

# Commercial Lithographic Printing

# 1997

Issued November 1999

EC97M-3231A

## 1997 Economic Census

*Manufacturing*

Industry Series



## U S C E N S U S B U R E A U

*Helping You Make Informed Decisions*

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



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-- Not applicable for this report.

# Introduction to the Economic Census

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## PURPOSES AND USES OF THE ECONOMIC CENSUS

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

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

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

## ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of 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 Foodservices
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), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

## RELATIONSHIP TO SIC

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 industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

## GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

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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 Internal Revenue Service tax forms is used as a basis for coding.

## **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.

## **DOLLAR VALUES**

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 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.

## **AVAILABILITY OF ADDITIONAL DATA**

### **Reports in Print and Electronic Media**

All results of the 1997 Economic Census are available on the Census Bureau Internet site ([www.census.gov](http://www.census.gov)) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

### **Special Tabulations**

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673  
Service Sector Statistics Division 301-457-2668

## **HISTORICAL INFORMATION**

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

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

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

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

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

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## SOURCES FOR MORE INFORMATION

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

## ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census 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.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
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.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.



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# Manufacturing

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## SCOPE

The 1997 Economic Census – Manufacturing covers all manufacturing establishments with one or more paid employees. Manufacturing is defined as the mechanical, physical, or chemical transformation of materials or substances into new products. The assembly of components into new products is also considered manufacturing, except when it is appropriately classified as construction.

Establishments in the manufacturing sector are often described as plants, factories, or mills and typically use power-driven machines and materials-handling equipment. Also included in the manufacturing sector are some establishments that make products by hand, like custom tailors and the makers of custom draperies. While manufacturers typically do not sell to the public, some establishments like bakeries and candy stores that make products on the premises may be included.

While logging and publishing are no longer in the scope of manufacturing, data for these industries are included in the manufacturing industry reports, but are not included in the manufacturing state, summary, and other reports.

## GENERAL

This report, from the 1997 Economic Census – Manufacturing, is one of a series of 480 industry reports and 51 geographic area reports, each of which provides statistics for individual industries or states, respectively. Seven of the industry reports are for industries no longer in the manufacturing sector but are included with manufacturing for the 1997 census year. Also included for this sector are General, Product, and Materials Consumed Summary reports, a special report on Concentration Ratios in Manufacturing, and data files on Location of Manufacturing Plants.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. 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. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more in the industry.

State reports, which include the District of Columbia, present similar statistics at the “all manufacturing” level for each state and its metropolitan areas (MAs) 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.

The General Summary 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.

The Products and Materials Consumed reports summarize the products and materials data published in the industry reports. The Product Summary report also includes data from the Current Industrial Reports (CIR) and a special table with data for products that are primary to more than one industry, which are not in the industry reports.

The Concentration Ratios report publishes data on the percentage of value of shipments accounted for by the 4-, 8-, 20-, and 50-largest companies for each manufacturing industry. Also shown in this report are Hirschmann-Herfindahl Indexes for each industry.

The Location of Manufacturing data files contain 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.

## GEOGRAPHIC AREAS COVERED

Statistics at the six-digit NAICS industry level are shown for states and the District of Columbia in both the state and industry reports for cells with 100 employees or more.

The state reports also include data at the “all manufacturing” level for a variety of geographies that meet the employment criteria.

Data are available for the metropolitan areas (MAs) with 250 employees or more. The term MA is a general term used to encompass all of the specifically defined metropolitan areas. A consolidated metropolitan statistical area (CMSA) is made up of two or more contiguous primary metropolitan statistical areas (PMSAs) with a combined population of at least 1 million. A PMSA is a subdivision of a CMSA that demonstrates very strong internal economic and social links separate from the ties to other portions of the CMSA. A metropolitan statistical area (MSA) is an integrated economic and social unit with a population of at least 50,000. An MA is made up of one or more counties meeting standards of metropolitan character. In New England, cities and towns, rather than counties, are the

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component geographic units. Determination of the MAs was made by the Office of Management and Budget (OMB) as of June 30, 1997. The population estimates were from the 1990 Census of Population or a subsequent special census. When applicable, the make-up of an MA is included in Appendix E. Changes to geographical boundaries are noted in Appendix D.

The state reports include data for counties with 500 employees or more. These are the primary divisions of states, except in Louisiana where they are called parishes and in Alaska where they are called boroughs and census areas. Maryland, Missouri, Nevada, and Virginia have one or more places that are independent of county organizations. These places are treated as counties and places. The counties and places are defined as of January 1, 1997.

The state reports include data for places with 500 employees or more. Places are typically cities, towns, and villages. They may be incorporated municipalities, semi-independent municipalities, special economic urban areas (SEUAs), or other place equivalents.

The state reports also include data for consolidated cities with 500 employees or more. Consolidated cities are made up of separately incorporated municipalities.

## **COMPARABILITY OF THE 1992 AND 1997 CENSUSES**

The adoption of the North American Industry Classification System (NAICS) has had a major impact on the comparability of data between the 1992 and 1997 censuses. Approximately half of the industries in the manufacturing sector of NAICS do not have comparable industries in the Standard Industrial Classification (SIC) system that was used in the past. If industries are not comparable between the two censuses, historic data are not shown. When applicable, Appendix G shows the product class and product comparability between the two systems.

While most of the change affecting the manufacturing sector was change within the sector, some industries left manufacturing and others came into manufacturing. Prominent among those leaving manufacturing are logging and portions of publishing. Prominent among the industries coming into the manufacturing sector are bakeries, candy stores where candy is made on the premises, custom tailors, makers of custom draperies, and tire retreading. Data for the industries coming into manufacturing as well as those leaving manufacturing are included in the manufacturing industry report series for 1997. However, the state and summary reports only include data for industries in the NAICS definition of manufacturing.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with manufacturing are not included along side the manufacturing data. This change affects data in the state reports and the general summary.

## **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 classified in a specific industry or geography is not considered a disclosure, and may be released even when other information is withheld.

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. However, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for capital expenditures that 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 58,000 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 a Current Industrial Reports (CIR) program. The CIR publishes detailed product statistics for selected manufacturing industries at the U.S. level annually and, in some cases, monthly and/or quarterly. For the 1997 Economic Census – Manufacturing, the annual CIR data are included in the Product Summary report.

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.



