

Sign Manufacturing: 2002

Issued January 2005

EC02-311-339950 (RV)

2002 Economic Census

Manufacturing

Industry Series



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-- Not applicable for this report.

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:

x Manufacturing

2002 Economic Census

- **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-Herschmann 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.

ZIP Code Statistics. This report contains statistics on the number of establishments for the three- and six-digit NAICS industry by employment-size of the establishment by ZIP Code.

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. A core based statistical areas (CBSA) contains 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 have been several additional data tables added, which did not exist in 1997. These tables for 2002 include products primary to more than one industry, industry-product analysis, e-commerce value of shipments, and leased and nonleased detail employment statistics by subsectors.

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. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year ¹	Com- panies ²	All estab- lish- ments ³	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
			Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)				
339950, Sign manufacturing 2002..	6 115	6 259	86 415	2 989 523	55 575	106 828	1 500 712	5 855 315	3 953 762	9 822 505	243 320
2001..	N	N	87 131	2 815 723	54 994	108 823	1 393 232	5 403 637	4 103 582	9 517 397	290 315
2000..	N	N	86 875	2 779 612	56 038	109 215	1 384 854	5 443 244	4 111 101	9 509 137	349 672
1999..	N	N	88 960	2 714 739	57 558	112 871	1 354 502	5 381 225	3 942 546	9 268 681	307 160
1998..	N	N	84 165	2 427 903	55 414	109 731	1 246 286	4 715 518	3 473 010	8 165 539	179 145
1997..	5 580	5 710	83 813	2 412 225	54 475	104 509	1 217 571	4 637 205	3 375 219	7 997 974	236 476

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and 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. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments ²		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
339950, Sign manufacturing												
United States.....	2	6 259	1 021	86 415	2 989 523	55 575	106 828	1 500 712	5 855 315	3 953 762	9 822 505	'243 320
Alabama.....	1	80	15	1 658	53 024	1 168	2 323	29 485	67 441	99 578	173 140	'4 172
Arizona.....	4	118	17	1 410	54 781	689	1 295	18 948	100 418	94 822	198 161	'3 726
Arkansas.....	2	50	4	478	13 782	318	565	6 940	29 659	20 527	50 108	'2 341
California.....	3	644	106	7 969	285 875	5 169	9 913	146 771	552 998	309 863	866 721	'18 376
Colorado.....	3	141	18	1 270	44 569	813	1 498	21 696	86 211	48 392	134 567	'3 301
Connecticut.....	—	75	14	1 725	50 484	1 171	2 282	23 994	104 159	81 669	185 704	'11 681
Florida.....	4	387	40	3 354	111 462	2 173	4 091	56 083	237 995	164 540	400 091	'15 606
Georgia.....	3	213	28	2 372	75 602	1 499	2 778	36 626	134 418	83 918	219 031	'8 355
Hawaii.....	6	24	1	136	4 731	93	184	2 486	8 825	6 219	15 023	'217
Illinois.....	3	246	61	4 641	180 302	2 727	5 360	81 711	390 912	296 120	683 590	'13 831
Indiana.....	3	152	22	1 811	57 132	1 221	2 171	30 587	97 820	81 051	178 961	'5 479
Iowa.....	—	53	10	848	28 008	552	1 112	13 751	53 395	33 691	87 599	'4 193
Kansas.....	2	66	12	1 114	33 899	805	1 492	19 511	64 951	40 077	105 188	'2 759
Kentucky.....	1	78	8	1 091	33 850	723	1 353	17 116	73 111	65 194	135 987	'5 501
Louisiana.....	3	57	9	514	15 508	384	754	9 598	26 336	19 149	46 616	'1 082
Maine.....	4	37	3	231	7 169	151	279	3 660	13 007	7 133	20 107	'555
Maryland.....	5	120	19	1 071	35 832	698	1 382	18 888	65 346	36 090	100 740	'2 384
Massachusetts.....	2	136	23	2 142	77 806	1 326	2 473	37 162	149 111	109 520	262 458	'7 268
Michigan.....	4	217	33	2 783	110 909	1 678	3 288	50 071	207 980	158 317	369 022	'5 978
Minnesota.....	2	136	33	2 620	94 329	1 599	3 040	45 816	197 049	133 278	329 727	'6 023
Mississippi.....	4	38	7	404	12 090	287	573	7 046	23 712	19 855	43 289	'565
Missouri.....	3	137	29	2 523	85 037	1 574	3 071	39 831	152 710	104 562	256 335	'5 787
Montana.....	2	25	1	124	4 159	77	133	2 330	7 634	4 543	12 210	'241
Nebraska.....	1	44	9	347	10 224	219	397	5 228	16 578	12 989	29 464	'453
Nevada.....	1	64	17	1 493	62 776	1 009	2 118	36 483	105 838	57 646	164 529	'7 012
New Hampshire.....	6	42	2	178	6 381	138	265	4 324	10 670	6 736	17 416	'261
New Jersey.....	1	179	32	3 512	146 429	2 137	4 379	61 764	288 553	181 640	469 695	'9 021
New Mexico.....	4	33	2	205	5 998	115	185	2 536	11 193	7 970	19 094	'336
New York.....	3	376	72	5 896	200 118	3 869	7 732	101 831	401 333	256 526	655 058	'17 882
North Carolina.....	4	180	26	1 727	60 647	1 104	1 968	31 920	114 856	71 833	186 452	'3 818
Ohio.....	1	290	63	4 956	168 299	3 184	6 080	83 322	342 166	210 859	552 360	'9 840
Oklahoma.....	4	72	6	541	16 161	349	590	8 133	26 560	19 100	45 885	'1 775
Oregon.....	1	113	13	1 150	39 012	754	1 423	21 206	72 883	39 595	113 998	'2 408
Pennsylvania.....	1	239	42	4 015	140 351	2 777	5 222	81 716	315 288	191 530	510 303	'7 537
Rhode Island.....	1	27	10	803	25 540	553	1 167	12 828	45 592	31 792	77 072	'2 306
South Carolina.....	—	96	10	1 116	34 229	810	1 567	20 814	77 788	49 081	129 690	'4 530
South Dakota.....	—	14	8	1 651	44 172	906	1 883	26 144	131 434	76 275	209 852	'4 761
Tennessee.....	3	120	21	2 045	80 051	1 216	2 326	40 792	92 938	95 868	190 683	'3 383
Texas.....	4	502	67	5 980	185 561	4 089	7 734	99 127	384 360	242 499	623 502	'10 722
Utah.....	2	72	7	690	25 019	435	885	12 610	42 906	32 179	74 286	'1 355
Virginia.....	2	147	26	1 896	60 901	1 275	2 351	32 146	110 604	71 559	181 781	'5 211
Washington.....	3	152	21	1 390	48 356	862	1 491	23 273	93 075	55 961	149 047	'2 927
West Virginia.....	—	24	2	235	8 240	163	330	4 774	16 324	11 800	28 124	'1 918
Wisconsin.....	1	145	33	2 899	108 113	1 776	3 592	49 056	233 923	172 192	403 529	'11 681
Wyoming.....	5	8	2	120	3 288	102	186	2 341	5 589	2 784	8 374	'218

