

Ohio

1997

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**1997 Economic Census**

*Manufacturing*

Geographic Area Series



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



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**Economics**

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# 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 1. Industry Statistics for the State: 1997**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)					Wages (\$1,000)
<b>OHIO</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>17 974</b>	<b>6 897</b>	<b>984 201</b>	<b>35 950 500</b>	<b>730 170</b>	<b>1 501 585</b>	<b>23 560 975</b>	<b>112 491 355</b>	<b>129 709 277</b>	<b>241 902 924</b>	<b>8 989 209</b>
311	Food mfg.....	1	936	308	48 624	1 468 870	35 061	69 444	926 980	8 873 516	8 963 872	17 869 313	460 777
3111	Animal food mfg.....	-	58	22	1 997	77 980	1 385	2 958	49 052	560 830	536 165	1 096 345	17 534
31111	Animal food mfg.....	-	58	22	1 997	77 980	1 385	2 958	49 052	560 830	536 165	1 096 345	17 534
311111	Dog & cat food mfg...	-	11	7	889	40 464	754	1 576	29 379	457 597	277 377	734 818	12 034
311119	Other animal food mfg.....	-	47	15	1 108	37 516	631	1 382	19 673	103 233	258 788	361 527	5 500
3112	Grain & oilseed milling ....	-	36	21	2 934	132 396	2 040	4 477	90 120	1 093 653	2 236 050	3 331 482	87 035
31121	Flour milling & malt mfg .	-	19	9	e	D	D	D	D	D	D	D	D
311211	Flour milling .....	-	19	9	e	D	D	D	D	D	D	D	D
31122	Starch & vegetable fats & oils mfg.....	-	15	10	1 513	62 614	945	2 094	36 989	478 341	1 725 432	2 200 223	49 622
311221	Wet corn milling .....	-	1	1	e	D	D	D	D	D	D	D	D
311222	Soybean processing ..	2	5	4	e	D	D	D	D	D	D	D	D
311225	Fats & oils refining & blending.....	-	9	5	897	34 992	583	1 247	20 040	270 135	778 648	1 039 053	30 414
31123	Breakfast cereal mfg ....	-	2	2	g	D	D	D	D	D	D	D	D
311230	Breakfast cereal mfg ..	-	2	2	g	D	D	D	D	D	D	D	D
3113	Sugar & confectionery product mfg.....	2	73	18	g	D	D	D	D	D	D	D	D
31131	Sugar mfg.....	3	3	2	275	8 494	212	521	5 899	19 621	74 689	94 228	D
311313	Beet sugar mfg.....	3	2	2	e	D	D	D	D	D	D	D	D
31133	Confectionery mfg from purchased chocolate...	1	35	12	1 036	17 261	808	1 192	11 523	50 016	44 486	96 844	2 127
311330	Confectionery mfg from purchased chocolate.....	1	35	12	1 036	17 261	808	1 192	11 523	50 016	44 486	96 844	2 127
31134	Nonchocolate confectionery mfg .....	-	25	3	518	14 442	301	477	5 266	43 882	24 851	68 194	552
311340	Nonchocolate confectionery mfg ...	-	25	3	518	14 442	301	477	5 266	43 882	24 851	68 194	552
3114	Fruit & vegetable preserving & specialty food mfg.....	-	65	37	9 874	303 274	8 268	16 616	221 209	2 469 774	1 407 403	3 876 985	117 473
31141	Frozen food mfg.....	1	23	15	5 721	151 364	4 742	9 351	101 581	911 431	662 152	1 574 630	54 821
311411	Frozen fruit, juice, & vegetable mfg.....	2	3	3	151	3 199	129	239	2 536	12 116	6 436	18 671	671
311412	Frozen specialty food mfg.....	1	20	12	5 570	148 165	4 613	9 112	99 045	899 315	655 716	1 555 959	54 150
31142	Fruit & vegetable canning, pickling, & drying.....	-	42	22	4 153	151 910	3 526	7 265	119 628	1 558 343	745 251	2 302 355	62 652
311421	Fruit & vegetable canning .....	-	35	18	g	D	D	D	D	D	D	D	D
311422	Specialty canning.....	-	4	3	g	D	D	D	D	D	D	D	D
3115	Dairy product mfg .....	2	74	44	5 645	171 375	3 558	7 885	103 580	1 014 075	1 373 168	2 406 729	49 193
31151	Dairy product (except frozen) mfg.....	2	56	36	4 947	150 424	3 110	6 941	91 296	938 717	1 245 552	2 202 604	44 098
311511	Fluid milk mfg.....	3	25	18	2 975	89 264	1 657	3 591	53 075	499 904	748 431	1 248 789	26 291
311513	Cheese mfg.....	1	23	13	g	D	D	D	D	D	D	D	12 126
311514	Dry, condensed, & evaporated dairy product mfg.....	-	7	5	835	32 564	542	1 653	20 833	339 942	202 825	558 585	D
31152	Ice cream & frozen dessert mfg.....	2	18	8	698	20 951	448	944	12 284	75 358	127 616	204 125	5 095
311520	Ice cream & frozen dessert mfg.....	2	18	8	698	20 951	448	944	12 284	75 358	127 616	204 125	5 095
3116	Meat product mfg.....	-	111	46	7 607	187 727	6 135	12 070	124 430	623 808	1 318 192	1 958 157	44 358
31161	Animal slaughtering & processing.....	-	111	46	7 607	187 727	6 135	12 070	124 430	623 808	1 318 192	1 958 157	44 358
311611	Animal (except poultry) slaughtering .....	2	49	10	1 037	25 528	906	1 740	21 058	84 501	230 958	315 345	2 468
311612	Meat processed from carcasses .....	-	46	23	4 638	128 525	3 580	7 411	80 107	454 459	907 694	1 374 726	32 781
311613	Rendering & meat byproduct processing.....	3	6	4	261	9 153	107	233	3 444	23 163	25 611	51 421	4 537
311615	Poultry processing.....	-	10	9	1 671	24 521	1 542	2 686	19 821	61 685	153 929	216 665	4 572
3118	Bakeries & tortilla mfg.....	-	403	65	12 154	348 792	7 914	13 915	198 277	1 672 624	816 801	2 488 307	37 590
31181	Bread & bakery product mfg.....	-	374	47	i	D	D	D	D	D	D	D	22 436
311811	Retail bakeries .....	3	292	13	1 794	22 992	1 094	1 403	12 739	47 136	24 769	72 124	2 217
311812	Commercial bakeries ..	-	76	31	6 515	207 168	3 602	6 588	93 098	653 906	313 281	967 120	19 619
311813	Frozen cakes, pies, & other pastries mfg ...	-	6	3	c	D	D	D	D	D	D	D	600
31182	Cookie, cracker, & pasta mfg.....	-	28	17	3 611	112 215	3 049	5 599	88 747	953 509	459 218	1 411 464	D
311821	Cookie & cracker mfg .	-	11	10	2 874	91 445	2 518	4 494	74 680	878 031	303 604	1 179 737	12 406
311822	Flour mixes & dough mfg from purchased flour .....	1	13	7	f	D	D	D	D	D	D	D	2 645

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>OHIO—Con.</b>												
	<b>Manufacturing—Con.</b>												
311	Food mfg—Con.												
3119	Other food mfg .....	2	114	55	6 512	205 283	4 384	9 254	116 532	1 321 324	1 124 748	2 440 806	99 882
31191	Snack food mfg .....	1	36	16	1 770	57 476	1 244	2 732	31 025	312 566	167 157	479 412	32 917
311911	Roasted nuts & peanut butter mfg .....	—	8	3	217	5 965	161	324	2 990	17 723	33 157	50 284	484
311919	Other snack food mfg .	1	28	13	1 553	51 511	1 083	2 408	28 035	294 843	134 000	429 128	32 433
31192	Coffee & tea mfg .....	7	4	3	175	5 103	100	205	2 338	37 899	47 411	85 052	1 674
311920	Coffee & tea mfg .....	7	4	3	175	5 103	100	205	2 338	37 899	47 411	85 052	1 674
31193	Flavoring syrup & concentrate mfg .....	1	10	5	759	29 557	428	956	17 142	538 660	300 918	836 317	16 813
311930	Flavoring syrup & concentrate mfg .....	1	10	5	759	29 557	428	956	17 142	538 660	300 918	836 317	16 813
31194	Seasoning & dressing mfg .....	2	22	12	1 443	48 963	794	1 657	20 551	212 545	208 252	420 920	31 617
311941	Mayonnaise, dressing, & other prepared sauce mfg .....	1	9	4	731	22 449	423	944	10 564	92 666	127 345	219 989	3 306
311942	Spice & extract mfg ...	4	13	8	712	26 514	371	713	9 987	119 879	80 907	200 931	28 311
31199	All other food mfg .....	1	42	19	2 365	64 184	1 818	3 704	45 476	219 654	401 010	619 105	16 861
311991	Perishable prepared food mfg .....	—	15	9	858	20 235	638	1 311	13 378	46 109	90 701	136 338	3 559
311999	All other miscellaneous food mfg .....	1	27	10	1 507	43 949	1 180	2 393	32 098	173 545	310 309	482 767	13 302
312	Beverage & tobacco product mfg .....	—	78	35	6 372	235 941	3 368	6 592	128 614	1 657 232	1 554 488	3 212 114	139 252
3121	Beverage mfg .....	—	78	35	6 372	235 941	3 368	6 592	128 614	1 657 232	1 554 488	3 212 114	139 252
31211	Soft drink & ice mfg .....	—	48	23	4 068	129 340	1 638	3 293	50 480	653 027	953 373	1 608 530	D
312111	Soft drink mfg .....	—	24	18	3 783	123 977	1 466	2 936	47 433	635 468	941 057	1 578 648	63 171
312113	Ice mfg .....	6	16	4	209	3 338	133	288	2 062	8 005	4 917	12 940	919
31212	Breweries .....	—	18	8	1 890	92 762	1 462	2 791	70 511	834 764	543 132	1 376 938	D
312120	Breweries .....	—	18	8	1 890	92 762	1 462	2 791	70 511	834 764	543 132	1 376 938	D
31213	Wineries .....	9	10	2	c	D	D	D	D	D	D	D	D
312130	Wineries .....	9	10	2	c	D	D	D	D	D	D	D	D
31214	Distilleries .....	—	2	2	e	D	D	D	D	D	D	D	D
312140	Distilleries .....	—	2	2	e	D	D	D	D	D	D	D	D
313	Textile mills .....	1	78	26	3 250	94 597	2 462	4 996	61 125	195 795	239 242	435 227	21 812
3132	Fabric mills .....	2	41	14	g	D	D	D	D	D	D	D	D
31321	Broadwoven fabric mills .	6	23	5	471	11 009	390	637	7 081	24 191	22 634	47 315	1 958
313210	Broadwoven fabric mills .....	6	23	5	471	11 009	390	637	7 081	24 191	22 634	47 315	1 958
31322	Narrow fabric mills & schiffli machine embroidery .....	2	10	1	e	D	D	D	D	D	D	D	D
313221	Narrow fabric mills ....	1	3	1	290	5 670	238	480	3 423	4 045	5 204	8 169	146
31323	Nonwoven fabric mills ...	—	8	8	684	19 631	568	1 273	15 403	48 951	52 109	100 758	3 469
313230	Nonwoven fabric mills .	—	8	8	684	19 631	568	1 273	15 403	48 951	52 109	100 758	3 469
3133	Textile & fabric finishing & fabric coating mills .....	—	36	12	1 773	57 845	1 239	2 554	34 897	117 933	158 526	277 549	16 159
31331	Textile & fabric finishing mills .....	5	22	3	230	7 021	165	367	3 729	15 681	9 389	25 084	852
313311	Broadwoven fabric finishing mills .....	5	22	3	230	7 021	165	367	3 729	15 681	9 389	25 084	852
31332	Fabric coating mills .....	—	14	9	1 543	50 824	1 074	2 187	31 168	102 252	149 137	252 465	15 307
313320	Fabric coating mills ...	—	14	9	1 543	50 824	1 074	2 187	31 168	102 252	149 137	252 465	15 307
314	Textile product mills .....	1	255	64	5 591	112 426	4 383	7 862	73 564	237 066	258 760	497 312	9 433
3141	Textile furnishings mills ....	—	101	18	1 889	38 238	1 415	2 615	23 874	76 470	90 797	171 193	3 034
31411	Carpet & rug mills .....	—	5	2	c	D	D	D	D	D	D	D	D
314110	Carpet & rug mills ....	—	5	2	c	D	D	D	D	D	D	D	D
31412	Curtain & linen mills .....	1	96	16	g	D	D	D	D	D	D	D	D
314121	Curtain & drapery mills .....	3	77	6	f	D	D	D	D	D	D	D	D
314129	Other household textile product mills .....	—	19	10	1 159	23 298	911	1 637	14 566	43 049	53 138	100 537	1 100
3149	Other textile product mills ..	1	154	46	3 702	74 188	2 968	5 247	49 690	160 596	167 963	326 119	6 399
31491	Textile bag & canvas mills .....	2	82	17	1 046	23 554	776	1 324	12 644	45 026	45 431	90 924	1 614
314911	Textile bag mills .....	—	10	4	221	6 488	177	364	3 034	14 334	15 764	30 373	286
314912	Canvas & related product mills .....	3	72	13	825	17 066	599	960	9 610	30 692	29 667	60 551	1 328
31499	All other textile product mills .....	1	72	29	2 656	50 634	2 192	3 923	37 046	115 570	122 532	235 195	4 785
314991	Rope, cordage, & twine mills .....	1	5	1	c	D	D	D	D	D	D	D	D
314999	All other miscellaneous textile product mills ..	1	66	27	2 509	47 012	2 077	3 688	34 633	108 271	112 098	217 331	D