**Table 3. Detailed Statistics by Industry: 1997**

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

Item	Value	Item	Value
<b>323110, COMMERCIAL LITHOGRAPHIC PRINTING</b>		<b>323110, COMMERCIAL LITHOGRAPHIC PRINTING</b>	
		— Con.	
Companies <sup>1</sup> .....	number.. 18 030	Value added .....	\$1,000.. 29 589 788
All establishments .....	number.. 18 622	Total inventories, beginning of year .....	\$1,000.. 2 899 090
Establishments with 1 to 19 employees .....	number.. 14 540	Finished goods inventories, beginning of year .....	\$1,000.. 383 847
Establishments with 20 to 99 employees .....	number.. 3 275	Work-in-process inventories, beginning of year .....	\$1,000.. 932 976
Establishments with 100 employees or more .....	number.. 807	Materials and supplies inventories, beginning of year .....	\$1,000.. 1 582 267
All employees .....	number.. 415 105	Total inventories, end of year .....	\$1,000.. 3 047 112
Total compensation <sup>2</sup> .....	\$1,000.. 16 299 850	Finished goods inventories, end of year .....	\$1,000.. 418 889
Annual payroll .....	\$1,000.. 13 714 396	Work-in-process inventories, end of year .....	\$1,000.. 991 260
Total fringe benefits .....	\$1,000.. 2 585 454	Materials and supplies inventories, end of year .....	\$1,000.. 1 636 963
Production workers, average for year .....	number.. 300 747	Gross book value of total assets at beginning of year .....	\$1,000.. 22 152 433
Production workers on March 12 .....	number.. 299 222	Total capital expenditures (new and used) .....	\$1,000.. 3 009 681
Production workers on May 12 .....	number.. 299 304	Capital expenditures for buildings and other structures (new and used) .....	\$1,000.. 436 003
Production workers on August 12 .....	number.. 300 522	Capital expenditures for machinery and equipment (new and used) .....	\$1,000.. 2 573 678
Production workers on November 12 .....	number.. 303 940	Total retirements <sup>2</sup> .....	\$1,000.. 724 133
Production-worker hours .....	1,000.. 586 552	Gross book value of total assets at end of year .....	\$1,000.. 24 437 981
Production-worker wages .....	\$1,000.. 8 631 629	Total depreciation during year <sup>2</sup> .....	\$1,000.. 1 719 506
Total cost of materials .....	\$1,000.. 20 682 253	Total rental payments <sup>2</sup> .....	\$1,000.. 1 209 413
Cost of materials, parts, containers, etc., consumed .....	\$1,000.. 16 660 337	Buildings and other structures rental payments <sup>2</sup> .....	\$1,000.. 530 056
Cost of resales .....	\$1,000.. 1 137 583	Machinery and equipment rental payments <sup>2</sup> .....	\$1,000.. 679 357
Cost of fuels .....	\$1,000.. 144 311	Cost of purchased services for the repair of buildings and other structures <sup>3</sup> .....	\$1,000.. 100 132
Cost of purchased electricity .....	\$1,000.. 476 008	Response coverage ratio <sup>4</sup> .....	percent.. 70
Cost of contract work .....	\$1,000.. 2 264 014	Cost of purchased services for the repair of machinery and equipment <sup>3</sup> .....	\$1,000.. 11 425 510
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 7 758 576	Response coverage ratio <sup>4</sup> .....	percent.. 70
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. S	Cost of purchased communications services <sup>3</sup> .....	\$1,000.. 44 000 224
Total value of shipments .....	\$1,000.. 50 178 715	Response coverage ratio <sup>4</sup> .....	percent.. 70
Primary products value of shipments .....	\$1,000.. 45 392 837	Cost of purchased legal services <sup>3</sup> .....	\$1,000.. 1 964 250
Secondary products value of shipments .....	\$1,000.. 2 704 062	Response coverage ratio <sup>4</sup> .....	percent.. 70
Total miscellaneous receipts .....	\$1,000.. 2 081 816	Cost of purchased accounting and bookkeeping services <sup>3</sup> .....	\$1,000.. 33 526 405
Value of resales .....	\$1,000.. 1 634 036	Response coverage ratio <sup>4</sup> .....	percent.. 70
Contract receipts .....	\$1,000.. —	Cost of purchased advertising services <sup>3</sup> .....	\$1,000.. 32 330 094
Other miscellaneous receipts .....	\$1,000.. 447 780	Response coverage ratio <sup>4</sup> .....	percent.. 70
Primary products specialization ratio .....	percent.. 94	Cost of purchased software and other data processing services <sup>3</sup> .....	\$1,000.. 1 496 681
Value of primary products shipments made in all industries .....	\$1,000.. 47 539 599	Response coverage ratio <sup>4</sup> .....	percent.. 70
Value of primary products shipments made in this industry .....	\$1,000.. 45 392 837	Cost of purchased refuse removal (including hazardous waste) services <sup>3</sup> .....	\$1,000.. 3 681 936
Value of primary products shipments made in other industries .....	\$1,000.. 2 146 762	Response coverage ratio <sup>4</sup> .....	percent.. 70
Coverage ratio .....	percent.. 95		

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

<sup>2</sup>These items are collected in the ASM and estimated for the remaining establishments; therefore, the levels of estimation are higher than for other items in the table.

<sup>3</sup>Based on ASM sample data.

<sup>4</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those ASM establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

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

**Table 4. Industry Statistics by Employment Size: 1997**

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

Employment size class	E <sup>1</sup>	All establishments		All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>323110, COMMERCIAL LITHOGRAPHIC PRINTING</b>												
<b>All establishments .....</b>	<b>2</b>	<b>18 622</b>	<b>4 082</b>	<b>415 105</b>	<b>13 714 396</b>	<b>300 747</b>	<b>586 552</b>	<b>8 631 629</b>	<b>29 589 788</b>	<b>20 682 253</b>	<b>50 178 715</b>	<b>3 009 681</b>
Establishments with 1 to 4 employees .....	7	6 942	—	15 331	331 331	11 197	16 415	212 920	702 918	456 293	1 157 739	92 560
Establishments with 5 to 9 employees .....	3	4 436	—	29 661	724 245	21 315	34 260	462 972	1 474 711	925 609	2 397 042	110 559
Establishments with 10 to 19 employees .....	2	3 162	—	42 431	1 202 138	29 328	53 077	744 230	2 343 085	1 491 769	3 831 763	198 521
Establishments with 20 to 49 employees .....	2	2 340	2 340	71 690	2 337 778	49 968	95 856	1 366 779	4 663 167	2 865 789	7 532 866	419 502
Establishments with 50 to 99 employees .....	2	936	936	65 069	2 315 261	45 880	91 695	1 376 817	4 707 131	3 060 455	7 762 078	464 426
Establishments with 100 to 249 employees .....	1	590	590	88 434	3 322 573	63 846	130 634	2 029 036	7 275 596	5 556 389	12 800 803	641 160
Establishments with 250 to 499 employees .....	2	158	158	54 691	1 870 393	40 559	85 089	1 227 819	4 322 399	3 423 297	7 732 966	369 449
Establishments with 500 to 999 employees .....	2	46	46	31 548	1 149 962	25 200	53 106	854 034	2 937 828	2 114 110	5 026 890	610 377
Establishments with 1,000 to 2,499 employees .....	—	12	12	16 250	460 715	13 454	26 420	357 022	1 162 953	788 542	1 936 568	103 127
Establishments with 2,500 employees or more .....	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records <sup>2</sup> .....	9	5 590	—	16 900	309 712	12 200	15 323	198 011	633 967	415 416	1 048 351	47 698

<sup>1</sup>Some 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 based on administrative-record 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.

<sup>2</sup>Some 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.

