systems, radar systems and equipment, and sonar systems and equipment.

334512 AUTOMATIC ENVIRONMENTAL CONTROL MANUFACTURING FOR RESIDENTIAL, COMMERCIAL, AND APPLIANCE USE

This U.S. industry comprises establishments primarily engaged in manufacturing automatic controls and regulators for applications, such as heating, air-conditioning, refrigeration, and appliances.

334513 INSTRUMENTS AND RELATED PRODUCTS MANUFACTURING FOR MEASURING, DISPLAYING, AND CONTROLLING INDUSTRIAL PROCESS VARIABLES

This U.S. industry comprises establishments primarily engaged in manufacturing instruments and related devices for measuring, displaying, indicating, recording, transmitting, and controlling industrial process variables. These instruments measure, display, or control (i.e., monitor and analyze) industrial process variables, such as temperature, humidity, pressure, vacuum, combustion, flow, level, viscosity, density, acidity, concentration, and rotation.

334514 TOTALIZING FLUID METER AND COUNTING DEVICE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing totalizing (i.e., registering) fluid meters and counting devices. Examples of products made by these establishments are gas consumption meters, water consumption meters, parking meters, taxi meters, motor vehicle gauges, and fare collection equipment.

334515 INSTRUMENT MANUFACTURING FOR MEASURING AND TESTING ELECTRICITY AND ELECTRICAL SIGNALS

This U.S. industry comprises establishments primarily engaged in manufacturing instruments for measuring and testing the characteristics of electricity and electrical signals. Examples of products made by these establishments are circuit and continuity testers, volt meters, ohm meters, wattmeters, multimeters, and semiconductor test equipment.

334516 ANALYTICAL LABORATORY INSTRUMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing instruments and instrumentation systems for laboratory analysis of the chemical or physical composition or concentration of samples of solid, fluid, gaseous, or composite material.

334517 IRRADIATION APPARATUS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing irradiation apparatus and tubes for applications, such as medical diagnostic, medical therapeutic, industrial, and research and scientific evaluation. Irradiation can take the form of beta-rays, gamma-rays, X-rays, or other ionizing radiation.

334518 WATCH, CLOCK, AND PART MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing and/or assembling: clocks; watches; timing mechanisms for clockwork operated devices; time clocks; time and date recording devices; and clock and watch parts (except crystals), such as springs, jewels, and modules.

334519 OTHER MEASURING AND CONTROLLING DEVICE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing measuring and controlling devices (except search, detection, navigation, guidance, aeronautical, and nautical instruments and systems; automatic environmental controls for residential, commercial, and appliance use; instruments for measurement, display, and control of industrial process variables; totalizing fluid meters and counting devices; instruments for measuring and testing electricity and electrical signals; analytical laboratory instruments; watches, clocks, and parts; irradiation equipment; and electromedical and electrotherapeutic apparatus).

3346 MANUFACTURING AND REPRODUCING MAGNETIC AND OPTICAL MEDIA

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. optical and magnetic media, such as blank audio tape, blank video tape, and blank diskettes and/or
2. mass duplicating (i.e., making copies) audio, video, software, and other data on magnetic, optical, and similar media.

33461 MANUFACTURING AND REPRODUCING MAGNETIC AND OPTICAL MEDIA

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

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1. optical and magnetic media, such as blank audio tape, blank video tape, and blank diskettes and/or;
 2. mass duplicating (i.e., making copies) audio, video, software, and other data on magnetic, optical, and similar media.

334611 SOFTWARE REPRODUCING

This U.S. industry comprises establishments primarily engaged in mass reproducing computer software. These establishments do not generally develop any software, they mass reproduce data and programs on magnetic media, such as diskettes, tapes, or cartridges. Establishments in this industry mass reproduce products, such as CD-ROMs and game cartridges.

334612 PRERECORDED COMPACT DISC (EXCEPT SOFTWARE), TAPE, AND RECORD REPRODUCING

This U.S. industry comprises establishments primarily engaged in mass reproducing audio and video material on magnetic or optical media. Examples of products mass reproduced by these establishments are audio compact discs, prerecorded audio and video cassettes, and laser discs.

334613 MAGNETIC AND OPTICAL RECORDING MEDIA MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing magnetic and optical recording media, such as blank magnetic tape, blank diskettes, blank optical discs, hard drive media, and blank magnetic tape cassettes.

335 ELECTRICAL EQUIPMENT, APPLIANCE, AND COMPONENT MANUFACTURING

Industries in the Electrical Equipment, Appliance, and Component Manufacturing subsector manufacture products that generate, distribute and use electrical power. Electric Lighting Equipment Manufacturing establishments produce electric lamp bulbs, lighting fixtures, and parts. Household Appliance Manufacturing establishments make both small and major electrical appliances and parts. Electrical Equipment Manufacturing establishments make goods, such as electric motors, generators, transformers, and switchgear apparatus. Other Electrical Equipment and Component Manufacturing establishments make devices for storing electrical power (e.g., batteries), for transmitting electricity (e.g., insulated wire), and wiring devices (e.g., electrical outlets, fuse boxes, and light switches).

3351 ELECTRIC LIGHTING EQUIPMENT MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. electric lamp bulbs and parts and/or
2. lighting fixtures.

33511 ELECTRIC LAMP BULB AND PART MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing electric light bulbs and tubes, and parts and components (except glass blanks for electric light bulbs).

335110 ELECTRIC LAMP BULB AND PART MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electric light bulbs and tubes, and parts and components (except glass blanks for electric light bulbs).

33512 LIGHTING FIXTURE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing electric lighting fixtures (except vehicular), nonelectric lighting equipment, lamp shades (except glass and plastics), and lighting fixture components (except current-carrying wiring devices).

335121 RESIDENTIAL ELECTRIC LIGHTING FIXTURE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing fixed or portable residential electric lighting fixtures and lamp shades of metal, paper, or textiles. Residential electric lighting fixtures include those for use both inside and outside the residence.

335122 COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL ELECTRIC LIGHTING FIXTURE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing commercial, industrial, and institutional electric lighting fixtures.

335129 OTHER LIGHTING EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electric lighting fixtures (except residential, commercial, industrial, institutional, and vehicular electric lighting fixtures) and nonelectric lighting equipment.

3352 HOUSEHOLD APPLIANCE MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. small electrical appliances and/or
2. major appliances.

33521 SMALL ELECTRICAL APPLIANCE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing small electric appliances and electric housewares, household-type fans, household-type vacuum cleaners, and other electric household-type floor care machines.

335211 ELECTRIC HOUSEWARES AND HOUSEHOLD FAN MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing small electric appliances and electric housewares for heating, cooking, and other purposes, and electric household-type fans (except attic fans).

335212 HOUSEHOLD VACUUM CLEANER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electric vacuum cleaners, electric floor waxing machines, and other electric floor care machines typically for household use.

33522 MAJOR APPLIANCE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing household-type cooking appliances, household-type laundry equipment, household-type refrigerators, upright and chest freezers, and other electrical and nonelectrical major household-type appliances, such as dishwashers, water heaters, and garbage disposal units.