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>OHIO—Con. Manufacturing— Con.</b>												
315	Apparel mfg . . . . .	2	154	44	4 555	102 741	3 629	7 024	62 289	327 604	249 726	570 561	7 153
3151	Apparel knitting mills . . . . .	—	4	3	199	4 105	157	323	2 338	7 076	7 212	14 298	26
31519	Other apparel knitting mills . . . . .	—	4	3	199	4 105	157	323	2 338	7 076	7 212	14 298	26
315191	Outerwear knitting mills . . . . .	—	4	3	199	4 105	157	323	2 338	7 076	7 212	14 298	26
3152	Cut & sew apparel mfg . . . . .	3	91	33	3 175	59 747	2 742	5 356	46 364	163 928	155 370	314 725	4 273
31521	Cut & sew apparel contractors . . . . .	1	43	6	499	7 429	434	723	5 976	33 933	4 128	35 559	273
315212	Women's, girls', & infants' cut & sew apparel contractors . . . . .	1	38	5	410	6 038	364	583	4 812	31 760	3 273	32 531	217
31522	Men's & boys' cut & sew apparel mfg . . . . .	3	27	19	1 939	34 241	1 706	3 192	27 303	85 636	114 542	198 387	2 924
315222	Men's & boys' cut & sew suit, coat, & overcoat mfg . . . . .	2	6	3	545	9 053	455	780	6 830	35 518	35 761	74 029	D
315223	Men's & boys' cut & sew shirt (exc work shirt) mfg . . . . .	8	6	4	531	9 299	511	904	8 019	21 242	21 841	42 562	D
315224	Men's & boys' cut & sew trouser, slack, & jean mfg . . . . .	—	5	4	c	D	D	D	D	D	D	D	65
315225	Men's & boys' cut & sew work clothing mfg . . . . .	—	2	2	c	D	D	D	D	D	D	D	D
315228	Men's & boys' cut & sew other outerwear mfg . . . . .	1	7	5	444	8 007	393	866	6 837	15 000	12 135	23 036	1 139
31523	Women's & girls' cut & sew apparel mfg . . . . .	6	16	6	626	16 444	515	1 318	12 057	40 192	35 416	75 142	1 033
315239	Women's & girls' cut & sew other outerwear mfg . . . . .	9	6	3	433	11 387	369	1 016	8 506	24 599	18 274	42 676	564
31529	Other cut & sew apparel mfg . . . . .	5	5	2	111	1 633	87	123	1 028	4 167	1 284	5 637	43
315299	All other cut & sew apparel mfg . . . . .	5	5	2	111	1 633	87	123	1 028	4 167	1 284	5 637	43
3159	Apparel accessories & other apparel mfg . . . . .	—	59	8	1 181	38 889	730	1 345	13 587	156 600	87 144	241 538	2 854
31599	Apparel accessories & other apparel mfg . . . . .	—	59	8	1 181	38 889	730	1 345	13 587	156 600	87 144	241 538	2 854
315991	Hat, cap, & millinery mfg . . . . .	—	4	1	c	D	D	D	D	D	D	D	D
315992	Glove & mitten mfg . . . . .	—	3	1	e	D	D	D	D	D	D	D	D
315999	Other apparel accessories & other apparel mfg . . . . .	3	52	6	f	D	D	D	D	D	D	D	D
316	Leather & allied product mfg . . . . .	—	36	16	2 105	43 297	1 625	3 017	25 774	147 502	115 491	260 056	2 123
3162	Footwear mfg . . . . .	—	4	3	f	D	D	D	D	D	D	D	D
31621	Footwear mfg . . . . .	—	4	3	f	D	D	D	D	D	D	D	D
316213	Men's footwear (except athletic) mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
316214	Women's footwear (except athletic) mfg . . . . .	2	2	2	e	D	D	D	D	D	D	D	D
3169	Other leather & allied product mfg . . . . .	—	26	12	1 358	27 463	1 126	2 165	17 209	77 500	60 769	138 605	911
31699	Other leather & allied product mfg . . . . .	—	26	12	1 358	27 463	1 126	2 165	17 209	77 500	60 769	138 605	911
316991	Luggage mfg . . . . .	—	9	5	e	D	D	D	D	D	D	D	D
316993	Personal leather good (except women's handbag & purse) mfg . . . . .	—	3	1	c	D	D	D	D	D	D	D	D
316999	All other leather good mfg . . . . .	—	13	6	844	16 389	713	1 407	10 740	55 196	41 145	96 165	397
321	Wood product mfg . . . . .	1	703	207	20 133	452 802	16 954	32 508	342 839	1 111 298	1 288 799	2 385 614	96 405
3211	Sawmills & wood preservation . . . . .	2	146	36	2 212	45 030	1 898	3 463	36 446	125 946	276 967	395 758	12 345
32111	Sawmills & wood preservation . . . . .	2	146	36	2 212	45 030	1 898	3 463	36 446	125 946	276 967	395 758	12 345
321113	Sawmills . . . . .	3	132	31	1 978	39 967	1 713	3 103	32 963	104 724	154 080	260 451	11 327
321114	Wood preservation . . . . .	1	14	5	234	5 063	185	360	3 483	21 222	122 887	135 307	1 018
3212	Veneer, plywood, & engineered wood product mfg . . . . .	—	53	31	2 588	65 351	1 930	4 059	40 377	162 382	221 577	384 487	7 921
32121	Veneer, plywood, & engineered wood product mfg . . . . .	—	53	31	2 588	65 351	1 930	4 059	40 377	162 382	221 577	384 487	7 921
321211	Hardwood veneer & plywood mfg . . . . .	—	8	3	f	D	D	D	D	D	D	D	D
321214	Truss mfg . . . . .	—	36	23	1 432	33 710	1 069	2 112	19 207	73 583	92 967	166 904	3 395
321219	Reconstituted wood product mfg . . . . .	—	7	3	488	13 366	269	575	6 862	44 174	78 535	121 406	2 537