**Table 5. Industry Statistics by Industry and Primary Product Class Specialization: 1997**

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

NAICS industry or product class code	Industry or primary product class	All establishments	All employees		Production workers			Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>323110</b>	<b>Commercial lithographic printing .....</b>	<b>18 622</b>	<b>415 105</b>	<b>13 714 396</b>	<b>300 747</b>	<b>586 552</b>	<b>8 631 629</b>	<b>29 589 788</b>	<b>20 682 253</b>	<b>50 178 715</b>	<b>3 009 681</b>
3231101	Magazine and periodical printing (lithographic) (offset) .....	548	47 634	1 534 935	38 643	80 393	1 128 446	3 224 903	2 209 288	5 408 188	320 241
3231103	Label and wrapper printing (lithographic) (offset) .....	312	13 252	468 227	9 639	19 880	293 470	1 038 600	708 393	1 735 787	82 810
3231105	Catalog and directory printing (lithographic) (offset) .....	410	27 531	927 452	21 762	43 861	653 077	2 176 214	2 061 936	4 221 823	180 663
3231107	Financial and legal printing (lithographic) (offset) .....	212	14 056	558 960	9 779	20 103	332 012	1 470 222	682 652	2 155 851	81 145
3231109	Advertising printing (lithographic) (offset) .....	2 714	133 237	4 974 707	95 295	191 760	2 984 567	10 396 516	7 778 201	18 148 981	1 036 045
323110B	Other general job printing, nec (lithographic) (offset) .....	4 617	97 310	2 921 609	66 305	127 480	1 775 341	6 450 345	4 087 966	10 531 579	945 963

**Table 6a. Products Statistics: 1997 and 1992**

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

NAICS product code	Product	1997				1992			
		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)			Quantity	Value (\$1,000)
<b>323110</b>	<b>Commercial lithographic printing</b> .....	<b>N</b>	<b>X</b>	<b>X</b>	<b>47 539 599</b>	<b>N</b>	<b>X</b>	<b>X</b>	<b>N</b>
3231101	Magazine and periodical printing (lithographic) (offset) .....	N	X	X	5 239 054	N	X	X	4 643 410
32311011	Magazine and periodical printing, (lithographic) (offset) .....	N	X	X	4 730 010	N	X	X	N
3231101111	Magazine and periodical printing (excluding Sunday magazine and comic supplements) (lithographic), sheet-fed .....	679	X	X	954 101	661	X	X	693 427
3231101113	Magazine and periodical printing (excluding Sunday magazine and comic supplements) (lithographic), web-fed .....	251	X	X	3 602 132	261	X	X	3 255 762
3231101121	Magazine and comic supplement printing (lithographic), for Sunday newspapers .....	16	X	X	173 777	20	X	X	198 532
3231101Y	Magazine and periodical printing (lithographic), nsk .....	N	X	X	509 044	N	X	X	N
3231101YWV	Magazine and periodical printing (lithographic), nsk .....	N	X	X	509 044	N	X	X	495 689
3231103	Label and wrapper printing (lithographic) (offset) .....	N	X	X	1 935 075	N	X	X	1 539 256
32311031	Label and wrapper printing (lithographic) .....	N	X	X	1 688 313	N	X	X	N
3231103111	Label printing (lithographic), custom and stock labels, including bordered, made of paper, flat (except pressure-sensitive) .....	311	X	X	814 052	268	X	X	605 221
3231103116	Label printing (lithographic), custom and stock labels, including bordered, made of paper, rolls (except pressure-sensitive) .....	29	X	X	41 000	25	X	X	49 715
3231103121	Label printing (lithographic), custom and stock labels, including bordered, made of paper, pressure-sensitive (self-adhesive) .....	202	X	X	315 873	161	X	X	204 593
3231103126	Label printing (lithographic), custom and stock labels, including bordered, made of materials other than paper or cloth .....	39	X	X	110 214	34	X	X	38 901
3231103131	Printed rolls and sheets for packaging purposes (printing only) (lithographic), made of paper (single-web) .....	87	X	X	321 513	55	X	X	163 503
3231103136	Printed rolls and sheets for packaging purposes (printing only) (lithographic), made of materials other than paper or cloth, including multiweb structures .....	31	X	X	85 661	23	X	X	195 314
3231103Y	Label and wrapper printing (lithographic), nsk .....	N	X	X	246 762	N	X	X	N
3231103YWV	Label and wrapper printing (lithographic), nsk .....	N	X	X	246 762	N	X	X	282 009
3231105	Catalog and directory printing (lithographic) (offset) .....	N	X	X	5 074 321	N	X	X	3 963 868
32311051	Catalog and directory printing (lithographic) .....	N	X	X	4 627 450	N	X	X	N
3231105111	Catalog printing (lithographic), including direct mail catalogs, sheet-fed .....	894	X	X	861 037	891	X	X	692 146
3231105113	Catalog printing (lithographic), including direct mail catalogs, web-fed .....	239	X	X	2 337 062	309	X	X	1 853 369
3231105121	Telephone directory printing (lithographic) .....	46	X	X	1 204 679	36	X	X	846 316
3231105126	Other directory printing (lithographic), including business reference services, sheet-fed .....	104	X	X	116 903	87	X	X	51 871
3231105128	Other directory printing (lithographic), including business reference services, web-fed .....	45	X	X	107 769	51	X	X	135 450
3231105Y	Catalog and directory printing (lithographic), nsk .....	N	X	X	446 871	N	X	X	N
3231105YWV	Catalog and directory printing (lithographic), nsk .....	N	X	X	446 871	N	X	X	384 716
3231107	Financial and legal printing (lithographic) (offset) .....	N	X	X	2 600 146	N	X	X	1 775 814
32311071	Financial and legal printing (lithographic) .....	N	X	X	2 344 106	N	X	X	N
3231107111	SEC filing and prospectus printing (lithographic), sheet-fed .....	62	X	X	106 305	47	X	X	96 296
3231107113	SEC filing and prospectus printing (lithographic), web-fed .....	36	X	X	482 282	22	X	X	254 664
3231107121	Annual report and other corporate financial printing (lithographic), sheet-fed .....	497	X	X	470 374	406	X	X	325 947
3231107123	Annual report and other corporate financial printing (lithographic), web-fed .....	63	X	X	389 585	67	X	X	164 152
3231107131	Other financial and legal printing (lithographic), including insurance forms, briefs, etc. (except checkbooks), sheet-fed .....	164	X	X	149 045	186	X	X	139 967

See footnotes at end of table.