335221 HOUSEHOLD COOKING APPLIANCE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing household-type electric and nonelectric cooking equipment (except small electric appliances and electric housewares).

335222 HOUSEHOLD REFRIGERATOR AND HOME FREEZER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing household-type refrigerators and upright and chest freezers.

335224 HOUSEHOLD LAUNDRY EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing household-type laundry equipment.

335228 OTHER MAJOR HOUSEHOLD APPLIANCE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electric and non-electric major household-type appliances (except cooking equipment, refrigerators, upright and chest freezers, and household-type laundry equipment).

3353 ELECTRICAL EQUIPMENT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing power, distribution, and specialty transformers; electric motors, generators, and motor generator sets; switchgear and switchboard apparatus; relays; and industrial controls.

33531 ELECTRICAL EQUIPMENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing power, distribution, and specialty transformers; electric motors, generators, and motor generator sets; switchgear and switchboard apparatus; relays; and industrial controls.

335311 POWER, DISTRIBUTION, AND SPECIALTY TRANSFORMER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing power, distribution, and specialty transformers (except electronic components). Industrial-type and consumer-type transformers in this industry vary (e.g., step up or step down) voltage but do not convert alternating to direct or direct to alternating current.

335312 MOTOR AND GENERATOR MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing electric motors (except internal combustion engine starting motors), power generators (except battery charging alternators for internal combustion engines), and motor generator sets (except turbine generator set units). This industry includes establishments rewinding armatures on a factory basis.

335313 SWITCHGEAR AND SWITCHBOARD APPARATUS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing switchgear and switchboard apparatus.

335314 RELAY AND INDUSTRIAL CONTROL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing relays, motor starters and controllers, and other industrial controls and control accessories.

3359 OTHER ELECTRICAL EQUIPMENT AND COMPONENT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing electrical equipment and components (except electric lighting equipment, household-type appliances, transformers, switchgear, relays, motors, and generators).

33591 BATTERY MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing primary and storage batteries.

335911 STORAGE BATTERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing storage batteries.

335912 PRIMARY BATTERY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing wet or dry primary batteries.

33592 COMMUNICATION AND ENERGY WIRE AND CABLE MANUFACTURING

This industry comprises establishments insulating fiber-optic cable, and manufacturing insulated nonferrous wire and cable from nonferrous wire drawn in other establishments.

335921 FIBER OPTIC CABLE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing insulated fiber-optic cable from purchased fiber-optic strand.

335929 OTHER COMMUNICATION AND ENERGY WIRE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing insulated wire and cable of nonferrous metals from purchased wire.

33593 WIRING DEVICE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing current-carrying wiring devices and noncurrent-carrying wiring devices for wiring electrical circuits.

335931 CURRENT-CARRYING WIRING DEVICE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing current-carrying wiring devices.

335932 NONCURRENT-CARRYING WIRING DEVICE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing noncurrent-carrying wiring devices.

33599 ALL OTHER ELECTRICAL EQUIPMENT AND COMPONENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing electrical equipment (except electric lighting equipment, household-type appliances, transformers, motors, generators, switchgear, relays, industrial controls, batteries, communication and energy wire and cable, and wiring devices).

335991 CARBON AND GRAPHITE PRODUCT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing carbon, graphite, and metal-graphite brushes and brush stock; carbon or graphite electrodes for thermal and electrolytic uses; carbon and graphite fibers; and other carbon, graphite, and metal-graphite products.

335999 ALL OTHER MISCELLANEOUS ELECTRICAL EQUIPMENT AND COMPONENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing industrial and commercial electric apparatus and other equipment (except lighting equipment, household appliances, transformers, motors, generators, switchgear, relays, industrial controls, batteries, communication and energy wire and cable, wiring devices, and carbon and graphite products). This industry includes power converters (i.e., AC to DC and DC to AC), power supplies, surge suppressors, and similar equipment for industrial-type and consumer-type equipment.

336 TRANSPORTATION EQUIPMENT MANUFACTURING

Industries in the Transportation Equipment Manufacturing subsector produce equipment for transporting people and goods. Transportation equipment is a type of machinery. An entire subsector is devoted to this activity because of the significance of its economic size in all three North American countries.

Establishments in this subsector utilize production processes similar to those of other machinery manufacturing establishments — bending, forming, welding, machining, and assembling metal or plastic parts into components and finished products. However, the assembly of components and subassemblies and their further assembly into finished vehicles tends to be a more common production process in this subsector than in the Machinery Manufacturing subsector.

The North American Industry Classification System (NAICS) has industry groups for the manufacture of equipment for each mode of transport — road, rail, air, and water. Parts for motor vehicles warrant a separate industry group because of their importance and because parts manufacture requires less assembly, and the establishments that manufacture only parts are not as vertically integrated as those that make complete vehicles.

Land use motor vehicle equipment not designed for highway operation (e.g., agricultural equipment, construction equipment, and materials handling equipment) is classified in the appropriate NAICS subsector based on the type and use of the equipment.

3361 MOTOR VEHICLE MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. automobile and light duty motor vehicles and/or
2. heavy duty trucks.

33611 AUTOMOBILE AND LIGHT DUTY MOTOR VEHICLE MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. complete automobile and light duty motor vehicles (i.e., body and chassis or unibody) or
2. chassis only.

336111 AUTOMOBILE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. complete automobiles (i.e., body and chassis or unibody) or
2. automobile chassis only.

336112 LIGHT TRUCK AND UTILITY VEHICLE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. complete light trucks and utility vehicles (i.e., body and chassis) or
2. light truck and utility vehicle chassis only.

Vehicles made include light duty vans, pick-up trucks, minivans, and sport utility vehicles.

33612 HEAVY DUTY TRUCK MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

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1. heavy duty truck chassis and assembling complete heavy duty trucks, buses, heavy duty motor homes, and other special purpose heavy duty motor vehicles for highway use or
 2. heavy duty truck chassis only.

336120 HEAVY DUTY TRUCK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. heavy duty truck chassis and assembling complete heavy duty trucks, buses, heavy duty motor homes, and other special purpose heavy duty motor vehicles for highway use or
2. heavy duty truck chassis only.

3362 MOTOR VEHICLE BODY AND TRAILER MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. motor vehicle bodies and cabs or
2. truck, automobile and utility trailers, truck trailer chassis, detachable trailer bodies, and detachable trailer chassis.

The products made may be sold separately or may be assembled on purchased chassis and sold as complete vehicles.

Motor homes are units where the motor and the living quarters are contained in the same integrated unit, while travel trailers are designed to be towed by a motor unit, such as an automobile or a light truck.

33621 MOTOR VEHICLE BODY AND TRAILER MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. motor vehicle bodies and cabs or
2. truck, automobile and utility trailers, truck trailer chassis, detachable trailer bodies, and detachable trailer chassis.

The products made may be sold separately or may be assembled on purchased chassis and sold as complete vehicles.

Motor homes are units where the motor and the living quarters are contained in the same integrated unit, while travel trailers are designed to be towed by a motor unit, such as an automobile or a light truck.

336211 MOTOR VEHICLE BODY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing truck and bus bodies and cabs and automobile bodies. The products made may be sold separately or may be assembled on purchased chassis and sold as complete vehicles.