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>OHIO—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
321	Wood product mfg—Con.												
3219	Other wood product mfg . . .	1	504	140	15 333	342 421	13 126	24 986	266 016	822 970	790 255	1 605 369	76 139
32191	Millwork . . . . .	2	150	49	4 660	109 879	3 832	7 509	80 613	224 986	315 458	533 775	16 539
321911	Wood window & door mfg . . . . .	2	49	21	2 095	49 712	1 743	3 346	36 882	97 179	115 329	210 741	8 569
321912	Cut stock, resawing lumber, & planing . . .	1	40	14	1 215	29 366	1 013	2 106	22 286	65 572	121 159	180 689	5 025
321918	Other millwork (including flooring) . . .	2	61	14	1 350	30 801	1 076	2 057	21 445	62 235	78 970	142 345	2 945
32192	Wood container & pallet mfg . . . . .	2	218	52	3 206	62 465	2 688	4 871	44 509	125 051	145 756	271 046	9 171
321920	Wood container & pallet mfg . . . . .	2	218	52	3 206	62 465	2 688	4 871	44 509	125 051	145 756	271 046	9 171
32199	All other wood product mfg . . . . .	—	136	39	7 467	170 077	6 606	12 606	140 894	472 933	329 041	800 548	50 429
321991	Manufactured home (mobile home) mfg . .	—	5	4	727	16 587	617	1 052	12 170	42 768	65 623	108 461	598
321992	Prefabricated wood building mfg . . . . .	—	15	7	510	15 959	351	815	9 334	36 156	54 250	91 104	2 055
321999	All other miscellaneous wood product mfg . . .	1	116	28	6 230	137 531	5 638	10 739	119 390	394 009	209 168	600 983	47 776
322	Paper mfg . . . . .	—	377	261	30 227	1 135 895	22 775	49 731	746 753	3 217 975	3 624 800	6 844 433	381 964
3221	Pulp, paper, & paperboard mills . . . . .	—	28	27	6 982	344 379	5 355	12 318	247 899	1 098 621	919 655	2 005 678	146 335
32212	Paper mills . . . . .	—	11	11	5 127	266 642	3 879	8 862	190 586	869 695	695 226	1 561 804	108 942
322121	Paper (except newsprint) mills . . . . .	—	10	10	h	D	D	D	D	D	D	D	D
322122	Newsprint mills . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
32213	Paperboard mills . . . . .	—	15	14	g	D	D	D	D	D	D	D	D
322130	Paperboard mills . . . . .	—	15	14	g	D	D	D	D	D	D	D	D
3222	Converted paper product mfg . . . . .	—	349	234	23 245	791 516	17 420	37 413	498 854	2 119 354	2 705 145	4 838 755	235 629
32221	Paperboard container mfg . . . . .	—	212	155	13 481	441 624	10 234	21 647	286 548	1 073 692	1 543 601	2 618 422	151 210
322211	Corrugated & solid fiber box mfg . . . . .	—	129	93	7 703	255 213	5 544	11 415	154 229	619 819	964 591	1 582 719	99 142
322212	Folding paperboard box mfg . . . . .	1	44	33	3 605	118 254	2 916	6 418	83 269	281 198	342 368	627 974	40 080
322213	Setup paperboard box mfg . . . . .	—	9	7	326	8 204	262	554	5 373	16 510	10 415	25 889	992
322214	Fiber can, tube, drum, & similar products mfg . . . . .	—	25	18	1 121	34 724	915	1 882	25 346	94 509	136 176	231 078	6 410
322215	Nonfolding sanitary food container mfg . . .	—	5	4	726	25 229	597	1 378	18 331	61 656	90 051	150 762	4 586
32222	Paper bag & coated & treated paper mfg . . . . .	—	62	37	5 887	246 005	4 114	9 620	142 252	758 494	855 191	1 623 259	68 364
322221	Coated & laminated packaging paper & plastics film mfg . . . . .	—	7	3	233	8 935	172	365	5 512	24 236	42 459	65 328	3 021
322222	Coated & laminated paper mfg . . . . .	—	42	27	4 196	184 828	2 722	6 321	96 140	619 048	606 803	1 240 834	52 931
322224	Uncoated paper & multiwall bag mfg . . . . .	—	5	3	809	26 635	683	1 587	20 007	47 987	86 721	133 502	D
322225	Laminated aluminum foil mfg for flexible packaging uses . . . . .	—	3	3	f	D	D	D	D	D	D	D	D
322226	Surface-coated paperboard mfg . . . . .	—	3	1	c	D	D	D	D	D	D	D	788
32223	Stationery product mfg . . . . .	2	34	19	2 229	56 924	1 789	3 614	41 127	153 067	159 258	313 833	8 200
322231	Die-cut paper & paperboard office supplies mfg . . . . .	—	17	8	1 077	26 743	904	1 794	20 242	66 144	68 816	135 360	3 925
322232	Envelope mfg . . . . .	3	14	10	1 107	28 846	853	1 753	20 073	83 054	85 982	169 796	4 092
32229	Other converted paper product mfg . . . . .	—	41	23	1 648	46 963	1 283	2 532	28 927	134 101	147 095	283 241	7 855
322291	Sanitary paper product mfg . . . . .	—	4	3	542	15 533	397	820	9 754	67 176	78 422	145 790	3 770
322299	All other converted paper product mfg . . .	1	37	20	1 106	31 430	886	1 712	19 173	66 925	68 673	137 451	4 085
323	Printing & related support activities . . . . .	1	1 836	412	43 003	1 331 787	30 816	60 027	812 711	3 060 026	1 863 029	4 911 202	237 433
3231	Printing & related support activities . . . . .	1	1 836	412	43 003	1 331 787	30 816	60 027	812 711	3 060 026	1 863 029	4 911 202	237 433
32311	Printing . . . . .	1	1 648	362	39 835	1 227 147	28 463	55 435	744 978	2 859 035	1 814 042	4 661 284	224 048
323110	Commercial lithographic printing . . .	1	823	208	21 935	686 733	16 055	31 688	434 660	1 448 594	956 364	2 404 685	104 482
323111	Commercial gravure printing . . . . .	6	14	3	324	18 121	242	490	12 304	57 890	20 795	79 147	6 090
323112	Commercial flexographic printing . . .	—	62	30	3 256	122 178	1 796	3 664	45 748	295 121	223 049	511 171	30 936
323113	Commercial screen printing . . . . .	1	178	44	4 642	114 897	3 261	6 163	63 378	247 959	187 947	429 312	22 846
323114	Quick printing . . . . .	3	337	13	1 892	41 235	1 299	1 893	24 906	86 754	48 852	135 559	5 034
323115	Digital printing . . . . .	—	11	1	128	3 152	92	151	1 720	8 549	3 986	12 555	521
323116	Manifold business form printing . . . . .	1	44	28	3 070	99 627	2 144	4 258	64 344	360 886	151 575	513 089	25 365
323117	Book printing . . . . .	—	21	10	2 632	85 799	2 167	4 503	65 156	213 322	126 472	341 191	21 912

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>OHIO—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
323	Printing & related support activities—Con.												
3231	Printing & related support activities—Con.												
32311	Printing—Con.												
323118	Blankbook, looseleaf binder, & device mfg.	1	14	7	518	14 927	384	757	9 232	32 512	20 741	52 760	1 374
323119	Other commercial printing	4	144	18	1 438	40 478	1 023	1 868	23 530	107 448	74 261	181 815	5 488
32312	Support activities for printing	1	188	50	3 168	104 640	2 353	4 592	67 733	200 991	48 987	249 918	13 385
323121	Tradebinding & related work	2	41	8	786	16 986	695	1 295	12 864	33 026	5 666	38 580	2 405
323122	Prepress services	1	147	42	2 382	87 654	1 658	3 297	54 869	167 965	43 321	211 338	10 980
324	Petroleum & coal products mfg	—	183	45	5 697	256 412	3 578	7 514	133 811	1 016 439	5 244 349	6 261 183	107 130
3241	Petroleum & coal products mfg	—	183	45	5 697	256 412	3 578	7 514	133 811	1 016 439	5 244 349	6 261 183	107 130
32411	Petroleum refineries	—	6	6	1 959	104 974	1 221	2 746	55 096	483 433	4 190 796	4 680 819	61 226
324110	Petroleum refineries	—	6	6	1 959	104 974	1 221	2 746	55 096	483 433	4 190 796	4 680 819	61 226
32412	Asphalt paving, roofing, & saturated materials mfg	2	138	28	2 335	96 817	1 666	3 590	57 558	367 781	772 621	1 135 459	35 997
324121	Asphalt paving mixture & block mfg	3	121	16	1 118	42 027	867	1 734	29 908	172 455	495 209	671 194	15 187
324122	Asphalt shingle & coating materials mfg	1	17	12	1 217	54 790	799	1 856	27 650	195 326	277 412	464 265	20 810
32419	Other petroleum & coal products mfg	2	39	11	1 403	54 621	691	1 178	21 157	165 225	280 932	444 905	9 907
324191	Petroleum lubricating oil & grease mfg	2	36	9	g	D	D	D	D	D	D	D	9 619
325	Chemical mfg	—	715	372	46 943	1 975 098	27 024	55 864	1 002 024	10 844 265	10 401 766	21 170 744	814 942
3251	Basic chemical mfg	—	139	79	12 123	577 838	6 979	15 007	313 628	2 467 110	2 583 468	5 044 878	237 405
32512	Industrial gas mfg	—	33	11	f	D	D	D	D	D	D	D	D
325120	Industrial gas mfg	—	33	11	f	D	D	D	D	D	D	D	D
32513	Dye & pigment mfg	1	20	12	2 343	111 810	1 430	3 181	66 977	502 940	426 305	921 616	47 117
325131	Inorganic dye & pigment mfg	—	7	5	898	46 149	512	1 113	27 379	208 449	232 091	431 250	22 751
325132	Synthetic organic dye & pigment mfg	3	13	7	1 445	65 661	918	2 068	39 598	294 491	194 214	490 366	24 366
32518	Other basic inorganic chemical mfg	—	41	25	4 685	222 449	2 466	5 290	112 463	859 870	590 014	1 453 499	45 920
325181	Alkalies & chlorine mfg	—	2	2	c	D	D	D	D	D	D	D	D
325188	All other basic inorganic chemical mfg	—	38	22	4 380	208 590	2 258	4 911	103 855	764 106	481 837	1 251 294	39 603
32519	Other basic organic chemical mfg	—	44	31	4 520	219 660	2 814	5 948	123 708	959 928	1 483 594	2 441 842	132 498
325192	Cyclic crude & intermediate mfg	—	5	4	f	D	D	D	D	D	D	D	D
325199	All other basic organic chemical mfg	—	38	27	4 012	195 751	2 497	5 155	108 958	835 027	1 213 416	2 041 565	107 393
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg	1	44	33	4 123	204 704	2 555	5 522	122 069	1 064 735	1 334 183	2 416 511	153 656
32521	Resin & synthetic rubber mfg	1	44	33	4 123	204 704	2 555	5 522	122 069	1 064 735	1 334 183	2 416 511	153 656
325211	Plastics material & resin mfg	1	34	29	3 088	150 662	1 961	4 197	91 994	602 202	1 042 691	1 659 312	94 806
325212	Synthetic rubber mfg	—	10	4	1 035	54 042	594	1 325	30 075	462 533	291 492	757 199	58 850
3253	Pesticide, fertilizer, & other agricultural chemical mfg	—	32	17	1 795	52 029	1 012	2 225	26 513	150 986	496 724	640 738	37 207
32531	Fertilizer mfg	—	26	14	1 663	47 443	937	2 064	24 126	125 671	479 640	598 216	34 302
325311	Nitrogenous fertilizer mfg	—	3	2	c	D	D	D	D	D	D	D	D
325314	Fertilizer (mixing only) mfg	—	22	12	g	D	D	D	D	D	D	D	D
32532	Pesticide & other agricultural chemical mfg	2	6	3	132	4 586	75	161	2 387	25 315	17 084	42 522	2 905
325320	Pesticide & other agricultural chemical mfg	2	6	3	132	4 586	75	161	2 387	25 315	17 084	42 522	2 905