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

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. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
339950, Sign manufacturing	
Companies ¹	number.. 6 115
All establishments ²	number.. 6 259
Establishments with 1 to 19 employees	number.. 5 238
Establishments with 20 to 99 employees	number.. 869
Establishments with 100 employees or more	number.. 152
All employees ³	number.. 86 415
Total compensation	\$1,000.. 3 473 368
Annual payroll	\$1,000.. 2 989 523
Total fringe benefits	\$1,000.. 483 845
Production workers, average for year	number.. 55 575
Production workers on March 12	number.. 55 443
Production workers on May 12	number.. 55 673
Production workers on August 12	number.. 55 784
Production workers on November 12	number.. 55 264
Production worker hours	1,000.. 106 828
Production worker wages	\$1,000.. 1 500 712
Total cost of materials	\$1,000.. 3 953 762
Materials, parts, containers, packaging, etc., used	\$1,000.. 3 131 809
Resales	\$1,000.. 317 480
Purchased fuels	\$1,000.. 23 737
Purchased electricity	\$1,000.. 57 286
Contract work	\$1,000.. 423 450
Quantity of electricity purchased for heat and power	1,000 kWh.. 832 814
Quantity of electricity generated less sold for heat and power	1,000 kWh.. 198
Total value of shipments	\$1,000.. 9 822 505
Primary products value of shipments	\$1,000.. 8 675 863
Secondary products value of shipments	\$1,000.. 302 653
Total miscellaneous receipts	\$1,000.. 843 989
Value of resales	\$1,000.. 448 779
Contract receipts	\$1,000.. 166 542
Other miscellaneous receipts	\$1,000.. 228 668
Primary products specialization ratio	percent.. 97
Value of primary products shipments made in all industries	\$1,000.. 8 915 450
Value of primary products shipments made in this industry	\$1,000.. 8 675 863
Value of primary products shipments made in other industries	\$1,000.. 239 587
Coverage ratio	percent.. 97
Value added	\$1,000.. 5 855 315
Total inventories, beginning of year	\$1,000.. 964 819
Finished goods inventories	\$1,000.. 262 602
Work-in-process inventories	\$1,000.. 286 552
Materials and supplies inventories	\$1,000.. 415 665
Total inventories, end of year	\$1,000.. 959 734
Finished goods inventories	\$1,000.. 253 822
Work-in-process inventories	\$1,000.. 281 904
Materials and supplies inventories	\$1,000.. 424 008
Gross value of depreciable assets (acquisition costs) at beginning of year	\$1,000.. '2 363 278
Total capital expenditures (new and used)	\$1,000.. '243 320
Buildings and other structures (new and used)	\$1,000.. '40 547
Machinery and equipment (new and used)	\$1,000.. '202 773
Automobiles, trucks, etc., for highway use	\$1,000.. '25 690
Computers and peripheral data processing equipment	\$1,000.. '32 050
All other expenditures for machinery and equipment	\$1,000.. '145 033
Total retirements	\$1,000.. '139 565
Gross value of depreciable assets at end of year	\$1,000.. '2 467 033
Depreciation charges during year	\$1,000.. '188 155
Total rental payments	\$1,000.. 243 239
Buildings and other structures	\$1,000.. 165 389
Machinery and equipment	\$1,000.. 77 850
Total other expenses ⁴	\$1,000.. 1 160 656
Response coverage ratio ⁵	percent.. 70
Repair and maintenance services of buildings and/or machinery ⁴	\$1,000.. 130 438
Communications services ⁴	\$1,000.. 81 410
Legal services ⁴	\$1,000.. 14 037
Accounting, auditing, and bookkeeping services ⁴	\$1,000.. 58 392
Advertising and promotional services ⁴	\$1,000.. 72 882
Expensed computer hardware and supplies and purchased computer services ⁴	\$1,000.. 98 336
Refuse removal (including hazardous waste) services ⁴	\$1,000.. 31 228
Management consulting and administrative services ⁴	\$1,000.. 20 030
Taxes and license fees ⁴	\$1,000.. 120 052
All other expenses ⁴	\$1,000.. 533 851

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

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Based on 2002 Annual Survey of Manufactures (ASM) sample data.

⁵A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and 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 4. Industry Statistics by Employment Size: 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]

Employment size class	E ¹	All establishments ²	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
339950, Sign manufacturing											
All establishments	2	6 259	86 415	2 989 523	55 575	106 828	1 500 712	5 855 315	3 953 762	9 822 505	'243 320
Establishments with—											
1 to 4 employees	8	3 648	6 940	217 112	4 736	7 896	113 200	379 013	249 674	627 993	'10 616
5 to 9 employees	4	799	5 432	170 891	3 573	6 377	91 126	314 083	206 102	521 335	'15 216
10 to 19 employees	2	791	10 933	339 443	7 094	12 096	177 035	654 677	382 069	1 037 369	'32 813
20 to 49 employees	2	640	19 567	660 560	12 560	24 142	335 329	1 294 704	809 178	2 097 593	'55 546
50 to 99 employees	1	229	16 105	585 133	10 595	21 296	298 905	1 139 351	801 341	1 954 237	'51 944
100 to 249 employees	2	132	19 215	695 511	12 196	24 923	336 550	1 475 778	1 072 087	2 550 021	'49 109
250 to 499 employees	2	16	5 318	236 037	3 070	6 470	103 608	379 249	287 124	668 510	'12 992
500 to 999 employees	—	3	g	D	D	D	D	D	D	D	D
1,000 to 2,499 employees	—	1	g	D	D	D	D	D	D	D	D
2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—
Administrative records ⁴	9	3 328	6 877	219 516	4 758	8 115	114 206	370 610	251 931	622 416	'9 455

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

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 5. Industry Statistics by Primary Product Class Specialization: 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]

Industry or product class code	Industry or primary product class	All establishments ¹	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)				
339950	Sign manufacturing	6 259	86 415	2 989 523	55 575	106 828	1 500 712	5 855 315	3 953 762	9 822 505	'243 320
3399501	Electric signs	753	26 498	944 276	16 570	32 677	476 977	1 793 193	1 148 980	2 949 628	'89 159
3399503	Nonelectric signs and displays, including counter, floor, and point-of-purchase displays	870	27 629	947 698	17 614	33 900	470 041	1 942 405	1 301 831	3 248 170	'79 093
3399505	Advertising specialties	144	11 128	395 934	7 203	14 284	192 121	884 866	649 652	1 534 496	'31 125

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

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 6a. Products Statistics: 2002 and 1997