336212 TRUCK TRAILER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing truck trailers, truck trailer chassis, cargo container chassis, detachable trailer bodies, and detachable trailer chassis for sale separately.

336213 MOTOR HOME MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

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1. motor homes on purchased chassis and/or
 2. conversion vans on an assembly line basis.

Motor homes are units where the motor and the living quarters are integrated in the same unit.

336214 TRAVEL TRAILER AND CAMPER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. travel trailers and campers designed to attach to motor vehicles;
2. pickup coaches (i.e., campers) and caps (i.e., covers) for mounting on pickup trucks; and
3. automobile, utility, and light-truck trailers.

Travel trailers do not have their own motor but are designed to be towed by a motor unit, such as an automobile or a light truck.

3363 MOTOR VEHICLE PARTS MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. motor vehicle gasoline engines and engine parts;
2. motor vehicle electrical and electronic equipment;
3. motor vehicle steering and suspension components (except spring);
4. motor vehicle brake systems;
5. motor vehicle transmission and power train parts;
6. motor vehicle seating and interior trimmings;
7. motor vehicle metal stampings; and/or
8. other motor vehicle parts.

33631 MOTOR VEHICLE GASOLINE ENGINE AND ENGINE PARTS MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle gasoline engines, and engine parts, whether or not for vehicular use.

336311 CARBURETOR, PISTON, PISTON RING, AND VALVE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding carburetors, pistons, piston rings, and engine intake and exhaust valves.

336312 GASOLINE ENGINE AND ENGINE PARTS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding gasoline motor vehicle engines and gasoline motor vehicle engine parts, excluding carburetors, pistons, piston rings, and valves.

33632 MOTOR VEHICLE ELECTRICAL AND ELECTRONIC EQUIPMENT MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. vehicular lighting and/or
2. manufacturing and/or rebuilding motor vehicle electrical and electronic equipment.

The products made can be used for all types of transportation equipment (i.e., aircraft, automobiles, trains, and ships).

336321 VEHICULAR LIGHTING EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing vehicular lighting fixtures.

336322 OTHER MOTOR VEHICLE ELECTRICAL AND ELECTRONIC EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding electrical and electronic equipment for motor vehicles and internal combustion engines.

336333 MOTOR VEHICLE STEERING AND SUSPENSION COMPONENTS (EXCEPT SPRING) MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle steering mechanisms and suspension components (except springs).

336330 MOTOR VEHICLE STEERING AND SUSPENSION COMPONENTS (EXCEPT SPRING) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle steering mechanisms and suspension components (except springs).

33634 MOTOR VEHICLE BRAKE SYSTEM MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle brake systems and related components.

336340 MOTOR VEHICLE BRAKE SYSTEM MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle brake systems and related components.

33635 MOTOR VEHICLE TRANSMISSION AND POWER TRAIN PARTS MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle transmission and power train parts.

336350 MOTOR VEHICLE TRANSMISSION AND POWER TRAIN PARTS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle transmission and power train parts.

33636 MOTOR VEHICLE SEATING AND INTERIOR TRIM MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing motor vehicle seating, seats, seat frames, seat belts, and interior trimmings.

336360 MOTOR VEHICLE SEATING AND INTERIOR TRIM MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing motor vehicle seating, seats, seat frames, seat belts, and interior trimmings.

33637 MOTOR VEHICLE METAL STAMPING

This industry comprises establishments primarily engaged in manufacturing motor vehicle stampings, such as fenders, tops, body parts, trim, and molding.

336370 MOTOR VEHICLE METAL STAMPING

This U.S. industry comprises establishments primarily engaged in manufacturing motor vehicle stampings, such as fenders, tops, body parts, trim, and molding.

33639 OTHER MOTOR VEHICLE PARTS MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle parts and accessories (except motor vehicle gasoline engines and engine parts, motor vehicle electrical and electronic equipment, motor vehicle steering and suspension components, motor vehicle brake systems, motor vehicle transmission and power train parts, motor vehicle seating and interior trim, and motor vehicle stampings).

336391 MOTOR VEHICLE AIR-CONDITIONING MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing air-conditioning systems and compressors for motor vehicles, such as automobiles, trucks, buses, aircraft, farm machinery, construction machinery, and other related vehicles.

336399 ALL OTHER MOTOR VEHICLE PARTS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle parts and accessories (except motor vehicle gasoline engines and engine parts, motor vehicle electrical and electronic equipment, motor vehicle steering and suspension components, motor vehicle brake systems, motor vehicle transmission and power train parts, motor vehicle seating and interior trim, motor vehicle stampings, and motor vehicle air-conditioning systems and compressors).

3364 AEROSPACE PRODUCT AND PARTS MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. complete aircraft, missiles, or space vehicles;
2. aerospace engines, propulsion units, auxiliary equipment or parts;
3. developing and making prototypes of aerospace products;
4. aircraft conversion (i.e., major modifications to systems); and
5. complete aircraft or propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft to original design specifications).

33641 AEROSPACE PRODUCT AND PARTS MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. complete aircraft, missiles, or space vehicles;
2. aerospace engines, propulsion units, auxiliary equipment or parts;
3. developing and making prototypes of aerospace products;
4. aircraft conversion (i.e., major modifications to systems); and
5. complete aircraft or propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft to original design specifications).

336411 AIRCRAFT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. manufacturing or assembling complete aircraft;
2. developing and making aircraft prototypes;
3. aircraft conversion (i.e., major modifications to systems); and

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4. complete aircraft overhaul and rebuilding (i.e., periodic restoration of aircraft to original design specifications).

336412 AIRCRAFT ENGINE AND ENGINE PARTS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. aircraft engines and engine parts;
2. developing and making prototypes of aircraft engines and engine parts;
3. aircraft propulsion system conversion (i.e., major modifications to systems); and
4. aircraft propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft propulsion system to original design specifications).

336413 OTHER AIRCRAFT PARTS AND AUXILIARY EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. aircraft parts or auxiliary equipment (except engines and aircraft fluid power subassemblies) and/or
2. developing and making prototypes of aircraft parts and auxiliary equipment.

Auxiliary equipment includes such items as crop dusting apparatus, armament racks, inflight refueling equipment, and external fuel tanks.

336414 GUIDED MISSILE AND SPACE VEHICLE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. complete guided missiles and space vehicles and/or
2. developing and making prototypes of guided missile or space vehicles.

336415 GUIDED MISSILE AND SPACE VEHICLE PROPULSION UNIT AND PROPULSION UNIT PARTS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. guided missile and/or space vehicle propulsion units and propulsion unit parts and/or
2. developing and making prototypes of guided missile and space vehicle propulsion units and propulsion unit parts.

336419 OTHER GUIDED MISSILE AND SPACE VEHICLE PARTS AND AUXILIARY EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. guided missile and space vehicle parts and auxiliary equipment (except guided missile and space vehicle propulsion units and propulsion unit parts) and/or
2. developing and making prototypes of guided missile and space vehicle parts and auxiliary equipment.