**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>OHIO—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
325	Chemical mfg—Con.												
3254	Pharmaceutical & medicine mfg .....	—	38	19	3 052	117 933	1 754	3 439	57 469	893 074	397 483	1 262 007	83 068
32541	Pharmaceutical & medicine mfg .....	—	38	19	3 052	117 933	1 754	3 439	57 469	893 074	397 483	1 262 007	83 068
325411	Medicinal & botanical mfg .....	1	8	2	174	7 606	82	177	2 923	22 901	15 718	38 857	6 789
325412	Pharmaceutical preparation mfg .....	—	20	13	2 660	104 572	1 547	3 055	51 124	850 958	373 295	1 195 495	74 768
325413	In-vitro diagnostic substance mfg .....	7	3	1	c	D	D	D	D	D	D	D	D
325414	Biological product (except diagnostic) mfg .....	5	7	3	c	D	D	D	D	D	D	D	D
3255	Paint, coating, & adhesive mfg .....	—	154	74	9 543	410 559	4 619	9 304	162 465	1 621 399	1 736 821	3 353 080	104 481
32551	Paint & coating mfg .....	—	95	45	6 563	295 504	2 920	6 035	108 433	1 159 372	1 235 817	2 389 077	78 579
325510	Paint & coating mfg .....	—	95	45	6 563	295 504	2 920	6 035	108 433	1 159 372	1 235 817	2 389 077	78 579
32552	Adhesive mfg .....	2	59	29	2 980	115 055	1 699	3 269	54 032	462 027	501 004	964 003	25 902
325520	Adhesive mfg .....	2	59	29	2 980	115 055	1 699	3 269	54 032	462 027	501 004	964 003	25 902
3256	Soap, cleaning compound, & toilet preparation mfg ..	—	92	43	7 866	309 384	4 982	10 095	167 154	3 567 580	2 633 930	6 155 903	96 970
32561	Soap & cleaning compound mfg .....	—	80	37	5 480	216 888	3 695	7 559	124 844	2 813 618	2 221 334	4 988 228	76 753
325611	Soap & other detergent mfg .....	—	44	20	3 115	131 785	2 284	4 639	93 573	2 378 649	1 943 470	4 274 415	60 258
325612	Polish & other sanitation good mfg ..	—	29	14	2 255	81 418	1 363	2 824	29 544	417 610	252 663	669 847	14 301
325613	Surface active agent mfg .....	3	7	3	110	3 685	48	96	1 727	17 359	25 201	43 966	2 194
32562	Toilet preparation mfg ..	—	12	6	2 386	92 496	1 287	2 536	42 310	753 962	412 596	1 167 675	20 217
325620	Toilet preparation mfg ..	—	12	6	2 386	92 496	1 287	2 536	42 310	753 962	412 596	1 167 675	20 217
3259	Other chemical product mfg .....	2	216	107	8 441	302 651	5 123	10 272	152 726	1 079 381	1 219 157	2 297 627	102 155
32591	Printing ink mfg .....	2	45	17	g	D	D	D	D	D	D	D	D
325910	Printing ink mfg .....	2	45	17	g	D	D	D	D	D	D	D	D
32592	Explosives mfg .....	—	3	1	e	D	D	D	D	D	D	D	D
325920	Explosives mfg .....	—	3	1	e	D	D	D	D	D	D	D	D
32599	All other chemical product & preparation mfg .....	2	168	89	7 060	255 447	4 442	8 863	133 069	976 151	1 071 470	2 044 739	95 269
325991	Custom compounding of purchased resin ...	1	69	44	3 816	132 901	2 550	5 241	75 448	398 411	633 623	1 026 783	54 297
325992	Photographic film, paper, plate, & chemical mfg .....	—	10	5	232	9 766	103	191	2 840	52 078	48 603	103 428	2 061
325998	All other miscellaneous chemical product & preparation mfg .....	3	89	40	3 012	112 780	1 789	3 431	54 781	525 662	389 244	914 528	38 911
326	Plastics & rubber products mfg .....	1	1 195	701	92 547	2 700 634	72 633	148 097	1 807 050	6 713 933	6 703 448	13 397 265	707 114
3261	Plastics product mfg .....	1	916	539	67 441	1 856 667	53 627	108 817	1 249 582	4 831 997	4 625 028	9 446 491	540 677
32611	Unsupported plastics film, sheet, & bag mfg ..	—	77	53	4 965	176 414	3 798	7 633	110 768	550 551	592 948	1 139 375	57 420
326111	Unsupported plastics bag mfg .....	—	23	17	1 375	39 542	1 165	2 327	27 604	117 079	125 284	241 995	4 417
326112	Unsupported plastics packaging film & sheet mfg .....	—	9	8	673	21 311	499	1 102	13 848	67 614	84 454	151 205	18 586
326113	Unsupported plastics film & sheet (except packaging) mfg .....	1	45	28	2 917	115 561	2 134	4 204	69 316	365 858	383 210	746 175	34 417
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	1	92	45	4 396	132 795	3 284	6 446	84 211	305 450	307 445	611 566	34 693
326121	Unsupported plastics profile shape mfg .....	—	65	30	2 872	88 390	2 081	3 991	54 641	187 260	159 315	345 751	17 921
326122	Plastics pipe & pipe fitting mfg .....	1	27	15	1 524	44 405	1 203	2 455	29 570	118 190	148 130	265 815	16 772
32613	Laminated plastics plate, sheet, & shape mfg .....	1	45	11	2 040	77 495	1 629	3 408	53 738	222 340	209 268	434 387	29 549
326130	Laminated plastics plate, sheet, & shape mfg .....	1	45	11	2 040	77 495	1 629	3 408	53 738	222 340	209 268	434 387	29 549
32614	Polystyrene foam product mfg .....	1	33	16	1 199	30 509	926	1 714	19 623	71 333	65 273	137 333	14 450
326140	Polystyrene foam product mfg .....	1	33	16	1 199	30 509	926	1 714	19 623	71 333	65 273	137 333	14 450
32615	Urethane & other foam product (except polystyrene) mfg .....	—	29	20	2 193	66 762	1 725	3 533	45 271	145 640	203 670	347 311	10 612
326150	Urethane & other foam product (except polystyrene) mfg .....	—	29	20	2 193	66 762	1 725	3 533	45 271	145 640	203 670	347 311	10 612
32616	Plastics bottle mfg .....	—	30	22	3 705	106 529	3 318	7 120	87 065	365 533	324 997	686 074	41 808
326160	Plastics bottle mfg .....	—	30	22	3 705	106 529	3 318	7 120	87 065	365 533	324 997	686 074	41 808

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>OHIO—Con. Manufacturing— Con.</b>												
326	Plastics & rubber products mfg—Con.												
3261	Plastics product mfg—Con.												
32619	Other plastics product mfg .....	1	610	372	48 943	1 266 163	38 947	78 963	848 906	3 171 150	2 921 427	6 090 445	352 145
326191	Plastics plumbing fixture mfg .....	1	28	11	f	D	D	D	D	D	D	D	D
326192	Resilient floor covering mfg .....	—	2	1	c	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	1	580	360	48 110	1 242 529	38 331	77 642	833 780	3 107 249	2 868 592	5 971 513	348 917
3262	Rubber product mfg .....	—	279	162	25 106	843 967	19 006	39 280	557 468	1 881 936	2 078 420	3 950 774	166 437
32621	Tire mfg .....	—	60	13	3 908	166 934	2 568	4 879	99 150	306 451	340 958	650 646	41 709
326211	Tire mfg (except retreading) .....	—	14	9	3 289	150 672	2 042	3 830	86 259	276 740	301 957	581 837	39 683
326212	Tire retreading .....	2	46	4	619	16 262	526	1 049	12 891	29 711	39 001	68 809	2 026
32622	Rubber & plastics hoses & belting mfg .....	—	16	12	2 595	90 042	1 978	4 312	63 457	243 515	322 517	561 230	13 903
326220	Rubber & plastics hoses & belting mfg ..	—	16	12	2 595	90 042	1 978	4 312	63 457	243 515	322 517	561 230	13 903
32629	Other rubber product mfg .....	—	203	137	18 603	586 991	14 460	30 089	394 861	1 331 970	1 414 945	2 738 898	110 825
326291	Rubber product mfg for mechanical use .....	—	120	83	12 255	404 448	9 775	20 396	283 842	912 168	734 458	1 634 955	80 058
326299	All other rubber product mfg .....	—	83	54	6 348	182 543	4 685	9 693	111 019	419 802	680 487	1 103 943	30 767
327	Nonmetallic mineral product mfg .....	1	841	351	37 768	1 267 649	29 717	61 081	897 965	3 873 784	2 515 278	6 371 640	344 634
3271	Clay product & refractory mfg .....	—	152	87	9 281	273 376	7 408	14 746	187 811	720 426	439 456	1 150 330	48 426
32711	Pottery, ceramics, & plumbing fixture mfg ...	—	67	32	4 507	125 154	3 759	7 459	90 774	346 221	133 352	474 374	15 914
327111	Vitreous china plumbing fixture & bathroom accessories mfg .....	—	4	3	1 605	53 989	1 389	2 951	43 671	192 032	53 641	244 942	D
327112	Vitreous china, fine earthenware, & other pottery product mfg ..	—	54	21	2 077	41 345	1 777	3 213	29 162	93 903	37 440	126 833	10 664
327113	Porcelain electrical supply mfg .....	—	9	8	825	29 820	593	1 295	17 941	60 286	42 271	102 599	D
32712	Clay building material & refractories mfg .....	—	85	55	4 774	148 222	3 649	7 287	97 037	374 205	306 104	675 956	32 512
327121	Brick & structural clay tile mfg .....	1	21	15	1 164	33 003	981	2 061	24 705	74 634	36 169	109 151	6 514
327122	Ceramic wall & floor tile mfg .....	—	10	7	949	19 238	805	1 338	14 427	46 675	44 292	91 468	4 936
327123	Other structural clay product mfg .....	—	6	5	380	11 554	280	528	6 749	25 707	8 668	32 882	1 118
327124	Clay refractory mfg ...	—	22	13	801	28 160	566	1 171	18 574	78 780	87 039	165 723	5 377
327125	Nonclay refractory mfg .....	—	26	15	1 480	56 267	1 017	2 189	32 582	148 409	129 936	276 732	14 567
3272	Glass & glass product mfg ..	—	128	54	12 463	435 630	10 159	21 126	327 420	1 575 786	723 927	2 268 676	145 570
32721	Glass & glass product mfg .....	—	128	54	12 463	435 630	10 159	21 126	327 420	1 575 786	723 927	2 268 676	145 570
327211	Flat glass mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
327212	Other pressed & blown glass & glassware mfg .....	—	43	22	7 647	279 515	6 316	13 301	211 243	1 088 100	364 283	1 424 345	110 318
327213	Glass container mfg ..	—	1	1	e	D	D	D	D	D	D	D	D
327215	Glass product mfg made of purchased glass .....	—	83	30	h	D	D	D	D	D	D	D	D
3273	Cement & concrete product mfg .....	3	387	133	7 814	258 406	5 782	12 104	168 803	637 612	681 740	1 330 544	74 538
32731	Cement mfg .....	—	12	4	384	17 188	286	661	11 938	71 958	55 155	127 743	14 829
327310	Cement mfg .....	—	12	4	384	17 188	286	661	11 938	71 958	55 155	127 743	14 829
32732	Ready-mix concrete mfg ..	4	215	72	3 841	127 909	2 972	6 354	91 506	314 807	413 765	728 449	34 852
327320	Ready-mix concrete mfg .....	4	215	72	3 841	127 909	2 972	6 354	91 506	314 807	413 765	728 449	34 852
32733	Concrete pipe, brick, & block mfg .....	1	59	32	1 572	49 607	1 036	2 207	26 837	111 100	109 336	234 439	14 485
327331	Concrete block & brick mfg .....	2	41	17	785	26 886	457	962	12 941	62 278	63 690	125 495	9 238
327332	Concrete pipe mfg .....	1	18	15	787	22 721	579	1 245	13 896	48 822	45 646	108 944	5 247
32739	Other concrete product mfg .....	2	101	25	2 017	63 702	1 488	2 882	38 522	139 747	103 484	239 913	10 372
327390	Other concrete product mfg .....	2	101	25	2 017	63 702	1 488	2 882	38 522	139 747	103 484	239 913	10 372
3274	Lime & gypsum product mfg .....	—	18	10	935	36 026	726	1 713	27 128	116 095	142 863	260 479	25 092
32741	Lime mfg .....	—	8	6	348	13 229	266	589	10 345	34 692	56 985	93 094	3 012
327410	Lime mfg .....	—	8	6	348	13 229	266	589	10 345	34 692	56 985	93 094	3 012
32742	Gypsum product mfg .....	—	10	4	587	22 797	460	1 124	16 783	81 403	85 878	167 385	22 080
327420	Gypsum product mfg ..	—	10	4	587	22 797	460	1 124	16 783	81 403	85 878	167 385	22 080