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
339950	Sign manufacturing	2002.. N 1997.. N	X X	X X	8 915 450 7 185 895
3399501	Electric signs	2002.. N 1997.. N	X X	X X	2 586 820 2 061 111
33995011	Luminous tubing electric signs, including argon, hydrogen, and neon electric signs (excluding fluorescent lamp and incandescent bulb electric signs)	2002.. N 1997.. N	X X	X X	805 930 458 660
3399501101	Luminous tubing electric signs, including argon, hydrogen, and neon electric signs (excluding fluorescent lamp and incandescent bulb electric signs)	2002.. 517 1997.. 417	X X	X X	805 930 458 660
33995012	Fluorescent lamp electric signs	2002.. N 1997.. N	X X	X X	653 041 534 031
3399501206	Fluorescent lamp electric signs	2002.. 428 1997.. 409	X X	X X	653 041 534 031
33995013	Incandescent bulb electric signs	2002.. N 1997.. N	X X	X X	1 093 600 979 184
3399501311	Incandescent bulb electric signs with variable message display	2002.. 95 1997.. 89	X X	X X	164 242 114 258
3399501316	Other incandescent bulb electric signs	2002.. 45 1997.. 44	X X	X X	116 663 76 435
3399501321	Other electric signs, including electric signs made of combinations of luminous tubing, fluorescent lamps, and incandescent bulbs	2002.. 265 1997.. 302	X X	X X	812 695 788 491
3399501Y	Electric signs, nsk	2002.. N 1997.. N	X X	X X	34 249 89 236
3399501YVW	Electric signs, nsk	2002.. N 1997.. N	X X	X X	34 249 89 236
3399503	Nonelectric signs and displays, including counter, floor, and point-of-purchase displays	2002.. N 1997.. N	X X	X X	3 066 270 2 438 678
33995031	Nonelectric signs and displays, including counter, floor, and point-of-purchase displays	2002.. N 1997.. N	X X	X X	3 004 486 2 264 274
3399503101	Screen printed nonelectric metal signs and displays, including counter, floor, and point-of-purchase displays	2002.. 217 1997.. 199	X X	X X	372 439 266 024
3399503106	Other nonelectric metal signs and displays, including counter, floor, and point-of-purchase displays	2002.. 392 1997.. 282	X X	X X	565 645 341 508
3399503111	Screen printed nonelectric wood signs and displays, including counter, floor, and point-of-purchase displays	2002.. 95 1997.. 89	X X	X X	90 811 108 077
3399503116	Other nonelectric wood signs and displays, including counter, floor, and point-of-purchase displays	2002.. 199 1997.. 176	X X	X X	259 718 152 087
3399503121	Other screen printed nonelectric signs and displays, including counter, floor, and point-of-purchase displays	2002.. 145 1997.. 201	X X	X X	262 873 218 033
3399503126	Other nonelectric signs and displays, including counter, floor, and point-of-purchase displays	2002.. 575 1997.. 510	X X	X X	1 453 000 1 178 545
3399503Y	Nonelectric signs and displays, including counter, floor, and point-of-purchase displays, nsk	2002.. N 1997.. N	X X	X X	61 784 174 404
3399503YVW	Nonelectric signs and displays, including counter, floor, and point-of-purchase displays, nsk	2002.. N 1997.. N	X X	X X	61 784 174 404
3399505	Advertising specialties	2002.. N 1997.. N	X X	X X	1 462 557 1 337 104
33995051	Advertising specialties	2002.. N 1997.. N	X X	X X	1 462 557 1 228 927
3399505100	Advertising specialties	2002.. 171 1997.. N	X X	X X	1 462 557 N
339950W	Sign manufacturing, nsk, total	2002.. N 1997.. N	X X	X X	1 799 803 1 349 002
339950WY	Sign manufacturing, nsk, total	2002.. N 1997.. N	X X	X X	1 799 803 1 349 002
339950WYVW	Sign manufacturing, nsk, for nonadministrative-record establishments	2002.. N 1997.. N	X X	X X	1 195 720 910 424
339950WYVY	Sign manufacturing, nsk, for administrative-record establishments	2002.. N 1997.. N	X X	X X	604 083 438 578

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: 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 6b. Product Class Shipments for Selected States: 2002 and 1997

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)	
3399501	Electric signs		
	United States	2002.. 2 586 820 1997.. 2 061 111	
	Alabama	2002.. 74 467 1997.. 61 035	
	Arizona	2002.. 87 856 1997.. 63 035	
	Arkansas	2002.. 15 093 1997.. 18 672	
	California	2002.. 214 177 1997.. 226 329	
	Colorado	2002.. 42 011 1997.. 23 737	
	Connecticut	2002.. 86 887 1997.. 49 568	
	Florida	2002.. 105 456 1997.. 89 003	
	Georgia	2002.. 27 531 1997.. 38 504	
	Illinois	2002.. 153 264 1997.. 108 268	
	Indiana	2002.. 37 201 1997.. 24 780	
	Iowa	2002.. 32 114 1997.. 18 723	
	Kansas	2002.. 9 221 1997.. 18 045	
	Kentucky	2002.. 71 305 1997.. 10 878	
	Louisiana	2002.. 12 811 1997.. 18 303	
	Maine	2002.. 5 259 1997.. 3 717	
	Maryland	2002.. 17 064 1997.. 21 060	
	Massachusetts	2002.. 31 464 1997.. 17 250	
	Michigan	2002.. 61 083 1997.. 108 271	
	Minnesota	2002.. 60 541 1997.. 47 808	
	Mississippi	2002.. 15 261 1997.. 19 441	
	Missouri	2002.. 37 022 1997.. 32 384	
	Montana	2002.. 6 500 1997.. N	
	Nebraska	2002.. 16 402 1997.. 19 951	
	Nevada	2002.. 116 477 1997.. 70 076	
	New Jersey	2002.. 67 898 1997.. 69 123	
	New Mexico	2002.. 5 372 1997.. 4 869	
	New York	2002.. 67 471 1997.. 73 205	
	North Carolina	2002.. 73 750 1997.. 31 294	
	Ohio	2002.. 91 625 1997.. 114 334	
	Oklahoma	2002.. 12 573 1997.. 10 839	
	Oregon	2002.. 18 248 1997.. 20 044	
	Pennsylvania	2002.. 131 198 1997.. 68 087	
	Rhode Island	2002.. 11 851 1997.. N	
	South Carolina	2002.. 68 988 1997.. 26 026	
	Tennessee	2002.. 62 976 1997.. 70 951	
	Texas	2002.. 153 873 1997.. 121 574	
	Utah	2002.. 60 315 1997.. 17 135	
	Virginia	2002.. 55 474 1997.. 29 231	
	Washington	2002.. 48 442 1997.. 34 220	
	Wisconsin	2002.. 134 175 1997.. 146 448	
	3399503	Nonelectric signs and displays, including counter, floor, and point-of-purchase displays	
		United States	2002.. 3 066 270 1997.. 2 438 678
		Arizona	2002.. 30 088 1997.. 28 128
		California	2002.. 276 544 1997.. 160 172
		Colorado	2002.. 34 567 1997.. 16 323
		Connecticut	2002.. 32 620 1997.. 24 447
		Florida	2002.. 95 095 1997.. 61 274
		Georgia	2002.. 96 857 1997.. 48 902
		Illinois	2002.. 294 025 1997.. 265 287

See footnotes at end of table.