**Table 6a. Products Statistics: 1997 and 1992—Con.**

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

NAICS product code	Product	1997				1992			
		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)			Quantity	Value (\$1,000)
<b>323110</b>	<b>Commercial lithographic printing—Con.</b>								
3231107	Financial and legal printing (lithographic) (offset)—Con.								
32311071	Financial and legal printing (lithographic)—Con.								
3231107133	Other financial and legal printing (lithographic), including insurance forms, briefs, etc. (except checkbooks) web-fed	30	X	X	94 870	40	X	X	67 522
3231107141	Bank printing (lithographic), excluding bank forms and checkbooks, sheet-fed	86	X	X	407 658	110	X	X	118 934
3231107143	Bank printing (lithographic), excluding bank forms and checkbooks, web-fed	58	X	X	116 884	60	X	X	223 685
3231107151	Bank form printing (lithographic), including passbooks, debit-credit slips, ledger and statement sheets, installment-loan coupons, etc. (except checkbooks)	59	X	X	127 103	66	X	X	92 528
3231107Y	Financial and legal printing (lithographic), nsk	N	X	X	256 040	N	X	X	N
3231107YVW	Financial and legal printing (lithographic), nsk	N	X	X	256 040	N	X	X	292 119
3231109	Advertising printing (lithographic) (offset)	N	X	X	15 050 733	N	X	X	13 218 922
32311091	Direct mail advertising printing (lithographic), including circulars, letters, pamphlets, cards, etc.	N	X	X	4 333 586	N	X	X	N
3231109111	Direct mail advertising printing (lithographic), including circulars, letters, pamphlets, cards, etc., sheet-fed	1 496	X	X	2 121 760	1 569	X	X	1 649 528
3231109113	Direct mail advertising printing (lithographic), including circulars, letters, pamphlets, cards, etc., web-fed	301	X	X	2 211 826	409	X	X	1 864 492
32311092	Advertising printing (lithographic), except direct mail advertising	N	X	X	8 912 204	N	X	X	N
3231109221	Display advertising poster printing (lithographic), including outdoor advertising, car cards, window, etc.	326	X	X	299 715	297	X	X	224 527
3231109226	Counter, floor display, point-of-purchase, and other advertising display material printing (lithographic), sheet-fed	502	X	X	872 332	442	X	X	577 217
3231109228	Counter, floor display, point-of-purchase, and other advertising display material printing (lithographic), web-fed	41	X	X	154 374	48	X	X	117 533
3231109236	Preprinted newspaper advertising insert printing (lithographic) (advertising supplements not regularly issued), rolls, including hi-fi and specticolor	57	X	X	371 975	87	X	X	288 980
3231109241	Preprinted newspaper advertising insert printing (lithographic) (advertising supplements not regularly issued), sections (two pages or more)	70	X	X	1 523 112	168	X	X	1 525 935
3231109246	Shopping news printing (lithographic)	69	X	X	190 952	109	X	X	97 145
3231109251	Book jacket printing (lithographic)	53	X	X	100 807	58	X	X	133 694
3231109256	Other advertising printing (lithographic), including brochures, magazine inserts, etc., sheet-fed	1 464	X	X	3 381 270	1 754	X	X	2 694 879
3231109258	Other advertising printing (lithographic), including brochures, magazine inserts, etc., web-fed	270	X	X	2 017 667	378	X	X	1 913 038
3231109Y	Advertising printing (lithographic), nsk	N	X	X	1 804 943	N	X	X	N
3231109YVW	Advertising printing (lithographic), nsk	N	X	X	1 804 943	N	X	X	2 131 954
323110B	Other general job printing, nec (lithographic) (offset)	N	X	X	10 035 492	N	X	X	N
323110B1	Other general job printing (lithographic)	N	X	X	7 412 783	N	X	X	N
323110B111	Newspaper printing (lithographic)	170	X	X	1 722 252	479	X	X	892 496
323110B116	Scientific and technical recording chart and chart paper printing (lithographic)	37	X	X	83 323	N	X	X	N
323110B121	Map, atlas, and globe cover printing (lithographic), including road maps and strip maps	73	X	X	54 141	63	X	X	62 993
323110B126	Calendar and calendar pad printing (lithographic), sheet-fed	221	X	X	215 744	171	X	X	168 229
323110B128	Calendar and calendar pad printing (lithographic), web-fed	28	X	X	283 665	43	X	X	208 554
323110B136	Ticket, coupon, and food and beverage check printing (lithographic), including transportation and amusement	96	X	X	158 084	92	X	X	157 461
323110B141	Playing card printing (lithographic)	13	X	X	164 228	15	X	X	91 649
323110B146	Printed decalcomanias and pressure-sensitive (self-adhesive) (lithographic), including bumper stickers, etc., excluding labels	33	X	X	43 750	20	X	X	26 762
323110B151	Lithographic printing on metal	22	X	X	177 373	25	X	X	337 754

See footnotes at end of table.



**Table 6a. Products Statistics: 1997 and 1992—Con.**

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

NAICS product code	Product	1997				1992			
		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)			Quantity	Value (\$1,000)
<b>323110</b>	<b>Commercial lithographic printing—Con.</b>								
323110B	Other general job printing, nec (lithographic) (offset)—Con.								
323110B1	Other general job printing (lithographic)—Con.								
323110B156	Credit and identification card printing (lithographic) (plastics, paper laminations, etc.) . . . . .	33	X	X	197 497	27	X	X	64 429
323110B161	Business card printing (lithographic) . . . . .	378	X	X	218 095	278	X	X	189 736
323110B166	Other business form printing, nec (lithographic), excluding blankbooks and looseleaf forms, sheet-fed . . . . .	473	X	X	454 501	565	X	X	364 505
323110B168	Other business form printing, nec (lithographic), excluding blankbooks and looseleaf forms, web-fed . . . . .	127	X	X	327 522	128	X	X	219 416
323110B176	Art reproduction and picture print printing (lithographic) . . . . .	153	X	X	133 495	160	X	X	101 166
323110B181	Greeting cards, printed for publication by others (lithographic) . . . . .	76	X	X	90 337	N	X	X	N
323110B191	All other general commercial lithographic printing, nec, sheet-fed . . . . .	734	X	X	1 983 722	N	X	X	N
323110B193	All other general commercial lithographic printing, nec, web-fed . . . . .	256	X	X	1 105 054	N	X	X	N
323110BY	Other general job printing (lithographic), nsk . . . . .	N	X	X	2 622 709	N	X	X	N
323110BYWV	Other general job printing (lithographic), nsk . . . . .	N	X	X	2 622 709	N	X	X	N
323110W	Commercial lithographic printing, nsk, total . . . . .	N	X	X	7 604 778	N	X	X	N
323110WY	Commercial lithographic printing, nsk, total . . . . .	N	X	X	7 604 778	N	X	X	N
323110WYWW	Commercial lithographic printing, nsk, for nonadministrative-record establishments . . . . .	N	X	X	6 625 957	N	X	X	N
323110WYWY	Commercial lithographic printing, nsk, for administrative-record establishments . . . . .	N	X	X	978 821	N	X	X	N

# Additional information is available for this item; see Appendix F.  
 @ Additional data are available for these codes at the aggregate U.S. level in the Current Industrial Report (CIR) series; see Appendix F for the CIR survey number and title.  
 \$ This product is primary to more than one industry; see Appendix F for a listing of the related product codes.

Note: For some establishments, data have been estimated from central unit values which 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.

**Table 6b. Product Class Shipments for Selected States: 1997 and 1992**

[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 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)	
		1997	1992
<b>3231101</b>	<b>MAGAZINE AND PERIODICAL PRINTING (LITHOGRAPHIC) (OFFSET)</b>		
	<b>United States . . . . .</b>	<b>5 239 054</b>	<b>4 643 410</b>
	Alabama . . . . .	25 370	41 484
	Arizona . . . . .	22 144	13 980
	Arkansas . . . . .	56 099	N
	California . . . . .	403 826	328 069
	Colorado . . . . .	55 473	33 827
	Connecticut . . . . .	28 815	24 087
	District of Columb . . . . .	22 238	15 804
	Florida . . . . .	234 681	175 457
	Georgia . . . . .	133 885	105 001
	Hawaii . . . . .	11 792	N
	Illinois . . . . .	431 053	432 961
	Indiana . . . . .	50 102	54 408
	Iowa . . . . .	21 805	66 645
	Kansas . . . . .	42 551	23 943
	Kentucky . . . . .	430 235	366 743
	Louisiana . . . . .	9 135	12 027
	Maine . . . . .	3 013	N
	Maryland . . . . .	127 495	151 306
	Massachusetts . . . . .	36 349	25 235
	Michigan . . . . .	136 096	108 692

See footnotes at end of table.