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>OHIO—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
327	Nonmetallic mineral product mfg—Con.												
3279	Other nonmetallic mineral product mfg.....	1	156	67	7 275	264 211	5 642	11 392	186 803	823 865	527 292	1 361 611	51 008
32791	Abrasive product mfg ...	—	34	19	2 090	72 496	1 497	3 071	42 543	253 044	150 463	412 462	19 376
327910	Abrasive product mfg . .	—	34	19	2 090	72 496	1 497	3 071	42 543	253 044	150 463	412 462	19 376
32799	All other nonmetallic mineral product mfg ...	1	122	48	5 185	191 715	4 145	8 321	144 260	570 821	376 829	949 149	31 632
327991	Cut stone & stone product mfg . . . . .	1	36	8	460	11 136	333	681	7 588	27 369	17 557	44 417	2 230
327992	Ground or treated mineral & earth mfg . .	2	36	14	915	32 859	633	1 333	20 310	115 498	92 325	210 426	9 044
327993	Mineral wool mfg . . . . .	—	29	16	3 373	135 628	2 864	5 649	108 843	389 405	236 655	627 329	17 876
327999	All other miscellaneous nonmetallic mineral product mfg.....	1	21	10	437	12 092	315	658	7 519	38 549	30 292	66 977	2 482
331	Primary metal mfg . . . . .	—	478	319	74 621	3 206 789	60 496	131 456	2 414 538	10 800 064	10 672 488	21 382 589	775 179
3311	Iron & steel mills & ferroalloy mfg . . . . .	—	29	26	24 302	1 264 850	19 740	43 732	974 993	5 747 483	4 984 300	10 640 907	347 762
33111	Iron & steel mills & ferroalloy mfg . . . . .	—	29	26	24 302	1 264 850	19 740	43 732	974 993	5 747 483	4 984 300	10 640 907	347 762
331111	Iron & steel mills . . . . .	—	24	21	22 764	1 199 146	18 610	41 156	929 147	5 490 376	4 673 161	10 088 697	317 932
331112	Electrometallurgical ferroalloy product mfg . . . . .	—	5	5	1 538	65 704	1 130	2 576	45 846	257 107	311 139	552 210	29 830
3312	Steel product mfg from purchased steel . . . . .	—	66	48	9 959	392 240	7 819	16 562	274 168	1 112 305	1 761 402	2 860 818	93 935
33121	Iron & steel pipes & tubes mfg from purchased steel . . . . .	—	26	22	5 122	176 940	4 251	8 989	133 112	520 919	705 913	1 216 321	35 947
331210	Iron & steel pipes & tubes mfg from purchased steel . . . . .	—	26	22	5 122	176 940	4 251	8 989	133 112	520 919	705 913	1 216 321	35 947
33122	Rolling & drawing of purchased steel . . . . .	—	40	26	4 837	215 300	3 568	7 573	141 056	591 386	1 055 489	1 644 497	57 988
331221	Cold-rolled steel shape mfg . . . . .	—	29	17	3 607	170 137	2 651	5 483	112 111	494 456	894 228	1 387 419	50 218
331222	Steel wire drawing . . . . .	—	11	9	1 230	45 163	917	2 090	28 945	96 930	161 261	257 078	7 770
3313	Alumina & aluminum production & processing . .	—	36	33	5 991	204 440	4 749	10 014	139 794	984 772	1 272 018	2 273 860	58 497
33131	Alumina & aluminum production & processing . . . . .	—	36	33	5 991	204 440	4 749	10 014	139 794	984 772	1 272 018	2 273 860	58 497
331312	Primary aluminum production . . . . .	—	1	1	g	D	D	D	D	D	D	D	D
331314	Secondary smelting & alloying of aluminum .	—	12	9	f	D	D	D	D	D	D	D	D
331315	Aluminum sheet, plate, & foil mfg . . . . .	—	4	4	1 226	47 561	952	1 869	31 852	220 656	442 832	687 325	15 525
331316	Aluminum extruded product mfg . . . . .	—	18	18	2 473	68 466	1 936	3 931	44 082	181 811	270 849	449 663	9 919
331319	Other aluminum rolling & drawing . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing . . . . .	—	56	34	4 342	182 043	3 043	7 090	116 250	550 178	864 094	1 419 985	35 246
33141	Nonferrous metal (except aluminum) smelting & refining . . . . .	—	8	4	216	7 717	131	249	3 915	17 526	44 270	62 041	715
331419	Other nonferrous metal primary smelting & refining . . . . .	—	7	4	c	D	D	D	D	D	D	D	715
33142	Copper rolling, drawing, extruding, & alloying . . .	—	13	11	1 571	64 240	1 084	2 417	38 152	174 971	470 631	653 786	14 728
331421	Copper rolling, drawing, & extruding .	—	7	7	1 199	47 764	836	1 877	30 025	148 721	352 266	504 913	13 827
331423	Secondary smelting, refining, & alloying of copper . . . . .	—	6	4	372	16 476	248	540	8 127	26 250	118 365	148 873	901
33149	Other nonferrous metal rolling, drawing, extruding, & alloying . . .	—	35	19	2 555	110 086	1 828	4 424	74 183	357 681	349 193	704 158	19 803
331491	Other nonferrous metal rolling, drawing, & extruding . . . . .	—	14	11	1 840	82 526	1 304	3 339	56 711	287 887	271 054	555 850	16 540
331492	Other nonferrous metal secondary smelting, refining, & alloying . . .	1	21	8	715	27 560	524	1 085	17 472	69 794	78 139	148 308	3 263

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>OHIO—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
331	Primary metal mfg—Con.												
3315	Foundries .....	-	291	178	30 027	1 163 216	25 145	54 058	909 333	2 405 326	1 790 674	4 187 019	239 739
33151	Ferrous metal foundries ..	-	125	84	18 209	784 259	15 486	33 990	638 684	1 505 050	1 108 079	2 616 753	139 366
331511	Iron foundries .....	-	83	60	13 665	633 610	11 723	26 378	524 664	1 188 759	929 091	2 122 072	125 749
331512	Steel investment foundries .....	-	16	13	2 586	80 277	2 152	4 337	59 884	154 489	84 364	237 966	8 223
331513	Steel foundries (except investment) .....	-	26	11	1 958	70 372	1 611	3 275	54 136	161 802	94 624	256 715	5 394
33152	Nonferrous metal foundries .....	-	166	94	11 818	378 957	9 659	20 068	270 649	900 276	682 595	1 570 266	100 373
331521	Aluminum die-casting foundries .....	1	32	21	2 971	100 403	2 541	5 078	78 057	244 053	232 110	474 437	34 526
331522	Nonferrous (except aluminum) die-casting foundries .....	-	20	14	1 221	35 417	970	2 002	24 407	77 359	78 351	155 012	5 484
331524	Aluminum foundries (except die-casting) ..	-	80	42	4 818	140 083	3 807	8 015	98 349	273 001	213 152	485 281	43 480
331525	Copper foundries (except die-casting) ..	-	20	9	679	24 002	569	1 129	18 110	54 054	29 718	81 549	D
331528	Other nonferrous foundries (except die-casting) .....	-	14	8	2 129	79 052	1 772	3 844	51 726	251 809	129 264	373 987	D
332	Fabricated metal product mfg .....	-	4 332	1 511	143 223	4 807 291	108 563	220 158	3 188 491	11 474 356	10 440 507	21 923 931	922 928
3321	Forging & stamping .....	-	284	180	18 021	649 979	13 662	29 180	439 575	1 576 067	1 603 069	3 170 045	158 449
33211	Forging & stamping .....	-	284	180	18 021	649 979	13 662	29 180	439 575	1 576 067	1 603 069	3 170 045	158 449
332111	Iron & steel forging .....	1	43	34	3 810	152 107	2 758	5 994	106 602	364 156	394 359	763 619	37 101
332112	Nonferrous forging .....	-	6	3	g	D	D	D	D	D	D	D	D
332114	Custom roll forming .....	-	34	26	2 799	98 975	2 037	4 527	63 669	260 143	313 093	561 880	8 921
332115	Crown & closure mfg .....	1	7	5	e	D	D	D	D	D	D	D	D
332116	Metal stamping .....	-	188	108	8 537	274 011	6 531	13 494	174 764	588 901	561 000	1 150 318	46 064
332117	Powder metallurgy part mfg .....	-	6	4	568	20 525	434	889	14 180	48 687	26 722	75 893	D
3322	Cutlery & handtool mfg .....	1	118	49	6 121	195 238	4 127	8 010	105 627	714 487	388 759	1 095 840	35 926
33221	Cutlery & handtool mfg ..	1	118	49	6 121	195 238	4 127	8 010	105 627	714 487	388 759	1 095 840	35 926
332211	Cutlery & flatware (except precious) mfg .....	3	12	2	233	7 073	176	320	4 323	14 381	9 776	24 159	1 087
332212	Hand & edge tool mfg ..	1	90	39	4 596	150 102	3 048	5 755	77 966	513 662	247 917	761 932	24 648
332213	Saw blade & handsaw mfg .....	-	9	3	431	13 022	349	741	9 464	45 467	19 043	63 770	4 622
332214	Kitchen utensil, pot, & pan mfg .....	-	7	5	861	25 041	554	1 194	13 874	140 977	112 023	245 979	5 569
3323	Architectural & structural metals mfg .....	-	648	255	20 604	644 165	15 140	30 158	404 179	1 573 786	1 771 085	3 365 602	67 947
33231	Plate work & fabricated structural product mfg ..	-	296	109	7 332	242 110	5 331	10 667	146 009	589 486	629 842	1 220 470	22 508
332311	Prefabricated metal building & component mfg .....	-	23	9	1 005	29 934	688	1 252	15 684	82 947	97 902	180 033	2 927
332312	Fabricated structural metal mfg .....	-	177	62	3 948	133 552	2 866	5 812	79 690	369 136	390 013	762 747	13 226
332313	Plate work mfg .....	-	96	38	2 379	78 624	1 777	3 603	50 635	137 403	141 927	277 690	6 355
33232	Ornamental & architectural metal products mfg .....	-	352	146	13 272	402 055	9 809	19 491	258 170	984 300	1 141 243	2 145 132	45 439
332321	Metal window & door mfg .....	-	72	35	4 637	132 084	3 416	6 909	87 235	409 788	500 970	917 225	14 774
332322	Sheet metal work mfg ..	1	213	86	6 590	203 479	4 924	9 574	131 964	435 228	445 397	895 650	25 601
332323	Ornamental & architectural metal work mfg .....	-	67	25	2 045	66 492	1 469	3 008	38 971	139 284	194 876	332 257	5 064
3324	Boiler, tank, & shipping container mfg .....	-	108	64	8 558	309 291	6 799	13 260	224 117	749 174	1 217 723	1 960 423	37 478
33241	Power boiler & heat exchanger mfg .....	-	17	13	1 051	34 742	657	1 255	18 823	93 620	69 646	163 234	2 633
332410	Power boiler & heat exchanger mfg .....	-	17	13	1 051	34 742	657	1 255	18 823	93 620	69 646	163 234	2 633
33242	Metal tank (heavy gauge) mfg .....	-	28	17	2 947	101 958	2 335	4 432	69 694	189 831	191 552	385 553	6 468
332420	Metal tank (heavy gauge) mfg .....	-	28	17	2 947	101 958	2 335	4 432	69 694	189 831	191 552	385 553	6 468
33243	Metal can, box, & other metal container (light gauge) mfg .....	-	63	34	4 560	172 591	3 807	7 573	135 600	465 723	956 525	1 411 636	28 377
332431	Metal can mfg .....	-	21	15	3 348	136 109	2 887	5 719	111 295	387 296	835 014	1 211 785	22 302
332439	Other metal container mfg .....	2	42	19	1 212	36 482	920	1 854	24 305	78 427	121 511	199 851	6 075
3325	Hardware mfg .....	1	61	33	4 539	160 618	3 293	7 002	112 636	496 861	376 535	865 518	15 026
33251	Hardware mfg .....	1	61	33	4 539	160 618	3 293	7 002	112 636	496 861	376 535	865 518	15 026
332510	Hardware mfg .....	1	61	33	4 539	160 618	3 293	7 002	112 636	496 861	376 535	865 518	15 026