3365 RAILROAD ROLLING STOCK MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

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1. manufacturing and/or rebuilding locomotives, locomotive frames, and parts;
 2. railroad, street, and rapid transit cars and car equipment for operation on rails for freight and passenger service; and
 3. rail layers, ballast distributors, rail tamping equipment, and other railway track maintenance equipment.

33651 RAILROAD ROLLING STOCK MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. manufacturing and/or rebuilding locomotives, locomotive frames, and parts;
2. railroad, street, and rapid transit cars and car equipment for operation on rails for freight and passenger service; and
3. rail layers, ballast distributors, rail tamping equipment, and other railway track maintenance equipment.

336510 RAILROAD ROLLING STOCK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. manufacturing and/or rebuilding locomotives, locomotive frames, and parts;
2. railroad, street, and rapid transit cars and car equipment for operation on rails for freight and passenger service; and
3. rail layers, ballast distributors, rail tamping equipment, and other railway track maintenance equipment.

3366 SHIP AND BOAT BUILDING

This industry group comprises establishments primarily engaged in operating shipyards or boat yards (i.e., ship or boat manufacturing facilities). Shipyards are fixed facilities with drydocks and fabrication equipment capable of building a ship, defined as watercraft typically suitable or intended for other than personal or recreational use. Boats are defined as watercraft typically suitable or intended for personal use. Activities of shipyards include the construction of ships, their repair, conversion and alteration, the production of prefabricated ship and barge sections, and specialized services, such as ship scaling.

33661 SHIP AND BOAT BUILDING

This industry comprises establishments primarily engaged in operating shipyards or boat yards (i.e., ship or boat manufacturing facilities). Shipyards are fixed facilities with drydocks and fabrication equipment capable of building a ship, defined as watercraft typically suitable or intended for other than personal or recreational use. Boats are defined as watercraft typically suitable or intended for personal use. Activities of shipyards include the construction of ships, their repair, conversion and alteration, the production of prefabricated ship and barge sections, and specialized services, such as ship scaling.

336611 SHIP BUILDING AND REPAIRING

This U.S. industry comprises establishments primarily engaged in operating a shipyard. Shipyards are fixed facilities with drydocks and fabrication equipment capable of building a ship, defined as watercraft typically suitable or intended for other than personal or recreational use. Activities of shipyards include the construction of ships, their repair, conversion and alteration, the production of prefabricated ship and barge sections, and specialized services, such as ship scaling.

336612 BOAT BUILDING

This U.S. industry comprises establishments primarily engaged in building boats. Boats are defined as watercraft not built in shipyards and typically of the type suitable or intended for personal use.

3369 OTHER TRANSPORTATION EQUIPMENT MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing transportation equipment (except motor vehicles and parts, aerospace products and parts, railroad rolling stock, ship building, and boat manufacturing).

33699 OTHER TRANSPORTATION EQUIPMENT MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing motorcycles, bicycles, metal tricycles, complete military armored vehicles, tanks, self-propelled weapons, vehicles pulled by draft animals, and other transportation equipment (except motor vehicles, boats, ships, railroad rolling stock, and aerospace products), including parts thereof.

336991 MOTORCYCLE, BICYCLE, AND PARTS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing motorcycles, bicycles, tricycles and similar equipment, and parts.

336992 MILITARY ARMORED VEHICLE, TANK, AND TANK COMPONENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing complete military armored vehicles, combat tanks, specialized components for combat tanks, and self-propelled weapons.

336999 ALL OTHER TRANSPORTATION EQUIPMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing transportation equipment (except motor vehicles, motor vehicle parts, boats, ships, railroad rolling stock, aerospace products, motorcycles, bicycles, and armored vehicles and tanks).

337 FURNITURE AND RELATED PRODUCT MANUFACTURING

Industries in the Furniture and Related Product Manufacturing subsector make furniture and related articles, such as mattresses, window blinds, cabinets, and fixtures. The processes used in the manufacture of furniture include the cutting, bending, molding, laminating, and assembly of such materials as wood, metal, glass, plastics, and rattan. However, the production process for furniture is not solely bending metal, cutting and shaping wood, or extruding and molding plastics. Design and fashion trends play an important part in the production of furniture. The integrated design of the article for both esthetic and functional qualities is also a major part of the process of manufacturing furniture. Design services may be performed by the furniture establishment's work force or may be purchased from industrial designers.

Furniture may be made of any material, but the most common ones used in North America are metal and wood. Furniture manufacturing establishments may specialize in making articles primarily from one material. Some of the equipment required to make a wooden table, for example, is different from that used to make a metal one. However, furniture is usually made from several materials. A wooden table might have metal brackets, and a wooden chair a fabric or plastics seat. Therefore, in the North American Industry Classification System (NAICS), furniture initially is classified based on the type of furniture (application for which it is designed) rather than the material used. For example, an upholstered sofa is treated as household furniture, although it may also be used in hotels or offices.

When classifying furniture according to the component material from which it is made, furniture made from more than one material is classified based on the material used in the frame, or if there is no frame, the predominant component material. Upholstered household furniture (excluding kitchen and dining room chairs with upholstered seats) is classified without regard to the frame material. Kitchen or dining room chairs with upholstered seats are classified according to the frame material.

Furniture may be made on a stock or custom basis and may be shipped assembled or unassembled (i.e., knockdown). The manufacture of furniture parts and frames is included in this subsector.

Some of the processes used in furniture manufacturing are similar to processes that are used in other segments of manufacturing. For example, cutting and assembly occurs in the production of wood trusses that are classified in Subsector 321, Wood Product Manufacturing. However, the multiple processes that distinguish wood furniture manufacturing from wood product manufacturing warrant inclusion of wooden furniture manufacturing in the Furniture and Related Product Manufacturing subsector. Metal furniture manufacturing uses techniques that are also employed in the manufacturing of roll-formed products classified in Subsector 332, Fabricated Metal Product Manufacturing. The molding process for plastics furniture is similar to the molding of other plastics products. However, plastics furniture producing establishments tend to specialize in furniture.

NAICS attempts to keep furniture manufacturing together, but there are two notable exceptions: seating for transportation equipment and laboratory and hospital furniture. These exceptions are related to that fact that some of the aspects of the production process for these products, primarily the design, are highly integrated with that of other manufactured goods, namely motor vehicles and health equipment.

3371 HOUSEHOLD AND INSTITUTIONAL FURNITURE AND KITCHEN CABINET MANUFACTURING

This industry group comprises establishments manufacturing household-type furniture, such as living room, kitchen and bedroom furniture and institutional (i.e., public building) furniture, such as furniture for schools, theaters, and churches.

33711 WOOD KITCHEN CABINET AND COUNTERTOP MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing wood or plastics laminated on wood kitchen cabinets, bathroom vanities, and countertops (except freestanding). The cabinets and counters may be made on a stock or custom basis.

337110 WOOD KITCHEN CABINET AND COUNTERTOP MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing wood or plastics laminated on wood kitchen cabinets, bathroom vanities, and countertops (except freestanding). The cabinets and counters may be made on a stock or custom basis.

33712 HOUSEHOLD AND INSTITUTIONAL FURNITURE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing household-type and public building furniture (i.e., library, school, theater, and church furniture). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

337121 UPHOLSTERED HOUSEHOLD FURNITURE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing upholstered household-type furniture. The furniture may be made on a stock or custom basis.