**Table 6b. Product Class Shipments for Selected States: 1997 and 1992—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 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)	
		1997	1992
<b>3231101</b>	<b>MAGAZINE AND PERIODICAL PRINTING (LITHOGRAPHIC) (OFFSET)—Con.</b>		
	Minnesota .....	280 810	245 110
	Missouri .....	93 407	65 446
	Nevada .....	41 154	36 113
	New Hampshire .....	38 426	N
	New Jersey .....	34 681	42 890
	New Mexico .....	2 307	2 237
	New York .....	179 230	230 765
	North Carolina .....	21 498	27 532
	North Dakota .....	5 319	N
	Ohio .....	198 677	158 088
	Oklahoma .....	69 400	56 243
	Oregon .....	14 398	14 517
	Pennsylvania .....	465 873	300 926
	South Carolina .....	10 321	14 524
	South Dakota .....	2 598	N
	Tennessee .....	310 079	237 596
	Texas .....	177 712	170 315
	Utah .....	33 111	7 338
	Virginia .....	254 768	210 263
	Washington .....	32 390	22 853
	Wisconsin .....	452 298	526 072
	Wyoming .....	2 496	N
<b>3231103</b>	<b>LABEL AND WRAPPER PRINTING (LITHOGRAPHIC) (OFFSET)</b>		
	<b>United States .....</b>	<b>1 935 075</b>	<b>1 539 256</b>
	Alabama .....	4 504	17 910
	Arizona .....	18 457	2 494
	Arkansas .....	16 890	3 241
	California .....	175 415	170 069
	Colorado .....	5 755	2 247
	Connecticut .....	15 904	5 195
	Florida .....	41 918	16 934
	Georgia .....	9 812	19 596
	Illinois .....	220 727	225 138
	Indiana .....	38 800	60 018
	Iowa .....	22 746	11 275
	Kansas .....	31 081	11 997
	Kentucky .....	53 299	32 844
	Louisiana .....	19 168	10 374
	Maine .....	2 146	N
	Maryland .....	8 293	20 797
	Massachusetts .....	34 788	20 623
	Michigan .....	101 353	58 888
	Minnesota .....	77 173	44 904
	Missouri .....	90 297	49 694
	New Jersey .....	66 469	59 646
	New York .....	125 151	95 468
	North Carolina .....	107 971	103 567
	Ohio .....	129 902	88 267
	Oklahoma .....	2 925	7 751
	Oregon .....	7 955	5 902
	Pennsylvania .....	166 875	127 558
	Rhode Island .....	5 338	N
	South Carolina .....	37 568	16 488
	Tennessee .....	45 233	17 394
	Texas .....	55 371	42 558
	Utah .....	2 188	3 029
	Virginia .....	25 064	31 758
	Washington .....	5 694	41 510
	Wisconsin .....	90 486	46 606
<b>3231105</b>	<b>CATALOG AND DIRECTORY PRINTING (LITHOGRAPHIC) (OFFSET)</b>		
	<b>United States .....</b>	<b>5 074 321</b>	<b>3 963 868</b>
	Alabama .....	94 021	56 928
	Arizona .....	7 064	41 629
	Arkansas .....	78 096	52 267
	California .....	385 795	446 727
	Colorado .....	194 849	115 543
	Connecticut .....	100 866	97 080
	Florida .....	98 479	156 801
	Georgia .....	232 073	167 796
	Illinois .....	527 162	474 295
	Indiana .....	37 953	72 031
	Iowa .....	90 120	46 375
	Kansas .....	84 943	19 989
	Kentucky .....	88 587	59 586
	Louisiana .....	6 085	4 024
	Maryland .....	57 689	49 854
	Massachusetts .....	56 602	57 183
	Michigan .....	67 122	76 087
	Minnesota .....	400 177	182 135
	Mississippi .....	50 071	N
	Missouri .....	116 236	83 515
	Montana .....	2 392	2 082
	Nebraska .....	52 972	N
	Nevada .....	23 661	N
	New Hampshire .....	7 591	9 025
	New Jersey .....	68 250	47 331

See footnotes at end of table.

Table 6b. **Product Class Shipments for Selected States: 1997 and 1992—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 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes.]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)	
		1997	1992
<b>3231105</b>	<b>CATALOG AND DIRECTORY PRINTING (LITHOGRAPHIC) (OFFSET)—Con.</b>		
	New York .....	187 725	127 965
	North Carolina .....	45 135	26 268
	Ohio .....	209 034	194 938
	Oklahoma .....	10 945	56 081
	Oregon .....	101 233	108 302
	Pennsylvania .....	573 407	364 085
	Rhode Island .....	8 189	17 866
	South Carolina .....	7 965	5 238
	South Dakota .....	7 351	4 903
	Tennessee .....	142 684	49 764
	Texas .....	102 343	186 832
	Utah .....	7 191	3 255
	Vermont .....	2 434	5 428
	Virginia .....	64 245	44 880
	Washington .....	16 153	23 656
	Wisconsin .....	546 543	238 784
<b>3231107</b>	<b>FINANCIAL AND LEGAL PRINTING (LITHOGRAPHIC) (OFFSET)</b>		
	<b>United States .....</b>	<b>2 600 146</b>	<b>1 775 814</b>
	Alabama .....	6 746	6 004
	Arizona .....	23 033	18 676
	Arkansas .....	5 409	N
	California .....	323 352	266 072
	Colorado .....	18 511	18 542
	Connecticut .....	35 566	23 429
	Florida .....	18 926	15 091
	Georgia .....	101 849	37 132
	Illinois .....	134 488	154 400
	Indiana .....	20 713	36 745
	Iowa .....	21 019	14 959
	Kansas .....	75 046	34 983
	Kentucky .....	6 613	16 705
	Louisiana .....	3 735	4 522
	Maine .....	5 092	N
	Maryland .....	105 454	46 786
	Massachusetts .....	216 059	128 581
	Michigan .....	56 649	41 964
	Minnesota .....	81 397	59 302
	Missouri .....	30 702	37 360
	Nebraska .....	8 765	7 535
	New Hampshire .....	11 634	7 298
	New Jersey .....	228 909	58 501
	New York .....	236 737	192 941
	North Carolina .....	59 949	23 552
	Ohio .....	67 341	63 259
	Oklahoma .....	4 897	8 959
	Oregon .....	20 203	25 684
	Pennsylvania .....	200 487	174 946
	Rhode Island .....	8 379	3 291
	South Carolina .....	2 816	2 590
	Tennessee .....	31 937	28 854
	Texas .....	282 304	111 274
	Utah .....	11 704	13 869
	Virginia .....	31 134	30 797
	Washington .....	60 796	17 035
	West Virginia .....	5 355	3 035
	Wisconsin .....	23 995	21 257
<b>3231109</b>	<b>ADVERTISING PRINTING (LITHOGRAPHIC) (OFFSET)</b>		
	<b>United States .....</b>	<b>15 050 733</b>	<b>13 218 922</b>
	Alabama .....	89 658	71 139
	Alaska .....	5 966	3 739
	Arizona .....	135 582	90 208
	Arkansas .....	34 148	37 438
	California .....	1 851 213	1 585 304
	Colorado .....	112 606	137 922
	Connecticut .....	459 844	298 319
	Delaware .....	9 160	11 945
	District of Columb .....	14 592	14 613
	Florida .....	297 799	238 128
	Georgia .....	375 738	300 966
	Hawaii .....	26 094	22 459
	Idaho .....	16 237	11 949
	Illinois .....	1 587 616	1 455 602
	Indiana .....	309 599	222 621
	Iowa .....	146 121	112 293
	Kansas .....	387 813	370 155
	Kentucky .....	223 732	118 813
	Louisiana .....	61 909	55 800
	Maine .....	46 111	34 278
	Maryland .....	309 622	254 366
	Massachusetts .....	411 623	373 826
	Michigan .....	666 376	698 262
	Minnesota .....	887 148	624 260
	Mississippi .....	14 851	22 828

See footnotes at end of table.