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>OHIO—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg—Con.												
3326	Spring & wire product mfg .	-	116	53	5 389	160 262	4 214	8 500	105 425	338 521	361 932	698 001	21 844
33261	Spring & wire product mfg . . . . .	-	116	53	5 389	160 262	4 214	8 500	105 425	338 521	361 932	698 001	21 844
332611	Spring (heavy gauge) mfg . . . . .	-	9	5	425	14 642	326	797	10 021	34 664	35 015	69 008	2 197
332612	Spring (light gauge) mfg . . . . .	1	37	19	1 958	54 454	1 689	3 603	41 787	128 950	117 202	246 704	12 413
332618	Other fabricated wire product mfg . . . . .	-	70	29	3 006	91 166	2 199	4 100	53 617	174 907	209 715	382 289	7 234
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	1	2 019	479	37 242	1 207 341	29 035	58 637	821 779	2 523 286	1 328 808	3 840 140	190 036
33271	Machine shops . . . . .	1	1 692	322	24 461	786 309	19 222	37 777	536 097	1 527 137	678 040	2 188 863	108 732
332710	Machine shops . . . . .	1	1 692	322	24 461	786 309	19 222	37 777	536 097	1 527 137	678 040	2 188 863	108 732
33272	Turned product & screw, nut, & bolt mfg . . . . .	-	327	157	12 781	421 032	9 813	20 860	285 682	996 149	650 768	1 651 277	81 304
332721	Precision turned product mfg . . . . .	-	230	101	8 172	263 134	6 485	14 122	186 653	610 401	309 407	917 870	47 463
332722	Bolt, nut, screw, rivet, & washer mfg . . . . .	-	97	56	4 609	157 898	3 328	6 738	99 029	385 748	341 361	733 407	33 841
3328	Coating, engraving, heat treating, & allied activities .	-	530	207	15 541	478 673	12 143	24 401	318 052	1 177 969	1 444 081	2 647 246	209 586
33281	Coating, engraving, heat treating, & allied activities . . . . .	-	530	207	15 541	478 673	12 143	24 401	318 052	1 177 969	1 444 081	2 647 246	209 586
332811	Metal heat treating . . . . .	-	106	46	3 431	121 653	2 707	5 495	84 081	253 903	377 750	630 500	65 253
332812	Metal coating/engraving (exc jewelry/silverware)/allied services . . . . .	-	149	65	5 175	158 719	4 049	8 439	107 151	424 782	831 324	1 282 267	113 745
332813	Electroplating, plating, polishing, anodizing, & coloring . . . . .	1	275	96	6 935	198 301	5 387	10 467	126 820	499 284	235 007	734 479	30 588
3329	Other fabricated metal product mfg . . . . .	-	448	191	27 208	1 001 724	20 150	41 010	657 101	2 324 205	1 948 515	4 281 116	186 636
33291	Metal valve mfg . . . . .	-	108	76	10 838	378 404	8 096	16 458	243 576	1 149 846	870 329	2 029 545	89 289
332911	Industrial valve mfg . . . . .	1	34	24	2 897	99 790	2 081	4 012	60 381	242 304	178 481	429 568	20 897
332912	Fluid power valve & hose fitting mfg . . . . .	-	43	30	5 694	206 617	4 301	8 788	136 032	735 320	486 935	1 210 986	44 230
332913	Plumbing fixture fitting & trim mfg . . . . .	-	9	7	697	22 311	516	1 106	13 434	45 722	66 085	112 545	1 969
332919	Other metal valve & pipe fitting mfg . . . . .	1	22	15	1 550	49 686	1 198	2 552	33 729	126 500	138 828	276 446	22 193
33299	All other fabricated metal product mfg . . . . .	-	340	115	16 370	623 320	12 054	24 552	413 525	1 174 359	1 078 186	2 251 571	97 347
332991	Ball & roller bearing mfg . . . . .	-	12	9	5 758	285 206	4 848	10 512	230 391	517 201	525 235	1 040 786	41 816
332993	Ammunition (except small arms) mfg . . . . .	-	2	1	e	D	D	D	D	D	D	D	D
332995	Other ordnance & accessories mfg . . . . .	-	6	3	981	39 463	217	515	8 007	58 676	6 237	66 456	20
332996	Fabricated pipe & pipe fitting mfg . . . . .	1	52	25	1 731	49 254	1 312	2 649	30 671	94 200	96 467	187 056	7 128
332997	Industrial pattern mfg . . . . .	1	75	9	1 019	33 595	856	1 685	26 524	54 767	14 214	69 050	2 572
332998	Enameled iron & metal sanitary ware mfg . . . . .	-	4	2	f	D	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product mfg . . . . .	1	177	64	5 521	167 442	3 844	7 238	89 956	331 549	334 776	667 179	40 427
333	Machinery mfg . . . . .	-	2 260	925	113 871	4 366 500	72 791	154 330	2 378 537	10 033 728	9 236 875	19 159 125	638 676
3331	Agriculture, construction, & mining machinery mfg . . . . .	-	109	49	7 280	250 328	5 555	11 818	165 746	565 621	816 023	1 398 231	43 511
33311	Agricultural implement mfg . . . . .	-	42	12	3 064	93 613	2 682	5 945	76 867	173 348	366 516	562 346	25 527
333111	Farm machinery & equipment mfg . . . . .	1	33	10	g	D	D	D	D	D	D	D	D
333112	Lawn & garden tractor & home lawn & garden equipment mfg . . . . .	-	9	2	g	D	D	D	D	D	D	D	D
33312	Construction machinery mfg . . . . .	-	46	28	3 420	130 150	2 270	4 688	71 400	308 454	387 352	689 469	15 745
333120	Construction machinery mfg . . . . .	-	46	28	3 420	130 150	2 270	4 688	71 400	308 454	387 352	689 469	15 745
33313	Mining & oil & gas field machinery mfg . . . . .	3	21	9	796	26 565	603	1 185	17 479	83 819	62 155	146 416	2 239
333131	Mining machinery & equipment mfg . . . . .	3	15	9	728	24 536	559	1 110	16 424	79 626	58 612	138 743	2 062