Table 6b. **Product Class Shipments for Selected States: 2002 and 1997—Con.**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3399503	Nonelectric signs and displays, including counter, floor, and point-of-purchase displays—Con.	
	United States—Con.	
	Indiana	2002.. 83 099
	Iowa	1997.. 28 115
	Kansas	2002.. 20 089
	Kentucky	1997.. 5 006
	Louisiana	2002.. 45 524
	Maine	1997.. 27 173
	Maryland	2002.. 16 268
	Massachusetts	1997.. 71 382
	Michigan	2002.. 6 882
	Minnesota	1997.. 5 201
	Mississippi	2002.. 3 887
	Missouri	1997.. N
	Nebraska	2002.. 39 276
	Nevada	1997.. 49 562
	New Hampshire	2002.. 61 313
	New Jersey	1997.. 35 487
	New Mexico	2002.. 140 514
	New York	1997.. 134 410
	North Carolina	2002.. 187 312
	Ohio	1997.. 97 748
	Oklahoma	2002.. 11 985
	Oregon	1997.. 6 983
	Pennsylvania	2002.. 58 701
	Rhode Island	1997.. 60 979
	South Carolina	2002.. 4 376
	Tennessee	1997.. 2 171
	Texas	2002.. 19 994
	Utah	1997.. 15 406
	Virginia	2002.. 2 097
	Washington	1997.. 4 443
	Wisconsin	2002.. 107 442
	Wisconsin	1997.. 198 549
	Wisconsin	2002.. 5 590
	Wisconsin	1997.. N
	Wisconsin	2002.. 265 833
	Wisconsin	1997.. 231 237
	Wisconsin	2002.. 42 385
	Wisconsin	1997.. 29 779
	Wisconsin	2002.. 223 384
	Wisconsin	1997.. 201 438
	Wisconsin	2002.. 14 250
	Wisconsin	1997.. 3 557
	Wisconsin	2002.. 42 794
	Wisconsin	1997.. 22 315
	Wisconsin	2002.. 181 166
	Wisconsin	1997.. 138 637
	Wisconsin	2002.. 26 848
	Wisconsin	1997.. 17 331
	Wisconsin	2002.. 28 665
	Wisconsin	1997.. 17 352
	Wisconsin	2002.. 24 731
	Wisconsin	1997.. 27 383
	Wisconsin	2002.. 132 633
	Wisconsin	1997.. 62 210
	Wisconsin	2002.. 5 524
	Wisconsin	1997.. 15 608
	Wisconsin	2002.. 65 844
	Wisconsin	1997.. 25 472
	Wisconsin	2002.. 28 110
	Wisconsin	1997.. 16 964
	Wisconsin	2002.. 158 402
	Wisconsin	1997.. 155 953
3399505	Advertising specialties	
	United States	2002.. 1 462 557
	United States	1997.. 1 337 104
	California	2002.. 87 897
	California	1997.. 109 728
	Florida	2002.. 58 482
	Florida	1997.. 31 736
	Georgia	2002.. 9 052
	Georgia	1997.. 21 474
	Illinois	2002.. 125 453
	Illinois	1997.. 171 561
	Massachusetts	2002.. 110 110
	Massachusetts	1997.. 54 388
	Minnesota	2002.. 40 053
	Minnesota	1997.. 36 987
	Missouri	2002.. 82 889
	Missouri	1997.. 70 349
	New Jersey	2002.. 160 405
	New Jersey	1997.. 145 513
	New York	2002.. 162 851
	New York	1997.. 92 030
	North Carolina	2002.. 3 802
	North Carolina	1997.. 3 879
	Ohio	2002.. 91 311
	Ohio	1997.. 53 389
	Pennsylvania	2002.. 78 937
	Pennsylvania	1997.. 99 904
	Rhode Island	2002.. 27 472
	Rhode Island	1997.. 39 482
	Tennessee	2002.. 58 194
	Tennessee	1997.. 48 621
	Texas	2002.. 136 535
	Texas	1997.. 63 080

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. For geographical definitions, see Appendix D.

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
339950	Sign manufacturing		
00900001	Total materials	2002.. X	3 131 809
		1997.. X	2 689 516
32121001	Veneer and plywood	2002.. X	38 584
		1997.. X	43 969
32200001	Paper and paperboard products (including paperboard boxes, containers, and corrugated paperboard)	2002.. X	43 866
		1997.. X	157 618
32521105	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc.	2002.. X	46 610
		1997.. X	43 839
32551002	Paints, varnishes, stains, lacquers, shellacs, japans, enamels, and allied product	2002.. X	37 855
		1997.. X	N
32610013	Plastics products consumed in the form of sheets, rods, tubes, film, and other shapes	2002.. X	218 251
		1997.. X	262 370
33251005	Metal hardware (including hinges, handles, locks, casters, etc.)	2002.. X	52 523
		1997.. X	47 833
33200047	All other fabricated metal products (excluding castings and forgings)	2002.. X	174 195
		1997.. X	132 092
33120001	Steel shapes and forms (excluding castings, forgings, and fabricated metal products)	2002.. X	70 479
		1997.. X	35 239
331000AJ	Nonferrous metal shapes and forms (excluding castings, forgings, and fabricated metal products)	2002.. X	68 839
		1997.. X	38 668
33531100	Specialty transformers and fluorescent ballasts	2002.. X	51 023
		1997.. X	59 286
32100043	Wood (excluding veneer and plywood)	2002.. X	35 375
		1997.. X	48 997
00190094	Manufactured products used for advertising specialties (including pens, pencils, key chains, calendars, magnets, etc.)	2002.. X	95 138
		1997.. X	79 503
31300045	Textiles and fabrics	2002.. X	20 231
		1997.. X	20 305
32591002	Printing inks	2002.. X	18 677
		1997.. X	N
00970099	All other materials and components, parts, containers, and supplies	2002.. X	532 465
		1997.. X	617 454
00971000	Materials, ingredients, containers, and supplies, nsk	2002.. X	1 627 698
		1997.. X	1 102 343

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: 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

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method (FIFO, LIFO, market, to name a few). Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and, then, to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory data by stage of fabrication

Total inventories and three detailed components (1)finished goods, (2)work-in-process, and (3)materials, supplies, fuels, etc., were collected.

When using inventory data by stage of fabrication for “all industries” and at the three-digit subsector level, it should be noted that an item treated as a finished product by an establishment in one industry may be reported as a raw material by an establishment in a different industry. For example, the finished-product inventories of a steel mill would be reported as raw materials by a stamping plant. Such differences are present in the inventory figures by stage of fabrication shown for all publication levels.

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.

Duplication in cost of materials and value of shipment

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 paper mills in the paper and allied products 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 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 which 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.

SELECTED PURCHASED SERVICES

Annual Survey of Manufactures (ASM) establishments were requested to provide information on the cost of selected purchased services for the repair and maintenance services of buildings and/or machinery; communication services; legal services; accounting, auditing, and bookkeeping services; advertising and promotional services; expensed computer hardware and supplies and purchased computer services; refuse removal services; management consulting and administrative services; taxes and license fees; and all other expenses not previously stated. Each of these items reflects the costs paid directly by the establishment and excludes salaries paid to employees of the establishment for these services. These expenses are normally considered as nonproduction related costs purchased from other companies.

Included in the cost of selected purchased services for the repair and maintenance services of buildings and/or machinery are payments made for all maintenance and repair work on buildings and equipment. Payments made to other establishments of the same company and for repair and maintenance of any leased property also are included. Excluded from this item are extensive repairs or reconstruction that was capitalized, which is considered capital expenditures; costs incurred directly by the establishment in using its own work force to perform repairs and maintenance work; and repairs and maintenance provided by the building or machinery owner as part of the rental contract.

Included in the cost of selected purchased services for communication is the actual expense incurred or payable during the year for any type of communication. Such types of communication include telephone, data transmission, telegraph, Internet, connectivity, FAX, telex, photo transmission, paging, cellular telephone, on-line access and related services, etc.

Included in the cost of selected purchased services for legal services are payments made to other companies for these services that were paid directly by the establishment. Excluded are the salaries paid to employees of the establishment for these services.

Included in the cost of selected accounting, auditing, and bookkeeping services are payments made to other companies for these services that were paid directly by the establishment. Excluded are the salaries paid to employees of this establishment for these services.

Included in the cost of selected advertising and promotional services are payments made to other companies for these services that were paid directly by the establishment. These include payments for printing, media coverage, and other services and materials. Excluded are the salaries paid to employees of this establishment for these services.

Included in the cost of selected expensed computer hardware and supplies and purchased computer services are actual expenses incurred or payable during the year for this item. Purchases for computer hardware and supplies, computer services (software, data transmission, processing services, Web design, etc.) are all included. Excluded are services provided by other establishments of the same company (such as a separate central data processing unit).