Table 6b. **Product Class Shipments for Selected States: 1997 and 1992—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 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)	
		1997	1992
<b>3231109</b>	<b>ADVERTISING PRINTING (LITHOGRAPHIC) (OFFSET)—Con.</b>		
	Missouri .....	303 774	391 958
	Montana .....	8 751	15 932
	Nebraska .....	69 180	42 246
	Nevada .....	46 887	15 508
	New Hampshire .....	78 326	35 092
	New Jersey .....	785 740	923 498
	New Mexico .....	6 544	12 957
	New York .....	751 969	753 836
	North Carolina .....	445 890	380 255
	North Dakota .....	8 948	11 106
	Ohio .....	800 501	685 695
	Oklahoma .....	107 809	136 360
	Oregon .....	214 734	193 599
	Pennsylvania .....	946 729	854 826
	Rhode Island .....	22 404	33 440
	South Carolina .....	36 321	57 255
	South Dakota .....	8 621	10 103
	Tennessee .....	188 820	191 752
	Texas .....	636 815	512 063
	Utah .....	56 739	43 430
	Vermont .....	20 756	23 208
	Virginia .....	317 914	227 200
	Washington .....	140 802	120 287
	West Virginia .....	6 052	5 107
	Wisconsin .....	553 662	371 030
	Wyoming .....	4 887	3 946
<b>323110B</b>	<b>OTHER GENERAL JOB PRINTING, NEC (LITHOGRAPHIC) (OFFSET)</b>		
	<b>United States .....</b>	<b>10 035 492</b>	<b>N</b>
	Alabama .....	57 975	N
	Alaska .....	2 813	N
	Arizona .....	96 595	N
	Arkansas .....	47 556	N
	California .....	790 976	N
	Colorado .....	99 330	N
	Connecticut .....	107 340	N
	Delaware .....	8 128	N
	District of Columb .....	15 332	N
	Florida .....	287 164	N
	Georgia .....	228 927	N
	Hawaii .....	16 650	N
	Idaho .....	17 161	N
	Illinois .....	664 045	N
	Indiana .....	302 673	N
	Iowa .....	195 503	N
	Kansas .....	65 809	N
	Kentucky .....	161 970	N
	Louisiana .....	37 652	N
	Maine .....	29 368	N
	Maryland .....	228 830	N
	Massachusetts .....	249 880	N
	Michigan .....	355 582	N
	Minnesota .....	601 162	N
	Mississippi .....	25 012	N
	Missouri .....	255 566	N
	Montana .....	9 848	N
	Nebraska .....	65 041	N
	Nevada .....	24 763	N
	New Hampshire .....	34 201	N
	New Jersey .....	538 756	N
	New Mexico .....	19 966	N
	New York .....	1 291 131	N
	North Carolina .....	212 271	N
	North Dakota .....	9 190	N
	Ohio .....	538 907	N
	Oklahoma .....	32 591	N
	Oregon .....	84 869	N
	Pennsylvania .....	528 979	N
	Rhode Island .....	25 358	N
	South Carolina .....	47 055	N
	South Dakota .....	9 290	N
	Tennessee .....	160 771	N
	Texas .....	563 662	N
	Utah .....	41 301	N
	Vermont .....	36 961	N
	Virginia .....	328 320	N
	Washington .....	180 833	N
	West Virginia .....	38 998	N
	Wisconsin .....	260 398	N
	Wyoming .....	3 033	N

# Additional information is available for this item; see Appendix F.

@ Additional data are available for these codes at the aggregate U.S. level in the Current Industrial Report (CIR) series; see Appendix F for the CIR survey number and title.

\$ This product is primary to more than one industry; see Appendix F for a listing of the related product codes.

**Table 7. Materials Consumed by Kind: 1997 and 1992**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS material code	Material consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
<b>323110</b>	<b>COMMERCIAL LITHOGRAPHIC PRINTING</b>				
32212203	Newsprint .....	X	1 218 379	X	N
32212009	Uncoated paper in sheets .....	X	1 142 576	X	N
32212011	Uncoated paper in rolls .....	X	2 079 768	X	N
32200011	Coated paper in sheets .....	X	1 867 757	X	N
32200013	Coated paper in rolls .....	X	2 240 851	X	N
32222200	Pressure-sensitive base stock, self-adhesive, including paper, film, foil, etc. ....	X	174 843	X	N
31320001	Cloth and nonwoven fabrics for hardbound book covers .....	X	32 135	X	N
32552003	Glues and adhesives .....	X	40 917	X	N
32591003	Printing ink .....	X	1 004 632	X	N
32599203	Light sensitive films and papers .....	X	226 438	X	N
32599201	Unexposed photosensitive printing plates .....	X	154 203	X	N
32312201	Printing plates, prepared for printing .....	X	187 534	X	N
32312209	Engraved printing cylinders for gravure printing .....	X	2 241	X	N
32221001	Paperboard containers, boxes, and corrugated paperboard .....	X	152 117	X	N
32223200	Purchased envelopes .....	X	213 643	X	N
00970099	All other materials and components, parts, containers, and supplies .....	X	1 134 822	X	N
00971000	Materials, ingredients, containers, and supplies, n.s.k. ....	X	4 787 481	X	N

# Additional information is available for this item; see Appendix F.

Note: For some establishments, data have been estimated from central unit values which 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.

# Appendix A.

## Explanation of Terms

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### **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 which 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.

### **COST OF PURCHASED SERVICES**

Annual Survey of Manufactures (ASM) establishments were requested to provide information on the cost of purchased services for the repair of buildings and other structures, the repair of machinery, communication services, legal services, accounting and bookkeeping services, advertising, software and other data processing services, and refuse removal. Each of these items reflects the costs paid directly by the establishment and excludes salaries paid to employees of the establishment for these services.

Included in the cost of purchased services for the repair of buildings and 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. Extensive repairs or reconstruction that was capitalized is considered capital expenditures and is, therefore, excluded from this item. Repair and maintenance costs provided by an owner as part of a rental contract or incurred directly by an establishment in using its own work force also are excluded.

Included in the cost of purchased advertising services are payments for printing, media coverage, and other advertising services and materials.

Included in the cost of purchased software and other data processing services are all purchases by the establishment from other companies. Excluded are services provided by other establishments of the same company (such as by a separate data processing unit).