337122 NONUPHOLSTERED WOOD HOUSEHOLD FURNITURE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing nonupholstered wood household-type furniture and freestanding cabinets (except television, radio, and sewing machine cabinets). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

337124 METAL HOUSEHOLD FURNITURE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing metal household-type furniture and freestanding cabinets. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

337125 HOUSEHOLD FURNITURE (EXCEPT WOOD AND METAL) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing household-type furniture of materials other than wood or metal, such as plastics, reed, rattan, wicker, and fiberglass. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

337127 INSTITUTIONAL FURNITURE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing institutional-type furniture (e.g., library, school, theater, and church furniture). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

337129 WOOD TELEVISION, RADIO, AND SEWING MACHINE CABINET MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing wood cabinets used as housings by television, stereo, loudspeaker, and sewing machine manufacturers.

3372 OFFICE FURNITURE (INCLUDING FIXTURES) MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing office furniture and/or office and store fixtures. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

33721 OFFICE FURNITURE (INCLUDING FIXTURES) MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing office furniture and/or office and store fixtures. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

337211 WOOD OFFICE FURNITURE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing wood office-type furniture. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

337212 CUSTOM ARCHITECTURAL WOODWORK AND MILLWORK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing custom designed interiors consisting of architectural woodwork and fixtures utilizing wood, wood products, and plastics laminates. All of the industry output is made to individual order on a job shop basis and requires skilled craftsmen as a labor input. A job might include custom manufacturing of display fixtures, gondolas, wall shelving units, entrance and window architectural detail, sales and reception counters, wall paneling, and matching furniture.

337214 OFFICE FURNITURE (EXCEPT WOOD) MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing nonwood office-type furniture. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

337215 SHOWCASE, PARTITION, SHELVING, AND LOCKER MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing wood and nonwood office and store fixtures, shelving, lockers, frames, partitions, and related fabricated products of wood and nonwood materials, including plastics laminated fixture tops. The products are made on a stock basis and may be assembled or unassembled (i.e., knockdown). Establishments exclusively making furniture parts (e.g., frames) are included in this industry.

3379 OTHER FURNITURE RELATED PRODUCT MANUFACTURING

This industry group comprises establishments manufacturing furniture related products, such as mattresses, blinds, and shades.

33791 MATTRESS MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing innerspring, box spring, and noninnerspring mattresses, including mattresses for waterbeds.

337910 MATTRESS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing innerspring, box spring, and noninnerspring mattresses, including mattresses for waterbeds.

33792 BLIND AND SHADE MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing one or more of the following: venetian blinds, other window blinds, shades; curtain and drapery rods, poles; and/or curtain and drapery fixtures. The blinds and shades may be made on a stock or custom basis and may be made of any material.

337920 BLIND AND SHADE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. venetian blinds, other window blinds, shades;
2. curtain and drapery rods, poles; and/or
3. curtain and drapery fixtures.

The blinds and shades may be made on a stock or custom basis and may be made of any material.

339 MISCELLANEOUS MANUFACTURING

Industries in the Miscellaneous Manufacturing subsector make a wide range of products that cannot readily be classified in specific North American Industrial Classification System (NAICS) subsectors in manufacturing. Processes used by these establishments vary significantly, both among and within industries. For example, a variety of manufacturing processes are used in manufacturing sporting and athletic goods that include products, such as tennis racquets and golf balls. The processes for these products differ from each other, and the processes differ significantly from the fabrication processes used in making dolls or toys, the melting and shaping of precious metals to make jewelry, and the bending, forming, and assembly used in making medical products.

The industries in this subsector are defined by what is made rather than how it is made. Although individual establishments might be appropriately classified elsewhere in the NAICS structure, for historical continuity, these product-based industries were maintained. In most cases, no one process or material predominates for an industry.

Establishments in this subsector manufacture products as diverse as medical equipment and supplies, jewelry, sporting goods, toys, and office supplies.

3391 MEDICAL EQUIPMENT AND SUPPLIES MANUFACTURING

This industry group comprises establishments primarily engaged in manufacturing medical equipment and supplies. Examples of products made by these establishments are laboratory apparatus and furniture, surgical and medical instruments, surgical appliances and supplies, dental equipment and supplies, orthodontic goods, dentures, and orthodontic appliances.

33911 MEDICAL EQUIPMENT AND SUPPLIES MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing medical equipment and supplies. Examples of products made by these establishments are laboratory apparatus and furniture, surgical and medical instruments, surgical appliances and supplies, dental equipment and supplies, orthodontic goods, dentures, and orthodontic appliances.

339111 LABORATORY APPARATUS AND FURNITURE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing laboratory apparatus and laboratory and hospital furniture (except dental). Examples of products made by these establishments are hospital beds, operating room tables, laboratory balances and scales, furnaces, ovens, centrifuges, cabinets, cases, benches, tables, and stools.

For this industry, the 1997 Economic Census did not fully implement the conversion to the North American Industry Classification System (NAICS). The data from 1997 to 2001 for NAICS industry 339111 did not include establishments primarily engaged in the manufacture of hospital beds and other hospital furniture. These establishments are included in the 2002 Economic Census data.

339112 SURGICAL AND MEDICAL INSTRUMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing medical, surgical, ophthalmic, and veterinary instruments and apparatus (except electrotherapeutic, electro-medical and irradiation apparatus). Examples of products made by these establishments are syringes, hypodermic needles, anesthesia apparatus, blood transfusion equipment, catheters, surgical clamps, and medical thermometers.

339113 SURGICAL APPLIANCE AND SUPPLIES MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing surgical appliances and supplies. Examples of products made by these establishments are orthopedic devices, prosthetic appliances, surgical dressings, crutches, surgical sutures, and personal industrial safety devices (except protective eyewear).

339114 DENTAL EQUIPMENT AND SUPPLIES MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing dental equipment and supplies used by dental laboratories and offices of dentists, such as dental chairs, dental instrument delivery systems, dental hand instruments, and dental impression material and dental cements.

339115 OPHTHALMIC GOODS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing ophthalmic goods. Examples of products made by these establishments are prescription eyeglasses (except manufactured in a retail setting), contact lenses, sunglasses, eyeglass frames, reading glasses made to standard powers, and protective eyewear.

339116 DENTAL LABORATORIES

This U.S. industry comprises establishments primarily engaged in manufacturing dentures, crowns, bridges, and orthodontic appliances customized for individual application.

3399 ALL OTHER MISCELLANEOUS MANUFACTURING ACTIVITIES NOT IDENTIFIED IN SUBSECTOR 339, MISCELLANEOUS MANUFACTURING

This industry group comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. jewelry and silverware;
2. sporting and athletic goods;

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3. doll, toy, and game;
 4. office supplies (except paper);
 5. signs; and/or
 6. all other miscellaneous.