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[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>OHIO—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
333	Machinery mfg—Con.												
3332	Industrial machinery mfg ..	1	309	132	14 529	565 463	7 952	16 653	259 935	1 477 569	1 218 116	2 673 085	65 987
33321	Sawmill & woodworking machinery mfg .....	—	19	3	580	20 897	409	851	12 398	39 731	29 502	70 169	1 073
333210	Sawmill & woodworking machinery mfg .....	—	19	3	580	20 897	409	851	12 398	39 731	29 502	70 169	1 073
33322	Plastics & rubber industry machinery mfg .....	—	58	31	4 597	196 348	2 225	4 451	80 906	667 897	487 254	1 133 589	25 737
333220	Plastics & rubber industry machinery mfg .....	—	58	31	4 597	196 348	2 225	4 451	80 906	667 897	487 254	1 133 589	25 737
33329	Other industrial machinery mfg .....	1	232	98	9 352	348 218	5 318	11 351	166 631	769 941	701 360	1 469 327	39 177
333291	Paper industry machinery mfg .....	—	20	11	849	37 870	427	790	16 721	65 275	94 955	165 167	4 353
333292	Textile machinery mfg .....	—	11	5	226	9 342	125	254	3 275	21 873	13 150	34 913	419
333293	Printing machinery & equipment mfg .....	—	38	12	1 723	55 273	716	1 613	23 563	143 509	156 903	297 123	7 047
333294	Food product machinery mfg .....	—	37	17	1 733	64 015	1 066	2 154	30 294	177 594	121 184	298 253	9 583
333295	Semiconductor machinery mfg .....	—	4	3	210	8 255	89	153	1 875	10 357	10 117	20 106	650
333298	All other industrial machinery mfg .....	2	122	50	4 611	173 463	2 895	6 387	90 903	351 333	305 051	653 765	17 125
3333	Commercial & service industry machinery mfg ..	2	105	46	6 793	253 698	3 752	7 764	105 981	688 646	442 712	1 133 542	43 468
33331	Commercial & service industry machinery mfg .....	2	105	46	6 793	253 698	3 752	7 764	105 981	688 646	442 712	1 133 542	43 468
333311	Automatic vending machine mfg .....	—	3	3	235	5 133	120	246	1 907	12 741	12 288	26 005	D
333312	Commercial laundry, drycleaning, & pressing machine mfg .....	—	5	2	e	D	D	D	D	D	D	D	D
333313	Office machinery mfg ..	5	4	2	c	D	D	D	D	D	D	D	D
333314	Optical instrument & lens mfg .....	—	11	4	1 260	40 319	976	2 040	26 350	110 282	42 751	153 439	10 153
333315	Photographic & photocopying equipment mfg .....	—	10	8	313	13 023	201	397	5 912	28 137	11 652	38 823	2 178
333319	Other commercial & service industry machinery mfg .....	2	72	27	4 404	175 568	2 127	4 374	63 636	504 037	334 413	839 781	30 106
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg .....	—	89	61	11 018	387 683	7 020	15 256	192 316	964 204	1 066 116	2 052 955	57 106
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg ..	—	89	61	11 018	387 683	7 020	15 256	192 316	964 204	1 066 116	2 052 955	57 106
333411	Air purification equipment mfg .....	—	20	12	1 201	34 313	787	1 638	16 977	82 122	70 155	153 140	3 245
333412	Industrial & commercial fan & blower mfg .....	4	16	12	1 556	54 761	946	2 116	28 343	116 340	126 711	245 345	6 185
333414	Heating equipment (except warm air furnaces) mfg .....	—	18	9	1 314	47 496	767	1 572	20 452	108 344	81 978	188 328	4 207
333415	AC & warm air heating & commercial/ industrial refrig equip mfg .....	—	35	28	6 947	251 113	4 520	9 930	126 544	657 398	787 272	1 466 142	43 469
3335	Metalworking machinery mfg .....	—	1 070	366	31 944	1 287 631	22 442	46 832	809 737	2 692 263	1 584 537	4 183 750	212 330
33351	Metalworking machinery mfg .....	—	1 070	366	31 944	1 287 631	22 442	46 832	809 737	2 692 263	1 584 537	4 183 750	212 330
333511	Industrial mold mfg ...	—	268	102	6 543	262 844	5 325	11 438	190 670	432 672	168 750	609 401	47 389
333512	Machine tool (metal cutting types) mfg ...	—	46	36	4 382	190 987	2 141	4 066	81 529	500 092	478 783	862 309	38 892
333513	Machine tool (metal forming types) mfg ...	—	33	24	3 577	161 829	2 374	5 087	96 803	318 939	260 454	580 772	21 498
333514	Special die & tool, die set, jig, & fixture mfg ..	1	478	116	9 491	363 269	7 290	14 963	254 491	688 886	299 817	981 392	57 147
333515	Cutting tool & machine tool accessory mfg ..	1	180	54	4 916	175 848	3 601	7 302	115 513	465 379	150 975	614 150	28 863
333516	Rolling mill machinery & equipment mfg .....	—	18	10	867	35 857	434	994	14 732	63 117	72 285	157 353	3 853
333518	Other metalworking machinery mfg .....	1	47	24	2 168	96 997	1 277	2 982	55 999	223 178	153 473	378 373	14 688

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>OHIO—Con.</b>												
	<b>Manufacturing—Con.</b>												
333	Machinery mfg—Con.												
3336	Engine, turbine, & power transmission equipment mfg .....	1	69	43	5 592	212 643	3 913	7 827	129 319	548 803	600 926	1 156 000	41 822
33361	Engine, turbine, & power transmission equipment mfg .....	1	69	43	5 592	212 643	3 913	7 827	129 319	548 803	600 926	1 156 000	41 822
333611	Turbine & turbine generator set unit mfg .....	—	3	3	156	6 873	83	179	2 310	9 758	18 863	30 273	132
333612	Speed changer, industrial high-speed drive, & gear mfg .....	3	23	12	1 015	35 722	696	1 344	21 216	81 726	77 123	158 799	4 990
333613	Mechanical power transmission equipment mfg .....	2	27	16	1 731	68 353	1 051	2 100	34 793	165 094	122 249	285 098	12 198
333618	Other engine equipment mfg .....	—	16	12	2 690	101 695	2 083	4 204	71 000	292 225	382 691	681 830	24 502
3339	Other general-purpose machinery mfg .....	—	509	228	36 715	1 409 054	22 157	48 180	715 503	3 096 622	3 508 445	6 561 562	174 452
33391	Pump & compressor mfg .....	—	58	33	8 380	317 720	4 962	10 465	159 171	670 278	767 059	1 425 105	33 183
333911	Pump & pumping equipment mfg .....	—	25	17	4 471	167 026	2 725	5 541	89 586	382 759	409 337	786 383	17 831
333912	Air & gas compressor mfg .....	—	24	11	3 210	122 552	1 772	4 011	53 035	211 530	294 894	500 742	12 532
333913	Measuring & dispensing pump mfg .....	—	9	5	699	28 142	465	913	16 550	75 989	62 828	137 980	2 820
33392	Material handling equipment mfg .....	—	124	73	8 719	325 039	5 646	11 613	173 343	671 035	740 729	1 408 992	37 409
333921	Elevator & moving stairway mfg .....	1	11	7	486	25 508	272	503	15 894	41 235	35 035	76 758	1 765
333922	Conveyor & conveying equipment mfg .....	1	64	35	3 258	122 523	1 873	4 109	51 800	243 229	213 406	455 904	8 055
333923	Overhead traveling crane, hoist, & monorail system mfg .....	—	19	8	1 028	38 025	540	1 056	17 219	106 147	160 510	258 371	8 758
333924	Industrial truck, tractor, trailer, & stacker machinery mfg .....	—	30	23	3 947	138 983	2 961	5 945	88 430	280 424	331 778	617 959	18 831
33399	All other general-purpose machinery mfg .....	—	327	122	19 616	766 295	11 549	26 102	382 989	1 755 309	2 000 657	3 727 465	103 860
333991	Power-driven handtool mfg .....	—	23	10	1 905	81 918	1 160	2 268	42 957	179 982	96 091	274 961	9 538
333992	Welding & soldering equipment mfg .....	—	22	14	6 162	238 312	3 787	8 180	132 924	569 862	995 739	1 532 780	42 774
333993	Packaging machinery mfg .....	—	40	18	2 651	106 102	1 082	2 389	32 727	229 369	206 473	438 013	12 735
333994	Industrial process furnace & oven mfg ..	2	40	18	1 396	60 014	704	3 593	21 462	113 377	148 567	264 640	4 124
333995	Fluid power cylinder & actuator mfg .....	—	35	17	1 657	52 435	1 162	2 373	33 322	115 712	68 283	187 729	9 786
333996	Fluid power pump & motor mfg .....	1	15	6	2 161	91 019	1 546	3 369	60 159	208 799	212 240	419 181	11 989
333997	Scale & balance (except laboratory) mfg .....	—	8	5	495	18 575	277	436	8 062	59 848	61 578	121 445	1 120
333999	All other miscellaneous general-purpose machinery mfg .....	—	144	34	3 189	117 920	1 831	3 494	51 376	278 360	211 686	488 716	11 794
334	Computer & electronic product mfg .....	—	522	228	35 278	1 263 594	21 664	42 345	597 088	3 976 831	3 346 079	7 256 499	267 891
3341	Computer & peripheral equipment mfg .....	1	48	11	2 555	97 870	1 600	3 389	51 009	527 178	291 872	821 226	19 222
33411	Computer & peripheral equipment mfg .....	1	48	11	2 555	97 870	1 600	3 389	51 009	527 178	291 872	821 226	19 222
334111	Electronic computer mfg .....	2	15	5	477	15 477	281	517	6 734	90 220	20 785	101 867	1 330
334119	Other computer peripheral equipment mfg .....	—	26	6	2 043	81 344	1 306	2 843	43 497	434 721	268 814	714 798	17 517
3342	Communications equipment mfg .....	—	45	20	6 208	259 151	3 692	7 078	144 942	1 075 317	938 866	1 978 983	50 782
33421	Telephone apparatus mfg .....	—	9	5	3 281	162 179	2 293	4 190	115 698	842 712	767 386	1 577 579	35 393
334210	Telephone apparatus mfg .....	—	9	5	3 281	162 179	2 293	4 190	115 698	842 712	767 386	1 577 579	35 393
33422	Radio & TV broadcasting & wireless communications equipment mfg .....	3	32	13	2 781	92 140	1 323	2 789	27 135	225 421	159 615	382 412	15 174
334220	Radio & TV broadcasting & wireless communications equipment mfg .....	3	32	13	2 781	92 140	1 323	2 789	27 135	225 421	159 615	382 412	15 174