Included in the cost of purchased refuse removal services are all costs of refuse removal services paid by the establishment, including costs for hazardous waste removal or treatment. Excluded are all costs included in rental payments or as capital expenditures.

### **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 non-reporters).

### **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.

### **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 which included the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. 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**

This item 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**

This item 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.

### **FRINGE BENEFITS**

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 BOOK VALUE OF DEPRECIABLE ASSETS 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 and end of year. 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.

### **NUMBER OF ESTABLISHMENTS AND COMPANIES**

A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

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.

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.

### **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, in contrast to the four-digit SIC 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. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry . . . . .	33461	Manufacturing and reproduction of magnetic and optical media
U.S. industry . . . . .	334612	Reproduction of software
Product class . . . . .	3346120	Prerecorded compact disc (except software), tape, and record reproducing
BLS link code . . . . .	3346120X	
Product code . . . . .	3346120XXX	

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

In the new system, there are about 1,500 product classes (seven-digit codes), about 6,000 census products (ten-digit codes), and an additional 3,700 CIR products (ten-digit 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.

## PRIMARY PRODUCT CLASS CODE

This file presents selected statistics for establishments according to their degree of specialization in products primary to their industry. This field contains either the six-digit North American Industrial Classification System (NAICS) industry code corresponding to all establishments in the industry, or the seven-digit NAICS product class code for all establishments within the industry that are specialized in a particular product class. Product class specialization is determined by evaluating the ratio of the largest primary product class shipments to total product shipments (primary plus secondary, excluding miscellaneous receipts) for the establishment.

## PRODUCTION-WORKER HOURS

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

## QUANTITY OF ELECTRIC ENERGY CONSUMED 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.

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## 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.

## TOTAL CAPITAL EXPENDITURES (NEW AND USED)

For establishments in operation and any known plants under construction, manufacturers were asked to report their new and used expenditures for (1) permanent additions and major alterations to manufacturing establishments and (2) machinery and equipment used for replacement and additions to plant capacity if they were of the type for which depreciation accounts were ordinarily maintained.

Totals for expenditures include the costs of assets leased from nonmanufacturing concerns through capital leases. New facilities owned by the Federal Government but operated under contract by private companies and plant and equipment furnished to the manufacturer by communities and nonprofit organizations are excluded. Also excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

## 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:

1. Reported contract work—Receipts for work or services that a plant performed for others on their materials.
2. Value of resales—Sales of products brought and sold without further manufacture, processing, or assembly.
3. 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:

1. Primary products value of shipments.
2. Secondary product value of shipments.
3. 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.

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## **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 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.

## **Specialization and Coverage Ratios**

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 ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in Tables 1a 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

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### **323110 COMMERCIAL LITHOGRAPHIC PRINTING**

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

The data published with NAICS code 323110 include the following SIC industries:

2752 Commercial printing, lithographic (pt)

2771 Greeting cards (pt)

3999 Manufacturing industries, n.e.c. (pt)

# Appendix C.

## Coverage and Methodology

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### MAIL/NONMAIL UNIVERSE

The manufacturing universe includes about 400,000 establishments. This number includes those industries in the North American Industry Classification System (NAICS) definition of manufacturing, but not those industries leaving the manufacturing sector in the classification change. The amounts of information requested from manufacturing establishments were 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). The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. 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 our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) 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 which 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” (nsc) 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 four-digit SIC industry and then erroneously re-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 SIC group classification codes available in the files. For the 1997 Economic Census – 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.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into three groups:

- 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-1000) 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 480 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 many 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 identified on the form.

A wide variety of special inquiries was 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 or 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 nsk categories.

## **INDUSTRY CLASSIFICATION OF ESTABLISHMENTS**

Each of the establishments covered in the 1997 Economic Census – Manufacturing was classified in 1 of 480 industries (473 manufacturing industries and 7 former manufacturing industries) in accordance with the industry definitions in the 1997 NAICS Manual. This is the first edition of the NAICS Manual and it is a major change from the 1987 SIC Manual that was used previously. Appendix A of the 1997 NAICS Manual notes the comparability between the 1987 SIC and 1997 NAICS classification systems. When applicable, Appendix G 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 1997, 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). This represents an expansion of the four-digit SIC-based U.S. industries from 459 in 1987. Product classes and products of the manufacturing industries have been assigned codes based on the industry from which they originate. In the new system, there are about 1,500 product classes (seven-digit codes), about 6,000 census products, and an additional 3,700 CIR products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits. These counts do not include the seven former manufacturing industries that are included in the 1997 Economic Census – Manufacturing.

For the 1997 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 1997, 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 which 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 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 1997, 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 1997 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 annual survey of manufactures (ASM) sample is drawn for the second survey year after a census. The most recent sample was drawn for the 1994 survey year based on the 1992 Census of Manufactures. This sample will be in place through the 1998 ASM.

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In 1992, there were approximately 370,000 individual manufacturing establishments. For sample efficiency and cost considerations, the 1992 manufacturing population was partitioned into two components for developing estimates within the ASM; a mail stratum and a nonmail stratum.

**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 230,000 of the 370,000 establishments in the 1992 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 1994 survey, a new sample of approximately 58,000 individual establishments was selected from the mail stratum assembled from the 1992 census. Supplemental samples representing both 1993 and 1994 births (newly active establishments that were not included in the 1992 census) were also selected. Establishments selected for the sample are mailed an ASM survey questionnaire for each year through 1998.

The 1994-98 ASM sample design is similar to the one used since 1984. Companies in the 1992 Census of Manufactures 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 1994-98 sample, there are approximately 650 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. In addition, all establishments producing products in SIC 3571 (Electronic Computers) were defined as certainties. Across these three 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 1992 Census of Manufactures.

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 1992 industry classification, its 1992 product class data, and the historical variability of the year-to-year estimates of the product class estimates. For each product class (1,755) and four-digit industry (459), 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 our 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) which permits us to prevent small establishments from being selected in consecutive samples without introducing a bias into the survey estimates.

**Nonmail component.** The initial nonmail component of the survey was comprised of approximately 140,000 small, single-establishment companies that were tabulated as administrative records in the 1992 Census of Manufactures. 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.

## DESCRIPTION OF THE 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 1992 (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 1993-1997 ASM estimates, the 1992 Census of Manufactures values serve as the base year. For the 1998 ASM, the base will be updated to be the 1997 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



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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 contains approximately 170,000 individual establishments in 1994, 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.

### **QUALIFICATIONS OF THE ASM DATA**

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.

### **DATA FROM THE CURRENT INDUSTRIAL REPORTS (CIR)**

The CIR program provides product statistics for selected manufacturing industries at the U.S. level annually and, in some cases, monthly and/or quarterly. When detail product data are collected in the CIR, they are not also collected in the census. However, the annual CIR data are included in the census Product Summary report.

The CIR program uses a unified data collection, processing, and publication system. The Census Bureau updates the survey panels for most reports annually and reconciles the estimates to the results of the broader-based annual survey of manufactures and the economic

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census – manufacturing. The economic census – manufacturing provides a complete list of all producers of the products covered by the CIR program and serves as the primary source for CIR sampling. Where a small number of producers exist, CIR surveys cover all known producers of a product. However, when the number of producers is large, cutoff and random sampling techniques are used. Surveys are continually reviewed and modified to provide the most up-to-date information on products produced. While the CIR program includes both mandatory and voluntary surveys, the annual data are mandatory.