33991 JEWELRY AND SILVERWARE MANUFACTURING

This industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. engraving, chasing, or etching jewelry;
2. metal personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases);
3. engraving, chasing, or etching precious metal solid, precious metal clad, or pewter cutlery and flatware;
4. engraving, chasing, or etching personal metal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases);
5. stamping coins;
6. unassembled jewelry parts and stock shop products, such as sheet, wire, and tubing;
7. cutting, slabbing, tumbling, carving, engraving, polishing, or faceting precious or semiprecious stones and gems;
8. recutting, repolishing, and setting gem stones; and
9. drilling, sawing, and peeling cultured and costume pearls.

339911 JEWELRY (EXCEPT COSTUME) MANUFACTURING

This U.S. industry group comprises establishments primarily engaged in one of the following:

1. manufacturing, engraving, chasing, or etching precious metal solid or precious metal clad jewelry;
2. manufacturing, engraving, chasing, or etching personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases) made of precious solid or clad metal; and
3. stamping coins.

339912 SILVERWARE AND HOLLOWWARE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing, engraving, chasing, or etching precious metal solid, precious metal clad, or pewter flatware and other hollowware.

339913 JEWELERS' MATERIAL AND LAPIDARY WORK MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. unassembled jewelry parts and stock shop products, such as sheet, wire, and tubing;
2. cutting, slabbing, tumbling, carving, engraving, polishing, or faceting precious or semiprecious stones and gems;
3. recutting, repolishing, and setting gem stones; and
4. drilling, sawing, and peeling cultured pearls.

339914 COSTUME JEWELRY AND NOVELTY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in one or more of the following manufacturing activities:

1. manufacturing, engraving, chasing, and etching costume jewelry; and/or
2. manufacturing, engraving, chasing, or etching nonprecious metal personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases).

This industry includes establishments primarily engaged in manufacturing precious plated jewelry and precious plated personal goods.

33992 SPORTING AND ATHLETIC GOODS MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing sporting and athletic goods (except apparel and footwear).

339920 SPORTING AND ATHLETIC GOODS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing sporting and athletic goods (except apparel and footwear).

33993 DOLL, TOY, AND GAME MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing dolls, toys, and games, such as complete dolls, doll parts, doll clothes, action figures, toys, games (including electronic), hobby kits, and children's vehicles (except metal bicycles and tricycles).

339931 DOLL AND STUFFED TOY MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing complete dolls, doll parts, and doll clothes; action figures; and stuffed toys.

339932 GAME, TOY, AND CHILDREN'S VEHICLE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing games (including electronic), toys, and children's vehicles (except bicycles and metal tricycles).

33994 OFFICE SUPPLIES (EXCEPT PAPER) MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing office supplies. Examples of products made by these establishments are pens, pencils, felt tip markers, crayons, chalk, pencil sharpeners, staplers, hand operated stamps, modeling clay, and inked ribbons.

339941 PEN AND MECHANICAL PENCIL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing pens, ballpoint pen refills and cartridges, mechanical pencils, and felt tipped markers.

339942 LEAD PENCIL AND ART GOOD MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing nonmechanical pencils and art goods. Examples of products made by these establishments are pencil leads, crayons, chalk, framed blackboards, pencil sharpeners, staplers, artists' palettes and paints, and modeling clay.

339943 MARKING DEVICE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing marking devices, such as hand operated stamps, embossing stamps, stamp pads, and stencils.

339944 CARBON PAPER AND INKED RIBBON MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing carbon paper and inked ribbons.

33995 SIGN MANUFACTURING

This industry comprises establishments primarily engaged in manufacturing signs and related displays of all materials (except printing paper and paperboard signs, notices, and displays).

339950 SIGN MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing signs and related displays of all materials (except printing paper and paperboard signs, notices, and displays).

33999 ALL OTHER MISCELLANEOUS MANUFACTURING

This industry comprises establishments primarily engaged in miscellaneous manufacturing (except medical equipment and supplies, jewelry and flatware, sporting and athletic goods, dolls, toys, games, office supplies (except paper), and signs).

339991 GASKET, PACKING, AND SEALING DEVICE MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing gaskets, packing, and sealing devices of all materials.

339992 MUSICAL INSTRUMENT MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing musical instruments (except toys).

339993 FASTENER, BUTTON, NEEDLE, AND PIN MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing fasteners, buttons, needles, pins, and buckles (except precious metals or precious and semiprecious stones and gems).

339994 BROOM, BRUSH, AND MOP MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing brooms, mops, and brushes.

339995 BURIAL CASKET MANUFACTURING

This U.S. industry comprises establishments primarily engaged in manufacturing burial caskets, cases, and vaults (except concrete).

339999 ALL OTHER MISCELLANEOUS MANUFACTURING

This U.S. industry comprises establishments primarily engaged in miscellaneous manufacturing (except medical equipment and supplies, jewelry and flatware, sporting and athletic goods, dolls, toys, games, office supplies (except paper), musical instruments, fasteners, buttons, needles, pins, brooms, brushes, mops, and burial caskets).

Appendix C. Methodology

SOURCES OF THE DATA

The manufacturing sector includes approximately 350,000 establishments. This number includes those industries in the North American Industry Classification System (NAICS) definition of manufacturing. The amount of information requested from manufacturing establishments was dependent upon a number of factors. The more important considerations were the size of the company and whether it was included in the Annual Survey of Manufactures (ASM).

Establishments in the 2002 Economic Census are divided into those sent report forms and those not sent report forms. The coverage of and the method of obtaining census information from each are described below:

1. Establishments sent a report form:

- a. ASM sample establishments. This group accounts for approximately 15 percent of all manufacturing establishments. The ASM panel covers all the units of large manufacturing establishments, as well as a sample of the medium and smaller establishments. The probability of selection was proportionate to size. For more information, see the Description of the ASM Survey Sample.

In an economic census year, the ASM report form (MA-10000) replaces the first page of the regular census form for those establishments included in the ASM. In addition to information on employment, payroll, and other items normally requested on the regular census form, establishments in the ASM sample were requested to supply additional information on gross book value of assets and capital expenditures. ASM establishments were also requested to provide information on retirements, depreciation, rental payments, and supplemental labor costs. For establishments not included in the ASM, these additional items were estimated using relationships observed in the ASM establishment data. The census statistics for these variables are a sum of the ASM establishment data and the estimated data for non-ASM establishments. ASM establishments were also requested to provide information for selected purchased services. The census statistics for the purchased service items were derived solely from the ASM establishments. See Appendix A. Explanation of Terms, for an explanation of these items. The census part of the report form is 1 of 220 versions containing product, material, and special inquiries. The diversity of manufacturing activities necessitated the use of this many forms to canvass the 473 manufacturing industries. Each form was developed for a group of related industries.

Appearing on each form was a list of products primary to the group of related industries, as well as secondary products and miscellaneous services that establishments classified in these industries were likely to perform. Respondents were requested to identify the products, the value of each product, and, in certain cases, the quantity of the product shipped during the survey year. Space also was provided for the respondent to describe products not specifically identified on the form.

The report form also contained a materials-consumed inquiry, which varied from form to form depending on the industries being canvassed. The respondents were asked to review a list of materials generally used in their production processes. From this list, each establishment was requested to identify those materials consumed during the survey year, the cost of each, and, in certain cases, the quantity consumed. Once again, space was provided

for the respondent to describe significant materials not listed on the form.