Included in the cost of selected purchased refuse removal services are payments made to other companies for these services that were paid directly by the establishment, including costs for hazardous waste removal or treatment. Excluded are all costs included in rental payments or as capital expenditures and the salaries paid to employees of the establishment for these services.

Included in the cost of selected purchased management consulting and administrative services are payments made to other companies for these services that were paid directly by the establishment. Excluded are the salaries paid to employees of this establishment for these services.

Included in the cost of selected purchased taxes and license fees are payments made to other companies for these services that were paid directly by the establishment, excluding income, sales, payroll, and excise taxes. Excluded are also the salaries paid to employees of this establishment for these services.

Response coverage ratio

A response coverage ratio is a measure of the extent to which respondents report for an item. The estimate is made by calculating the ratio value of the weighted total employment data for all the ASM establishments that report the item to the weighted total employment data for all ASM establishments classified in an industry (reporters and nonreporters).

DEPRECIATION CHARGES FOR FIXED ASSETS

This item includes depreciation and amortization charged during the year against assets. Depreciation charged against fixed assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation.

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 comprise 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.

TOTAL FRINGE BENEFITS

This item is the employer’s costs for social security tax, unemployment tax, workmen’s compensation insurance, state disability insurance pension plans, stock purchase plans, union-negotiated benefits, life insurance premiums, and insurance premiums on hospital and medical plans for employees.

Fringe benefits are divided into legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of federal old age and survivors’ insurance, unemployment compensation, and workers’ compensation. Payments for voluntary programs include all programs not specifically required by legislation, whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE ASSETS (ACQUISITION COSTS) AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable assets is collected on all census forms.

It shows the value of depreciable assets for the beginning of year (BOY) and end of year (EOY). The data encompass all fixed depreciable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, and equipment (production, office, and transportation equipment) for which depreciation reserves are maintained. Excluded are nondepreciable capital assets including inventories and intangible assets, such as timber and mineral rights.

The definition of fixed depreciable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year.

Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

ESTABLISHMENT

An establishment is a single physical location where business is conducted or where services or industrial operations are performed. Data in this sector includes those establishments where manufacturing is performed. A separate report was required for each manufacturing establishment (plant) with one employee or more that were in operation at any time during the year.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

Company

A company or ("enterprise") is comprised of all the establishments that operate under the ownership or control of a single organization. A company may be a business, service, or membership organization; consist of one or several establishments; and operate at one or several locations. It includes all subsidiary organizations, all establishments that are majority-owned by the company or any subsidiary, and all the establishments that can be directed or managed by the company or any subsidiary.

A company may have one or many establishments. Examples include product and service sales offices (retail and wholesale), industrial production plants, processing or assembly operations, mines or well sites, and support operations (such as an administrative office, warehouse, customer service center, or regional headquarters). Each establishment should receive, complete, and return a separate census form.

If the company operated at different physical locations, even if the individual locations were producing the same line of goods, a separate report was requested for each location. If the company operated in two or more distinct lines of manufacturing at the same location, a separate report was requested for each activity.

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).

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits.

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. Since the 1997 census programs, information is collected on the output of almost 10,000 individual product items.

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.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives.

Comparability with previous figures was given considerable weight in the selection of product categories, so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments information were collected. However, if quantity was not significant or could not be reported by manufacturers, only value of shipments was collected.

Shipments include both commercial shipments and transfers of products to other plants of the same company. For industries in which a considerable portion of the total shipments is transferred to other plants of the same company, separate information on interplant transfers also was collected. Moreover, for products that are used to a large degree within the same establishment as materials or components in the fabrication of other products, total production and often consumption of the item within the plant (quantity produced and consumed) was collected. Typically, the information on production also was collected for products for which there are significant differences between total production and shipments in a given year because of wide fluctuations in finished goods inventories. Other measures of output of products with long production cycles were used as appropriate and feasible.

PRODUCTION-WORKER HOURS

This item covers all hours worked or paid for at the manufacturing plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave when the employee was not at the establishment.

QUANTITY OF ELECTRICITY PURCHASED FOR HEAT AND POWER

Data on the cost of purchased electric energy were collected on all census forms. However, data on the quantity of purchased electric energy were collected only on the Annual Survey of Manufactures (ASM) form. In addition, information is 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.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. However, the breakdown between rental payments for buildings and other structures and rental payments for machinery and equipment is collected only on the ASM forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained, if they were owned by the establishment, e.g., structures and buildings, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments.

However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

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 include 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.

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.

VALUE OF SHIPMENTS

This item covers the received or receivable net selling values, f.o.b. 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: Reported contract work — receipts for work or services that a plant performed for others on their materials. Value of resales — sales of products brought and sold without further manufacture, processing, or assembly. Other miscellaneous receipts — such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. These components are: Primary products value of shipments. Secondary product value of shipments. Total miscellaneous receipts.

Primary product shipments is used in the calculations of industry specialization ratio and industry coverage ratio. The term “Value of primary products shipments made in this industry” is used in this publication and refers to the same data.

Duplication in cost of materials and value of shipment

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 paper mills in the paper and allied products 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

These items are not collected on the report forms, but are derived from the data shown in Table 3. 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 the industry shown in Tables 1 through 5 and data on product shipments shown in Tables 6a and 6b.

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.

Appendix B.

NAICS Codes, Titles, and Descriptions

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).

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 Areas and Micropolitan Statistical Areas

Not applicable for this report.

Appendix F.