#### **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 1997 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.

# Appendix D. Geographic Notes

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Not applicable for this report.

# Appendix E. Metropolitan Areas

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Not applicable for this report.

# Appendix F. Footnotes for Products Statistics and Materials Consumed by Kind

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Not applicable for this report.



1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
323116W pt	27820 pt	27820 pt	3231191	27591	27591	323119W pt	39999 pt	39999 pt
323116WYWW pt	2761000	2761000	3231191100 pt	2759100	2759100	323119WYWW pt	2759000 pt	2759000 pt
323116WYWW pt	2782000 pt	2782000 pt	3231191100 pt	2759113 pt	2759112	323119WYWWW pt	2771000 pt	2771000 pt
323116WYWY pt	2761002	2761002	3231191100 pt	2759113 pt	2759114	323119WYWWW pt	2771211	2771200 pt
323116WYWW pt	2782002 pt	2782002 pt				323119WYWWW pt	2771200 pt	2771200 pt
			3231193	27592	27592	323119WYWWW pt	3999000 pt	3999000 pt
3231171	27323	27323	3231193111	2759212	2759212	323119WYWWW pt	3999900 pt	3999900 pt
3231171111	2732310	2732310	3231193116	2759214	2759214	323119WYWWW pt	3999986	3999999 pt
3231171216	2732312	2732312	3231193121	2759216	2759216	323119WYWWW pt	2759002 pt	2759002 pt
3231171321	2732314	2732314	3231193126	2759218	2759218	323119WYWWW pt	2771002 pt	2771002 pt
3231171426	2732316	2732316	3231193131	2759221	2759221	323119WYWWW pt	3999002 pt	3999002 pt
3231171531	2732318	2732318	3231193136	2759223	2759223			
3231171YVV	2732300	2732300	3231193141	2759227	2759227	3231211	27891	27891
			3231193YVV	2759200	2759200	3231211111	2789110	2789110
						3231211116	2789113	2789113
3231173	27324	27324				3231211121	2789125	2789125
3231173111	2732422	2732422				3231211226	2789141	2789141
3231173116	2732425	2732425	3231195	27593	27593	3231211YVV	2789100	2789100
3231173YVV	2732400	2732400	3231195100 pt	2759300	2759300			
			3231195100 pt	2759317 pt	2759312			
						3231213	27892	27892
3231175	27325	27325	3231195100 pt	2759317 pt	2759318	3231213111	2789223	2789223
3231175111	2732532	2732532				3231213216	2789224	2789224
3231175116	2732535	2732535	3231197	27594	27594	3231213321	2789225	2789225
3231175YVV	2732500	2732500	3231197100 pt	2759400	2759400	3231213326	2789226	2789226
			3231197100 pt	2759421 pt	2759411	3231213431	2789281	2789281
			3231197100 pt	2759421 pt	2759413	3231213536	2789292	2789292
			3231197100 pt	2759421 pt	2759415	3231213YVV	2789200	2789200
			3231197100 pt	2759421 pt	2759419			
						323121W	27890	27890
						323121WYWWW	2789000	2789000
			3231199	27595	27595	323121WYWY	2789002	2789002
			3231199111	2759512	2759512			
			3231199116	2759514	2759514	3231221 pt	27910 pt	27910 pt
			3231199121	2759516	2759516			
			3231199126	2759518	2759518	3231221 pt	27962	27962
			3231199131	2759520	2759520			
			3231199136	2759522	2759522	3231221 pt	27963 pt	27963 pt
			3231199141	2759524	2759524	3231221100 pt	2791000 pt	2791016
			3231199YVV	2759500	2759500	3231221100 pt	2791000 pt	2791018
						3231221100 pt	2791000 pt	2791032
						3231221100 pt	2791000 pt	2791034
3231179	2732A	2732A	3231199126	2759518	2759518	3231221100 pt	2796200 pt	2796200
3231179111	2732A52	2732A52	3231199131	2759520	2759520	3231221100 pt	2796200 pt	2796231
3231179116	2732A54	2732A54	3231199136	2759522	2759522	3231221100 pt	2796200 pt	2796239
3231179121	2732A55	2732A55	3231199141	2759524	2759524	3231221100 pt	2796200 pt	2796241
3231179126	2732A56	2732A56	3231199YVV	2759500	2759500	3231221100 pt	2796300 pt	2796300 pt
3231179131	2732A57	2732A57				3231221100 pt	2796352	2796352
3231179YVV	2732A00	2732A00	323119B pt	27596	27596	3231221100 pt	2796375	2796373
323117A	2732B	2732B	323119B pt	27712 pt	27712 pt	3231223 pt	27961	27961
323117A100	2732B00	2732B00	323119B111	2759611	2759611	3231223 pt	27963 pt	27963 pt
			323119B116	2759613	2759613	323122306 pt	2796100 pt	2796100 pt
			323119B121	2759615	2759615	323122306 pt	2796100 pt	2796111
			323119B126	2759616	2759616	323122306 pt	2796100 pt	2796115
323117C	2732C	2732C	323119B131	2759617	2759617	323122306 pt	2796100 pt	2796131
323117C100	2732C00	2732C00	323119B136	2759619	2759619	3231223111 pt	2796327 pt	2796325
			323119B141	2759621	2759621	3231223116 pt	2796327 pt	2796330
			323119B146	2759623	2759623	3231223121	2796345	2796345
			323119B191 pt	2759627	2759627	3231223126	2796347	2796347
			323119B191 pt	2771209	2771200 pt	3231223191 pt	2796353	2796353
			323119BYVV pt	2759600	2759600	3231223191 pt	2796371 pt	2796369
			323119BYVV pt	2771200 pt	2771200 pt	3231223YVV pt	2796370	2796370
						3231223YVV pt	2796100 pt	2796100 pt
3231181	27824	27824	323119E	27599	27599	323122W pt	27910 pt	27910 pt
3231181111	2782441	2782441	323119E111	2759912	2759912	323122W pt	27960	27960
3231181116	2782445	2782445	323119E116	2759922	2759922	323122WYWWW pt	2791000 pt	2791000 pt
3231181121	2782451	2782451	323119E121	2759933	2759933	323122WYWWW pt	2796000	2796000
3231181YVV	2782400	2782400	323119E126	2759935	2759935	323122WYWY pt	2791002	2791002
			323119EYVV	2759900	2759900	323122WYWY pt	2796002	2796002
3231183	27825	27825	323119W pt	27590 pt	27590 pt			
3231183111	2782501	2782501	323119W pt	27710 pt	27710 pt			
3231183116	2782503	2782503	323119W pt	27710 pt	27710 pt			
3231183121	2782506	2782506						
3231183126	2782508	2782508	323119W pt	27590 pt	27590 pt			
3231183131	2782511	2782511	323119W pt	27710 pt	27710 pt			
3231183136	2782522	2782522						
3231183YVV	2782500	2782500						
323118W	27820 pt	27820 pt	323119W pt	27712 pt	27712 pt			
323118WYWWW	2782000 pt	2782000 pt						
323118WYWY	2782002 pt	2782002 pt	323119W pt	39990 pt	39990 pt			