A wide variety of special inquiries were included to measure activities peculiar to a given industry, such as operations performed and equipment used.

- b. Large and medium establishments (non-ASM). Approximately 30 percent of all manufacturing establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 220 economic census — manufacturing regular forms. The first page, requesting establishment data for items such as employment and payroll, was standard but did not contain the detailed statistics included on the ASM form. The product, material, and special inquiry sections supplied were based on the historical industry classification of the establishment.
- c. Small single-establishment companies (non-ASM). This group includes approximately 15 percent of all manufacturing establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated “short form” was used. These establishments received 1 of the 31 versions of the short form, which requested summary product and material data and totals but no details on employment, payroll, cost of materials, inventories, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics, because the same data were collected on the short form as on the long form. However, detailed information on products and materials consumed was not collected on the short form; thus, its use would increase the value of the “not specified by kind” (nsk) categories.

2. Establishments not sent a report form:

- a. Small single-establishment companies not sent a report form. Approximately 40 percent of the manufacturing establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and the Census Bureau’s ability to assign the correct six-digit NAICS industry classification to the establishment. For each six-digit NAICS industry code, an annual payroll cutoff was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report that requested information for assigning NAICS industry codes. Establishments below the cutoff that could be directly assigned a six-digit NAICS code were excused from filing any report. For below cutoff establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other federal agencies under special arrangements that safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and cost of materials were not distributed among specific products and materials for these establishments, but were included in the product and material “not specified by kind” (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between manufacturing and nonmanufacturing activity.

Sometimes the administrative-record cases had only two- or three-digit NAICS group classification codes available in the files. For manufacturing, these establishments were sent a

separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as “All other” industries within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics, other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

- b. All nonemployers, i.e., all firms subject to federal income tax, with no paid employees, during 2002 are excluded as in previous censuses. Data for nonemployers are not included in this report, but are released in the annual *Nonemployer Statistics* series.

The report forms used to collect information for establishments in this sector are available at help.econ.census.gov/econhelp/resources/.

A more detailed examination of census methodology is presented in the *History of the Economic Census* at www.census.gov/econ/www/history.html.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

The classifications for all establishments covered in the 2002 Economic Census — Manufacturing are classified in 1 of 473 industries in accordance with the industry definitions in the *North American Industry Classification System (NAICS), United States, 2002* manual. There were no changes between the 2002 edition and the 1997 edition affecting this sector. When applicable, Appendix F of this report shows the product class and product comparability between the two systems for data in this report.

In the NAICS system, an industry is generally defined as a group of establishments that have similar production processes. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of number, value added by manufacture, value of shipments, and number of employees.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the manufacturing sector for 2002, there are 21 subsectors (three-digit NAICS), 86 industry groups (four-digit NAICS), 184 NAICS industries (five-digit NAICS) that are comparable with Canadian and Mexican classification, and 473 U.S. industries (six-digit NAICS). Product classes and products of the manufacturing industries have been assigned codes based on the industry from which they originate. There are 1,450 product classes (seven-digit codes), 5,674 census products, and an additional 3,746 ten-digit product codes. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 2002 Economic Census — Manufacturing, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value. For 2002, there were no “resistance rules” or “frozen industries.”

In ASM years, establishments included in the ASM sample with certainty weights are reclassified by industry only if the change in the primary activity from the prior year is significant or if the change has occurred for 2 successive years. This procedure prevents reclassification when there are minor shifts in product mix.

In ASM years, establishments included in the ASM sample with noncertainty weight are not shifted from one industry classification to another. They are retained in the industry where they were classified in the base census year. However, in the following census year, these ASM plants are allowed to shift from one industry to another.

The results of these rules covering the switching of plants from one industry classification to another are that some industries comprise different mixes of establishments in different survey years. Hence, comparisons between prior-year and current-year published totals, particularly at the six-digit NAICS level, should be viewed with caution. This is particularly true for the comparison between the data shown for a census year versus the data shown for the previous ASM year.

As previously noted, the small establishments that may have been misclassified by industry are usually administrative-record cases whose industry codes were assigned on the basis of incomplete descriptions of the general activity of the establishment. Such possible misclassifications have no significant effect on the statistics other than on the number of companies and establishments.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by manufacture, value of shipments, etc.) reflect the activities of the establishments that may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics, especially the value of shipments, to the product statistics, the composition of the industry's output should be considered.

The extent to which industry and product statistics may be matched with each other is measured by the primary product specialization ratio and the coverage ratio. The primary product specialization ratio is the proportion of industry shipments accounted for by the primary products of establishments classified in the industry. The coverage ratio is the proportion of product shipments accounted for by establishments classified in the industry.

ESTABLISHMENT BASIS OF REPORTING

The 2002 Economic Census — Manufacturing is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each location or establishment. The ASM also is conducted on an establishment basis, but separate reports are filed for just those establishments selected in the sample. Companies engaged in distinctly different lines of activity at one location are requested to submit separate reports, if the plant records permit such a separation and if the activities are substantial in size.

In 2002, as in earlier years, a minimum size limit was set for inclusion of establishments in the census. All establishments employing one person or more at any time during the census year are included. The same size limitation has applied since 1947 in censuses and annual surveys of manufactures. In the 1939 and earlier censuses, establishments with less than \$5,000 value of products were excluded. The change in the minimum size limit in 1947 does not appreciably affect the historical comparability of the census figures, except for data on number of establishments for a few industries.

The 2002 Economic Census — Manufacturing excludes data for central administrative offices (CAOs). These would include separately operated administrative offices, warehouses, garages, and other auxiliary units that service manufacturing establishments of the same company. These data are published in a separate report series.

DESCRIPTION OF THE ASM SURVEY SAMPLE

The ASM sample is drawn for the second survey year after a census. The most recent sample was drawn for the 1999 survey year based on the 1997 Economic Census — Manufacturing. This sample will be in place through the 2003 ASM.

In 1997, there were approximately 370,000 individual manufacturing establishments. For sample efficiency and cost considerations, the establishments in the 1997 manufacturing population were partitioned into two components for developing estimates within the ASM. The details of each are described below:

1. Mail stratum. The mail stratum of the survey is comprised of larger single-location manufacturing companies and all manufacturing establishments of multiunit companies (companies

that operate at more than one physical location). Approximately 200,000 of the 370,000 establishments in the 1997 census were assigned to the mail stratum. On an annual basis, the mail stratum is supplemented with larger, newly active single-location companies identified from a list provided by the Internal Revenue Service (IRS) and new manufacturing locations of multiunit companies identified from the Census Bureau's Company Organization Survey (COS).

For the 1999 survey, a new sample of approximately 58,000 individual establishments was selected from the mail stratum assembled from the 1997 census. Supplemental samples representing both 1998 and 1999 births (newly active establishments that were not included in the 1997 census) were also selected. Establishments selected for the sample are mailed an ASM survey questionnaire for each year through 2003.

The 1999-2003 ASM sample design is similar to the one used since 1984. Companies in the 1997 Economic Census — Manufacturing with manufacturing shipments of at least \$500 million were defined as company certainties. For these large companies, each manufacturing establishment is included in the mail sample. For the 1999-2003 sample, there are approximately 500 certainty companies collectively accounting for over 18,000 establishments.