Comparability of Product Classes and Product Codes: 2002 to 1997

2002 published	2002 collected	1997 published	2002 published	2002 collected	1997 published	2002 published	2002 collected	1997 published
3391114	3391137	3391137	3391136 pt.	3391136	3391135	3399111YVW	3399111YVW	3399111YVW
3391114100	3391137100	3391137100	3391136101	3391136101	3391135101	3399113	3399113	3399113
			3391136106	3391136106	3391135106	3399113101	3399113101	3399113101
			3391136111	3391136111	3391135111	3399113111	3399113111	3399113111
3391116	3391125	3391123	3391136116 pt	3391136116	3391135116	3399113121 pt	3399113121 pt	3399113106
3391116102	3391125106	3391123106	3391136121	3391136121	3391135121	3399113121 pt	3399113121 pt	3399113116
3391116105	3391125111	3391123111	3391136126	3391136126	3391135126	3399113YVW	3399113YVW	3399113YVW
3391116109	3391125116	3391123116	3391136131 pt	3391136131	3391135131			
3391116YVW	3391125YVW	3391123YVW	3391136136 pt	3391136136	3391135136			
			3391136141 pt	3391136141	3391135141			
3391118	3391110 pt.	3391110 pt.	3391136146 pt	3391136146	3391135146			
3391118120	3391110230	3391110230	3391136151 pt	3391136151	3391135151			
3391118240	3391110110	3391110110	3391136156 pt	3391136156	3391135156			
3391118YVW	3391110YVW pt.	3391110YVW pt.	3391136161 pt	3391136161	3391135161			
			3391136166 pt	3391136166	3391135166			
339111W pt.	3391110 pt.	3391110 pt.	3391136171 pt	3391136171	3391135171			
			3391136176 pt	3391136176	3391135176			
339111W pt.	3391112W pt.	3391112W pt.	3391136181 pt	3391136181	3391135181			
			3391136186 pt	3391136186	3391135186			
339111W pt.	3391113W pt.	3391113W pt.	3391136191 pt	3391136191	3391135191			
339111WYVW pt.	3391110YVW pt.	3391110YVW pt.	3391136196 pt	3391136196	3391135196			
339111WYVW pt.	339112WYVW pt.	339112WYVW pt.	3391136201 pt	3391136201	3391135201			
339111WYVW pt.	339113WYVW pt.	339113WYVW pt.	3391136206 pt	3391136206	3391135206			
339111WYVW pt.	339114WYVW pt.	339114WYVW pt.	3391136211 pt	3391136211	3391135211			
339111WYVW pt.	339115WYVW pt.	339115WYVW pt.	3391136216 pt	3391136216	3391135216			
339111WYVW pt.	339116WYVW pt.	339116WYVW pt.	3391136221 pt	3391136221	3391135221			
339111WYVW pt.	339117WYVW pt.	339117WYVW pt.	3391136226 pt	3391136226	3391135226			
339111WYVW pt.	339118WYVW pt.	339118WYVW pt.	3391136231 pt	3391136231	3391135231			
339111WYVW pt.	339119WYVW pt.	339119WYVW pt.	3391136236 pt	3391136236	3391135236			
339111WYVW pt.	339120WYVW pt.	339120WYVW pt.	3391136241 pt	3391136241	3391135241			
339111WYVW pt.	339121WYVW pt.	339121WYVW pt.	3391136246 pt	3391136246	3391135246			
339111WYVW pt.	339122WYVW pt.	339122WYVW pt.	3391136251 pt	3391136251	3391135251			
339111WYVW pt.	339123WYVW pt.	339123WYVW pt.	3391136256 pt	3391136256	3391135256			
339111WYVW pt.	339124WYVW pt.	339124WYVW pt.	3391136261 pt	3391136261	3391135261			
339111WYVW pt.	339125WYVW pt.	339125WYVW pt.	3391136266 pt	3391136266	3391135266			
339111WYVW pt.	339126WYVW pt.	339126WYVW pt.	3391136271 pt	3391136271	3391135271			
339111WYVW pt.	339127WYVW pt.	339127WYVW pt.	3391136276 pt	3391136276	3391135276			
339111WYVW pt.	339128WYVW pt.	339128WYVW pt.	3391136281 pt	3391136281	3391135281			
339111WYVW pt.	339129WYVW pt.	339129WYVW pt.	3391136286 pt	3391136286	3391135286			
339111WYVW pt.	339130WYVW pt.	339130WYVW pt.	3391136291 pt	3391136291	3391135291			
339111WYVW pt.	339131WYVW pt.	339131WYVW pt.	3391136296 pt	3391136296	3391135296			
339111WYVW pt.	339132WYVW pt.	339132WYVW pt.	3391136301 pt	3391136301	3391135301			
339111WYVW pt.	339133WYVW pt.	339133WYVW pt.	3391136306 pt	3391136306	3391135306			
339111WYVW pt.	339134WYVW pt.	339134WYVW pt.	3391136311 pt	3391136311	3391135311			
339111WYVW pt.	339135WYVW pt.	339135WYVW pt.	3391136316 pt	3391136316	3391135316			
339111WYVW pt.	339136WYVW pt.	339136WYVW pt.	3391136321 pt	3391136321	3391135321			
339111WYVW pt.	339137WYVW pt.	339137WYVW pt.	3391136326 pt	3391136326	3391135326			
339111WYVW pt.	339138WYVW pt.	339138WYVW pt.	3391136331 pt	3391136331	3391135331			
339111WYVW pt.	339139WYVW pt.	339139WYVW pt.	3391136336 pt	3391136336	3391135336			
339111WYVW pt.	339140WYVW pt.	339140WYVW pt.	3391136341 pt	3391136341	3391135341			
339111WYVW pt.	339141WYVW pt.	339141WYVW pt.	3391136346 pt	3391136346	3391135346			
339111WYVW pt.	339142WYVW pt.	339142WYVW pt.	3391136351 pt	3391136351	3391135351			
339111WYVW pt.	339143WYVW pt.	339143WYVW pt.	3391136356 pt	3391136356	3391135356			
339111WYVW pt.	339144WYVW pt.	339144WYVW pt.	3391136361 pt	3391136361	3391135361			
339111WYVW pt.	339145WYVW pt.	339145WYVW pt.	3391136366 pt	3391136366	3391135366			
339111WYVW pt.	339146WYVW pt.	339146WYVW pt.	3391136371 pt	3391136371	3391135371			
339111WYVW pt.	339147WYVW pt.	339147WYVW pt.	3391136376 pt	3391136376	3391135376			
339111WYVW pt.	339148WYVW pt.	339148WYVW pt.	3391136381 pt	3391136381	3391135381			
339111WYVW pt.	339149WYVW pt.	339149WYVW pt.	3391136386 pt	3391136386	3391135386			
339111WYVW pt.	339150WYVW pt.	339150WYVW pt.	3391136391 pt	3391136391	3391135391			
339111WYVW pt.	339151WYVW pt.	339151WYVW pt.	3391136396 pt	3391136396	3391135396			
339111WYVW pt.	339152WYVW pt.	339152WYVW pt.	3391136401 pt	3391136401	3391135401			
339111WYVW pt.	339153WYVW pt.	339153WYVW pt.	3391136406 pt	3391136406	3391135406			
339111WYVW pt.	339154WYVW pt.	339154WYVW pt.	3391136411 pt	3391136411	3391135411			
339111WYVW pt.	339155WYVW pt.	339155WYVW pt.	3391136416 pt	3391136416	3391135416			
339111WYVW pt.	339156WYVW pt.	339156WYVW pt.	3391136421 pt	3391136421	3391135421			
339111WYVW pt.	339157WYVW pt.	339157WYVW pt.	3391136426 pt	3391136426	3391135426			
339111WYVW pt.	339158WYVW pt.	339158WYVW pt.	3391136431 pt	3391136431	3391135431			
339111WYVW pt.	339159WYVW pt.	339159WYVW pt.	3391136436 pt	3391136436	3391135436			
339111WYVW pt.	339160WYVW pt.	339160WYVW pt.	3391136441 pt	3391136441	3391135441			
339111WYVW pt.	339161WYVW pt.	339161WYVW pt.	3391136446 pt	3391136446	3391135446			
339111WYVW pt.	339162WYVW pt.	339162WYVW pt.	3391136451 pt	3391136451	3391135451			
339111WYVW pt.	339163WYVW pt.	339163WYVW pt.	3391136456 pt	3391136456	3391135456			
339111WYVW pt.	339164WYVW pt.	339164WYVW pt.	3391136461 pt	3391136461	3391135461			
339111WYVW pt.	339165WYVW pt.	339165WYVW pt.	3391136466 pt	3391136466	3391135466			
339111WYVW pt.	339166WYVW pt.	339166WYVW pt.	3391136471 pt	3391136471	3391135471			
339111WYVW pt.	339167WYVW pt.	339167WYVW pt.	3391136476 pt	3391136476	3391135476			
339111WYVW pt.	339168WYVW pt.	339168WYVW pt.	3391136481 pt	3391136481	3391135481			
339111WYVW pt.	339169WYVW pt.	339169WYVW pt.	3391136486 pt	3391136486	3391135486			
339111WYVW pt.	339170WYVW pt.	339170WYVW pt.	3391136491 pt	3391136491	3391135491			
339111WYVW pt.	339171WYVW pt.	339171WYVW pt.	3391136496 pt	3391136496	3391135496			
339111WYVW pt.	339172WYVW pt.	339172WYVW pt.	3391136501 pt	3391136501	3391135501			
339111WYVW pt.	339173WYVW pt.	339173WYVW pt.	3391136506 pt	3391136506	3391135506			
339111WYVW pt.	339174WYVW pt.	339174WYVW pt.	3391136511 pt	3391136511	3391135511			
339111WYVW pt.	339175WYVW pt.	339175WYVW pt.	3391136516 pt	3391136516	3391135516			
339111WYVW pt.	339176WYVW pt.	339176WYVW pt.	3391136521 pt	3391136521	3391135521			
339111WYVW pt.	339177WYVW pt.	339177WYVW pt.	3391136526 pt	3391136526	3391135526			