For the remaining portion of the mail component of the survey, the establishment was defined as the sample unit. All establishments with 250 employees or more were defined as employment certainties. Across these arbitrary certainty classes, there were approximately 25,000 establishments included in the sample with certainty. Collectively, these certainty establishments accounted for approximately 80 percent of the total value of shipments in the 1997 Economic Census — Manufacturing.

Smaller establishments in the remaining portion of the mail stratum were sampled with probabilities ranging from .02 to 1.00. The initial probabilities of selection assigned to these establishments were proportionate to a measure-of-size determined for each establishment. The measure-of-size was a function of the establishment's 1997 industry classification and its 1997 product class data. For each product class (1,755) and six-digit industry (473), a desired reliability constraint was specified. Using a technique developed by Dr. James R. Chromy of the Research Triangle Institute, the initial establishment probabilities were optimized such that the expected sample satisfied all industry and product class reliability constraints, while the sample size was minimized. This technique reduces the likelihood of selecting nonrepresentative samples for individual product classes or industries.

This method of assigning probabilities based on product class shipments is motivated by the Census Bureau's primary desire to produce reliable estimates of both product class and industry shipments. The high correlation between shipments and employment, value-added, and other general statistics assures that these variables will also be well represented by the sample. The actual sample selection procedure uses an independent chance of selection method (Poisson sampling) that permits us to prevent small establishments from being selected in consecutive samples without introducing a bias into the survey estimates.

2. Nonmail stratum. The initial nonmail component of the survey was comprised of approximately 170,000 small, single-establishment companies that were tabulated as administrative records in the 1997 Economic Census — Manufacturing. The nonmail stratum is also supplemented annually using the list of newly active single-location companies provided by the Internal Revenue Service (IRS) and payroll cutoffs. Companies with payroll below the payroll cutoff are added to the nonmail stratum. For this portion of the population, sampling is not used. The data for this group are estimated based on selected information obtained annually from the administrative records of the IRS and Social Security Administration (SSA). This administrative information, which includes payroll, total employment, industry classification, and physical location, is obtained under conditions which safeguard the confidentiality of both tax and census records.

RELIABILITY OF DATA

All data compiled in the economic census are subject to nonsampling errors. Nonsampling errors can be attributed to many sources during the development or execution of the census. The following are two ways that further explain this method: ASM Estimating Procedure. Most of the ASM

estimates derived for the mail stratum are computed using a difference estimator. At the establishment level, there is a strong correlation between the current-year data values and the corresponding 1997 (base) data values. Therefore, within the mailed stratum, for each item at each level of aggregation, an estimate of the “difference” between the current year and the base year is computed from sample cases and added to the corresponding base-year values. For the 1998-2002 ASM estimates, the 1997 Economic Census — Manufacturing values serve as the base year. For the 2003 ASM, the base will be updated to be the 2002 Economic Census — Manufacturing.

Due to the positive year-to-year correlation, estimates derived using this methodology are generally more reliable than comparable estimates developed from the current sample data alone. Estimates for the capital expenditures variables are not generated using the difference estimator because the year-to-year correlations are considerably weaker. The standard linear estimator is used for these variables.

For the nonmail stratum, estimates for payroll and employment are directly tabulated from the administrative-record data provided by IRS and SSA. Estimates of data other than payroll and employment are developed from industry averages. Although the nonmail stratum contained approximately 170,000 individual establishments in 1999, it accounts for less than 2 percent of the estimate for total value of shipments at the total manufacturing level.

Corresponding estimates for the mail and nonmail components are combined to produce the estimates included in this publication. ASM Data Qualifications. The estimates developed from the sample are apt to differ somewhat from the results of a survey covering all companies in the sample lists, but otherwise conducted under essentially the same conditions as the actual sample survey. The estimates of the magnitude of the sampling errors (the difference between the estimates obtained and the results theoretically obtained from a comparable, complete-coverage survey) are provided by the standard errors of estimates.

The particular sample selected for the ASM is one of many similar probability samples that, by chance, might have been selected under the same specifications. Each of the possible samples would yield somewhat different sets of results, and the standard errors are measures of the variation of all the possible sample estimates around the theoretically comparable, complete-coverage values.

Estimates of the standard errors have been computed from the sample data for selected ASM statistics in this report. They are represented in the form of relative standard errors (the standard errors divided by the estimated values to which they refer).

In conjunction with its associated estimate, the relative standard error may be used to define confidence intervals (ranges that would include the comparable, complete-coverage value for specified percentages of all the possible samples).

The complete-coverage value would be included in the range:

- From one standard error below to one standard error above the derived estimate for about two-thirds of all possible samples.
- From two standard errors below to two standard errors above the derived estimate for about 19 out of 20 of all possible samples.
- From three standard errors below to three standard errors above the derived estimate for nearly all samples.

An inference that the comparable, complete-survey result would be within the indicated ranges would be correct in approximately the relative frequencies shown. Those proportions, therefore, may be interpreted as defining the confidence that the estimates from a particular sample would differ from complete-coverage results by as much as one, two, or three standard errors, respectively.

For example, suppose an estimated total is shown at 50,000 with an associated relative standard error of 2 percent, that is, a standard error of 1,000 (2 percent of 50,000). There is approximately 67 percent confidence that the interval 49,000 to 51,000 includes the complete-coverage total, about 95 percent confidence that the interval 48,000 to 52,000 includes the complete-coverage total, and almost certain confidence that the interval 47,000 to 53,000 includes the complete-coverage total.

In addition to the sample errors, the estimates are subject to various response and operational errors: errors of collection, reporting, coding, transcription, imputation for nonresponse, etc. These operational errors also would occur if a complete canvass were to be conducted under the same conditions as the survey. Explicit measures of their effects generally are not available. However, it is believed that most of the important operational errors were detected and corrected during the Census Bureau's review of the data for reasonableness and consistency. The small operational errors usually remain. To some extent, they are compensating in the aggregated totals shown. When important operational errors were detected too late to correct the estimates, the data were suppressed or were specifically qualified in the tables.

As derived, the estimated standard errors included part of the effect of the operational errors. The total errors, which depend upon the joint effect of the sampling and operational errors, are usually of the order of size indicated by the standard error, or moderately higher. However, for particular estimates, the total error may considerably exceed the standard errors shown. Any figures shown in the tables in this publication having an associated standard error exceeding 15 percent may be combined with higher level totals, creating a broader aggregate, which then may be of acceptable reliability.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 2002 Economic Census — Manufacturing shows value of shipments data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment.

DISCLOSURE

In accordance with federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments in a specific industry or geographic area is not considered a disclosure; therefore, this information may be released even though other information is withheld. Techniques employed to limit disclosure are discussed at www.census.gov/epcd/ec02/disclosure.htm.

The disclosure analysis for the industry statistics files is based on the total value of shipments. When the total value of shipments cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. Nonetheless, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for capital expenditures, which can be suppressed even though value of shipments data are published.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan and Micropolitan Statistical Areas

Not applicable for this report.