339111WYVW pt.	339178WYVW pt.	339178WYVW pt.	3391136531 pt	3391136531	3391135531			
339111WYVW pt.	339179WYVW pt.	339179WYVW pt.	3391136536 pt	3391136536	3391135536			
339111WYVW pt.	339180WYVW pt.	339180WYVW pt.	3391136541 pt	3391136541	3391135541			
339111WYVW pt.	339181WYVW pt.	339181WYVW pt.	3391136546 pt	3391136546	3391135546			
339111WYVW pt.	339182WYVW pt.	339182WYVW pt.	3391136551 pt	3391136551	3391135551			
339111WYVW pt.	339183WYVW pt.	339183WYVW pt.	3391136556 pt	3391136556	3391135556			
339111WYVW pt.	339184WYVW pt.	339184WYVW pt.	3391136561 pt	3391136561	3391135561			
339111WYVW pt.	339185WYVW pt.	339185WYVW pt.	3391136566 pt	3391136566	3391135566			
339111WYVW pt.	339186WYVW pt.	339186WYVW pt.	3391136571 pt	3391136571	3391135571			
339111WYVW pt.	339187WYVW pt.	339187WYVW pt.	3391136576 pt	3391136576	3391135576			
339111WYVW pt.	339188WYVW pt.	339188WYVW pt.	3391136581 pt	3391136581	3391135581			
339111WYVW pt.	339189WYVW pt.	339189WYVW pt.	3391136586 pt	3391136586	3391135586			
339111WYVW pt.	339190WYVW pt.	339190WYVW pt.	3391136591 pt	3391136591	3391135591			
339111WYVW pt.	339191WYVW pt.	339191WYVW pt.	3391136596 pt	3391136596	3391135596			
339111WYVW pt.	339192WYVW pt.	339192WYVW pt.	3391136601 pt	3391136601	3391135601			
339111WYVW pt.	339193WYVW pt.	339193WYVW pt.	3391136606 pt	3391136606	3391135606			
339111WYVW pt.	339194WYVW pt.	339194WYVW pt.	3391136611 pt	3391136611	3391135611			
339111WYVW pt.	339195WYVW pt.	339195WYVW pt.	3391136616 pt	3391136616	3391135616			
339111WYVW pt.	339196WYVW pt.	339196WYVW pt.	3391136621 pt	3391136621	3391135621			
339111WYVW pt.	339197WYVW pt.	339197WYVW pt.	3391136626 pt	3391136626	3391135626			
339111WYVW pt.	339198WYVW pt.	339198WYVW pt.	3391136631 pt	3391136631	3391135631			
339111WYVW pt.	339199WYVW pt.	339199WYVW pt.	3391136636 pt	3391136636	3391135636			
339111WYVW pt.	339200WYVW pt.	339200WYVW pt.	3391136641 pt	3391136641	3391135641			
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2002 published	2002 collected	1997 published	2002 published	2002 collected	1997 published	2002 published	2002 collected	1997 published
3399203	3399203	3399203	3399327	3399324	3399327	339944W	339944W	339944W
3399203101	3399203101	3399203101	3399327301	3399324201	3399327101	339944WYWW	339944WYWW	339944WYWW
3399203206	3399203206	3399203206	3399327306	3399324206	3399327206	339944WYVY	339944WYVY	339944WYVY
3399203311	3399203311	3399203311	3399327311	3399324211	3399327311			
3399203416	3399203416	3399203416	3399327316	3399324216	3399327216			
3399203421	3399203421	3399203421	3399327321	3399324221	3399327221			
3399203YVW	3399203YVW	3399203YVW	3399327326	3399324226	3399327226			
			3399327YVW	3399324YVW	3399327YVW			
3399205	3399205	3399205	3399328 pt.	3262999 pt.	3262999 pt.			
3399205101	3399205101	3399205101						
3399205106	3399205106	3399205106						
3399205YVW	3399205YVW	3399205YVW						
3399207	3399207	3399207	3399328 pt.	3399328	3399323 pt.			
3399207101	3399207101	3399207101	3399328116	3399328116	3399323116			
3399207111	3399207111	3399207111	3399328121	3399328121	3399323121			
3399207131	3399207131	3399207131	3399328141 pt.	3399328141 pt.	3399323126			
3399207141	3399207141	3399207141	3399328141	3399328141	3399323131			
3399207198 pt.	3399207198 pt.	3399207198 pt.	3399328251	3399328251	3399323251			
3399207198 pt.	3399207198 pt.	3399207198 pt.	3399328251	3399328251	3399323251			
3399207198 pt.	3399207198 pt.	3399207198 pt.	3399328251	3399328251	3399323251			
3399207YVW	3399207YVW	3399207YVW	3399328YVW	3399328YVW	3399323YVW pt.			
339920A pt.	3262998 pt.	3262998 pt.	3399328YVW pt.	3399328YVW pt.	3399323YVW pt.			
339920A pt.	3399209	3399209	339932851 pt.	3262999145	3262999145			
339920A101	3399209101	3399209101	3399328551 pt.	3399328551 pt.	3399323111 pt.			
339920A106	3399209106	3399209106	3399328551 pt.	3399328551 pt.	3399323206			
339920A111	3399209111	3399209111	3399328551 pt.	3399328551 pt.	3399323236			
339920A116	3399209116	3399209116	3399328571	3399328571	3399323256			
339920A118	3399209118	3399209118	3399328YVW pt.	3262999YVW pt.	3262999YVW pt.			
339920A11A	339920911A	339920911A	3399328YVW pt.	3399328YVW pt.	3399323276			
339920A11F	339920911F	339920911F			3399323271			
339920A11L pt.	326299812B	3262998121 pt.	3399329	3399326	3399329			
339920A11L pt.	339920911K	339920911K	3399329100	3399326100	3399329100			
339920A11N	339920911N	339920912U pt.						
339920A11P	339920911P	339920911P	339932W pt.	339932W pt.	339932W pt.			
339920A11R pt.	339920911R pt.	339920911U						
339920A11R pt.	339920911R pt.	339920911U						
339920A11V	339920911V	339920912A						
339920A12C	339920912C	3399209141						
339920A12H pt.	339920912H pt.	3399209126						
339920A12H pt.	339920912H pt.	339920912F						
339920A12H pt.	339920912H pt.	3399209131						
339920A12H pt.	339920912H pt.	3399209136						
339920A12H pt.	339920912H pt.	3399209146						
339920A12H pt.	339920912H pt.	3399209151 pt.						
339920A156	3399209156	3399209156						
339920A166	3399209166	3399209166						
339920A181	3399209181	3399209181						
339920A186	3399209186	3399209186						
339920A193	3399209193	3399209193						
339920A194	3399209194	3399209196						
339920A195 pt.	3399209195 pt.	3399209171						
339920A195 pt.	3399209195 pt.	3399209191						
339920A197	3399209197	339920912P						
339920A199 pt.	3399209199 pt.	339920912K						
339920A199 pt.	3399209199 pt.	339920912U pt.						
339920A199 pt.	3399209199 pt.	3399209151 pt.						
339920A199 pt.	3399209199 pt.	3399209161						
339920A199 pt.	3399209199 pt.	3399209176						
339920AYVW pt.	3262998YVW pt.	3262998YVW pt.						
339920AYVW pt.	3399209YVW	3399209YVW						
339920W pt.	3262999W pt.	3262999W pt.						
339920W pt.	339920W	339920W						
339920WYVW pt.	3262999WYVW pt.	3262999WYVW pt.						
339920WYVW pt.	339920WYVW	339920WYVW						
339920WYVW pt.	3262999WYVW pt.	3262999WYVW pt.						
339920WYVW pt.	339920WYVW	339920WYVW						
3399310	3399310	3399310						
3399310106 pt.	3399310106 pt.	3399310106						
3399310106 pt.	3399310106 pt.	3399310131 pt.						
3399310111 pt.	3399310111 pt.	3399310111						
3399310111 pt.	3399310111 pt.	3399310131 pt.						
3399310301	3399310301	3399310301						
3399310321	3399310321	3399310321						
3399310326	3399310326	3399310326						
3399310516	3399310516	3399310216						
3399310YVW	3399310YVW pt.	3399310YVW pt.						
3399310YVW	3399310YVW pt.	3399310YVW pt.						
3399322	3399322	3399321 pt.						
3399322101	3399322101	3399321101						
3399322106	3399322106	3399321106						
3399322111	3399322141	3399321111						
3399322131	3399322131	3399321116 pt.						
3399322YVW	3399322YVW pt.	3399321YVW pt.						
3399326 pt.	3399325 pt.	3399323 pt.						
3399326 pt.	3399325 pt.	3399325						
3399326 pt.	339999K pt.	339999H pt.						
3399326102 pt.	3399325102 pt.	3399323111 pt.						
3399326102 pt.	3399325102 pt.	3399325101						
3399326106	3399325106	3399325106						
3399326116	3399325116	3399325116						
3399326118	3399325118	3399325111						
3399326121	3399325121	3399325121						
3399326227 pt.	3399325226	3399325226						
3399326227 pt.	339999K149	339999H151 pt.						
3399326231	3399325231	3399325231						
3399326236	3399325236	3399325236						
3399326YVW pt.	3399325YVW pt.	3399323YVW pt.						
3399326YVW pt.	3399325YVW pt.	3399325YVW						
3399326YVW pt.	339999KYVW pt.	339999HYVW pt.						

2002 published	2002 collected	1997 published	2002 published	2002 collected	1997 published	2002 published	2002 collected	1997 published
3399935	3399935	3399935	3399951	3399951	3399951	339999E pt	3261997 pt	3261997 pt
3399935106	3399935106	3399935106	3399951101	3399951101	3399951101	339999E pt	339999E	339999C
3399935112 pt	3399935112 pt	3399935101	3399951206	3399951206	3399951206	339999E101	339999E101	339999C101
3399935112 pt	3399935112 pt	3399935111	3399951YVW	3399951YVW	3399951YVW	339999E206	339999E206	339999C206
3399935131 pt	3399935131 pt	3399935116	3399953	3399953	3399953	339999E311	339999E311	339999C311
3399935131 pt	3399935131 pt	3399935121	3399953101	3399953111	3399953101	339999E313	3261997126	3261997121
3399935131 pt	3399935131 pt	3399935126	3399953106	3399953106	3399953106	339999E316	339999E316	339999C316
3399935YVW	3399935YVW	3399935YVW	3399953YVW	3399953YVW	3399953YVW	339999EYVW pt	3261997YVW pt	3261997YVW pt
339993W	339993W	339993W	3399955	3399955	3399955	339999EYVW pt	339999EYVW pt	339999CYVW
339993WYVW	339993WYVW	339993WYVW	3399955100	3399955100	3399955100	339999K pt	3352113 pt	3352113 pt
339993WYVW	339993WYVW	339993WYVW	339995W	339995W	339995W	339999K pt	3399310 pt	3399310 pt
3399941	3399941	3399941	339995WYVW	339995WYVW	339995WYVW	339999K pt	339999K pt	339999H pt
3399941101	3399941101	3399941101	339995WYVW	339995WYVW	339995WYVW	339999K111	339999K111	339999H111
3399941106	3399941106	3399941106	339995WYVW	339995WYVW	339995WYVW	339999K121	339999K121	339999H121
3399941311	3399941311	3399941311	3399991	3399991	3399991	339999K151 pt	3352113120	3352113000 pt
3399941316	3399941316	3399941316	3399991101	3399991101	3399991101	339999K151 pt	3399310141	3399310131 pt
3399941321	3399941321	3399941321	3399991106	3399991106	3399991106	339999K151 pt	339999K151	339999H151 pt
3399941YVW	3399941YVW	3399941YVW	3399991111	3399991111	3399991111	339999K151 pt	3352113YVW pt	3352113000 pt
3399943	3399943	3399943	3399991116	3399991116	3399991116	339999KYVW pt	3399310YVW pt	3399310YVW pt
3399943101	3399943101	3399943101	3399991121	3399991121	3399991121	339999KYVW pt	339999KYVW pt	339999HYVW pt
3399943206	3399943206	3399943206	3399991YVW	3399991YVW	3399991YVW	339999W pt	326199W pt	326199W pt
3399943211	3399943211	3399943211	3399993	3399993	3399993	339999W pt	335211W pt	335211W pt
3399943YVW	3399943YVW	3399943YVW	3399993101	3399993101	3399993101	339999W pt	3399310 pt	3399310 pt
3399945	3399945	3399945	3399993106	3399993106	3399993106	339999W pt	339999W pt	339999W pt
3399945101	3399945101	3399945101	3399993YVW	3399993YVW	3399993YVW	339999WYVW pt	326199WYVW pt	326199WYVW pt
3399945106	3399945106	3399945106	3399995	3399995	3399995	339999WYVW pt	335211WYVW pt	335211WYVW pt
3399945211	3399945211	3399945211	3399995100	3399995100	3399995100	339999WYVW pt	3399310YVW pt	3399310YVW pt
3399945216	3399945216	3399945216	3399997	3399997	3399997	339999WYVW pt	339999WYVW pt	339999WYVW pt
3399945221	3399945221	3399945221	3399997100	3399997100	3399997100	339999WYVW pt	339999WYVW pt	339999WYVW pt
3399945226	3399945226	3399945226	3399999	3399999	3399999	339999WYVW pt	326199WYVW pt	326199WYVW pt
3399945YVW	3399945YVW	3399945YVW	3399999101	3399999101	3399999101	339999WYVW pt	335211WYVW pt	335211WYVW pt
339994W	339994W	339994W	3399999106	3399999106	3399999106	339999WYVW pt	3399310YVW pt	3399310YVW pt
339994WYVW	339994WYVW	339994WYVW	3399999111	3399999111	3399999111	339999WYVW pt	339999WYVW pt	339999WYVW pt
339994WYVW	339994WYVW	339994WYVW	3399999YVW	3399999YVW	3399999YVW	339999WYVW pt	339999WYVW pt	339999WYVW pt