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>OHIO—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
334	Computer & electronic product mfg—Con.												
3342	Communications equipment mfg—Con.												
33429	Other communications equipment mfg . . . . .	2	4	2	146	4 832	76	99	2 109	7 184	11 865	18 992	215
334290	Other communications equipment mfg . . . . .	2	4	2	146	4 832	76	99	2 109	7 184	11 865	18 992	215
3343	Audio & video equipment mfg . . . . .	—	10	3	528	15 477	411	789	8 685	14 265	69 457	79 049	D
33431	Audio & video equipment mfg . . . . .	—	10	3	528	15 477	411	789	8 685	14 265	69 457	79 049	D
334310	Audio & video equipment mfg . . . . .	—	10	3	528	15 477	411	789	8 685	14 265	69 457	79 049	D
3344	Semiconductor & other electronic component mfg . . . . .	—	167	86	11 225	340 381	8 164	16 246	201 007	1 000 769	1 074 868	2 033 261	120 163
33441	Semiconductor & other electronic component mfg . . . . .	—	167	86	11 225	340 381	8 164	16 246	201 007	1 000 769	1 074 868	2 033 261	120 163
334411	Electron tube mfg . . . . .	—	12	8	3 508	116 106	2 747	5 670	78 668	328 943	649 845	939 273	54 536
334412	Bare printed circuit board mfg . . . . .	1	36	17	1 199	31 043	960	1 843	19 936	65 499	39 217	104 915	12 107
334413	Semiconductor & related device mfg . . . . .	—	12	6	1 932	67 415	1 327	2 595	36 371	278 491	127 129	399 762	35 230
334415	Electronic resistor mfg . . . . .	1	2	2	c	D	D	D	D	D	D	D	D
334416	Electronic coil, transformer, & other inductor mfg . . . . .	—	11	6	f	D	D	D	D	D	D	D	D
334417	Electronic connector mfg . . . . .	—	7	4	362	10 604	254	455	7 535	56 022	13 795	70 545	1 304
334418	Printed circuit assembly (electronic assembly) mfg . . . . .	2	18	13	887	22 440	625	1 308	12 739	49 047	53 505	99 601	3 870
334419	Other electronic component mfg . . . . .	2	69	30	2 679	73 241	1 834	3 556	35 781	184 225	168 449	357 508	11 736
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	—	232	105	14 499	542 074	7 621	14 486	186 912	1 336 722	960 680	2 310 945	68 029
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	—	232	105	14 499	542 074	7 621	14 486	186 912	1 336 722	960 680	2 310 945	68 029
334510	Electromedical & electrotherapeutic apparatus mfg . . . . .	—	17	5	785	37 032	292	629	10 071	87 681	112 329	203 046	3 848
334511	Search, detection, navigation, & guidance instrument mfg . . . . .	—	15	5	f	D	D	D	D	D	D	D	3 024
334512	Automatic environmental control mfg . . . . .	—	25	13	3 089	80 301	2 270	4 226	45 514	144 148	87 342	231 702	10 685
334513	Industrial process control instrument mfg . . . . .	—	47	24	2 883	132 876	1 060	1 647	29 750	305 543	178 471	486 473	13 679
334514	Totalizing fluid meter & counting device mfg . . . . .	—	11	5	641	16 169	511	916	9 206	44 712	91 968	136 749	D
334515	Electricity measuring & testing instrument mfg . . . . .	—	32	17	1 718	67 495	793	1 536	24 581	152 049	77 159	230 986	12 680
334516	Analytical laboratory instrument mfg . . . . .	—	20	5	1 086	41 006	523	984	12 457	79 186	44 749	123 242	9 349
334517	Irradiation apparatus mfg . . . . .	—	9	6	1 071	54 601	322	681	10 143	150 671	193 230	346 104	3 325
334518	Watch, clock, & part mfg . . . . .	—	4	2	c	D	D	D	D	D	D	D	D
334519	Other measuring & controlling device mfg . . . . .	—	52	23	2 360	88 306	1 321	2 694	34 528	279 686	141 623	422 313	8 147
3346	Mfg & reproducing magnetic & optical media . . . . .	1	20	3	263	8 641	176	357	4 533	22 580	10 336	33 035	D
33461	Mfg & reproducing magnetic & optical media . . . . .	1	20	3	263	8 641	176	357	4 533	22 580	10 336	33 035	D
334611	Software reproducing . . . . .	2	6	1	c	D	D	D	D	D	D	D	1 550
334612	Prerecorded CD (except software), tape, & record reproducing . . . . .	—	11	2	c	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg . . . . .	—	393	211	46 877	1 563 654	33 867	67 436	950 783	5 305 672	4 041 756	9 411 851	228 741



**Table 1. Industry Statistics for the State: 1997—Con.**

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>OHIO—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
335	Electrical equipment, appliance, & component mfg—Con.												
3351	Electric lighting equipment mfg . . . . .	-	63	33	6 923	228 715	5 712	12 103	174 534	1 021 575	485 494	1 500 340	36 584
33511	Electric lamp bulb & part mfg . . . . .	-	11	11	h	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg . . . . .	-	11	11	h	D	D	D	D	D	D	D	D
33512	Lighting fixture mfg . . . . .	-	52	22	h	D	D	D	D	D	D	D	D
335121	Residential electric lighting fixture mfg . . . . .	1	13	6	f	D	D	D	D	D	D	D	D
335122	Commercial/industrial/institutional electric lighting fixture mfg . . . . .	-	14	4	1 070	26 582	768	1 643	15 177	186 940	105 281	290 922	2 826
335129	Other lighting equipment mfg . . . . .	-	25	12	1 715	47 453	1 273	2 419	25 925	136 038	132 028	265 739	6 616
3352	Household appliance mfg . . . . .	-	29	24	14 560	479 503	11 771	22 446	346 087	1 879 961	1 758 942	3 700 577	72 874
33521	Small electrical appliance mfg . . . . .	-	16	14	i	D	D	D	D	D	D	D	41 984
335211	Electric housewares & household fan mfg . . . . .	-	8	6	g	D	D	D	D	D	D	D	D
335212	Household vacuum cleaner mfg . . . . .	-	8	8	3 992	152 980	2 580	4 995	86 384	528 738	268 474	810 748	D
33522	Major appliance mfg . . . . .	-	13	10	i	D	D	D	D	D	D	D	30 890
335221	Household cooking appliance mfg . . . . .	-	5	3	e	D	D	D	D	D	D	D	D
335222	Household refrigerator & home freezer mfg . . . . .	-	4	3	f	D	D	D	D	D	D	D	D
335224	Household laundry equipment mfg . . . . .	-	2	2	i	D	D	D	D	D	D	D	D
335228	Other major household appliance mfg . . . . .	-	2	2	g	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg . . . . .	-	177	83	15 380	560 466	9 360	18 889	264 554	1 627 541	976 043	2 608 610	79 938
33531	Electrical equipment mfg . . . . .	-	177	83	15 380	560 466	9 360	18 889	264 554	1 627 541	976 043	2 608 610	79 938
335311	Power, distribution, & specialty transformer mfg . . . . .	5	7	4	329	9 489	243	528	6 038	18 207	14 473	32 903	1 287
335312	Motor & generator mfg . . . . .	-	48	28	5 621	173 894	4 106	8 546	110 868	431 189	314 478	748 817	31 284
335313	Switchgear & switchboard apparatus mfg . . . . .	-	44	19	3 376	114 746	2 377	4 575	71 793	408 115	207 553	604 336	12 152
335314	Relay & industrial control mfg . . . . .	-	78	32	6 054	262 337	2 634	5 240	75 855	770 030	439 539	1 222 554	35 215
3359	Other electrical equipment & component mfg . . . . .	-	124	71	10 014	294 970	7 024	13 998	165 608	776 595	821 277	1 602 324	39 345
33591	Battery mfg . . . . .	-	7	5	1 214	37 969	934	1 989	27 716	98 468	152 921	251 196	3 603
335911	Storage battery mfg . . . . .	-	5	3	f	D	D	D	D	D	D	D	D
335912	Primary battery mfg . . . . .	-	2	2	e	D	D	D	D	D	D	D	D
33592	Communication & energy wire & cable mfg . . . . .	-	14	13	1 289	41 731	908	1 860	23 140	137 796	152 554	296 065	6 782
335921	Fiber optic cable mfg . . . . .	-	2	2	c	D	D	D	D	D	D	D	D
335929	Other communication & energy wire mfg . . . . .	-	12	11	g	D	D	D	D	D	D	D	D
33593	Wiring device mfg . . . . .	-	51	31	4 041	110 833	2 934	5 704	64 868	240 324	248 721	487 631	15 485
335931	Current-carrying wiring device mfg . . . . .	-	35	20	2 698	71 861	2 099	4 249	45 093	152 964	173 437	326 143	9 682
335932	Noncurrent-carrying wiring device mfg . . . . .	-	16	11	1 343	38 972	835	1 455	19 775	87 360	75 284	161 488	5 803
33599	All other electrical equipment & component mfg . . . . .	-	52	22	3 470	104 437	2 248	4 445	49 884	300 007	267 081	567 432	13 475
335991	Carbon & graphite product mfg . . . . .	-	15	7	899	33 672	663	1 420	20 399	64 184	68 020	132 110	7 526
335999	All other miscellaneous electrical equipment & component mfg . . . . .	-	37	15	2 571	70 765	1 585	3 025	29 485	235 823	199 061	435 322	5 949
336	Transportation equipment mfg . . . . .	-	718	464	173 104	8 133 458	141 417	298 462	6 167 525	25 592 324	45 786 373	71 399 811	2 583 267
3361	Motor vehicle mfg . . . . .	-	25	18	36 503	1 881 897	32 528	66 605	1 604 229	10 769 855	23 244 869	33 952 920	454 792
33611	Automobile & light duty motor vehicle mfg . . . . .	-	16	10	k	D	D	D	D	D	D	D	438 073
336111	Automobile mfg . . . . .	-	11	6	j	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg . . . . .	-	5	4	j	D	D	D	D	D	D	D	D
33612	Heavy duty truck mfg . . . . .	-	9	8	i	D	D	D	D	D	D	D	16 719
336120	Heavy duty truck mfg . . . . .	-	9	8	i	D	D	D	D	D	D	D	16 719

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>OHIO—Con.</b>												
	<b>Manufacturing—Con.</b>												
336	Transportation equipment mfg—Con.												
3362	Motor vehicle body & trailer mfg .....	-	72	38	5 256	149 688	4 132	8 445	104 094	281 876	492 474	781 160	26 598
33621	Motor vehicle body & trailer mfg .....	-	72	38	5 256	149 688	4 132	8 445	104 094	281 876	492 474	781 160	26 598
336211	Motor vehicle body mfg .....	-	39	24	3 380	92 626	2 639	5 215	65 237	168 350	303 581	481 090	24 084
336212	Truck trailer mfg .....	-	14	8	926	28 895	741	1 696	18 862	56 167	107 242	164 319	1 659
336213	Motor home mfg .....	-	3	1	e	D	D	D	D	D	D	D	D
336214	Travel trailer & camper mfg .....	1	16	5	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	484	336	111 445	5 114 391	93 248	200 425	4 033 544	11 259 491	18 433 490	29 724 705	1 889 709
33631	Motor vehicle gasoline engine & engine parts mfg .....	-	43	20	9 118	490 946	7 253	16 016	372 032	1 612 948	3 651 672	5 212 482	547 752
336311	Carburetor, piston, piston ring, & valve mfg .....	-	9	5	1 123	60 373	828	1 470	41 413	106 716	72 217	174 935	D
336312	Gasoline engine & engine parts mfg .....	-	34	15	7 995	430 573	6 425	14 546	330 619	1 506 232	3 579 455	5 037 547	D
33632	Motor vehicle electrical & electronic equipment mfg .....	-	54	34	16 936	778 204	13 636	27 205	582 439	1 417 706	2 550 656	4 019 441	126 557
336321	Vehicular lighting equipment mfg .....	-	9	5	g	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical & electronic equipment mfg .....	-	45	29	j	D	D	D	D	D	D	D	D
33633	Motor vehicle steering & suspension component (except spring) mfg ....	-	20	18	8 623	448 169	7 180	14 820	332 808	774 098	1 053 360	1 828 941	126 943
336330	Motor vehicle steering & suspension component (except spring) mfg .....	-	20	18	8 623	448 169	7 180	14 820	332 808	774 098	1 053 360	1 828 941	126 943
33634	Motor vehicle brake system mfg .....	-	27	19	7 581	354 625	6 093	13 672	276 920	599 881	1 251 103	1 849 384	111 984
336340	Motor vehicle brake system mfg .....	-	27	19	7 581	354 625	6 093	13 672	276 920	599 881	1 251 103	1 849 384	111 984
33635	Motor vehicle transmission & power train parts mfg .....	-	36	23	13 004	702 708	11 165	25 293	585 768	1 725 537	3 143 213	4 892 262	323 483
336350	Motor vehicle transmission & power train parts mfg .....	-	36	23	13 004	702 708	11 165	25 293	585 768	1 725 537	3 143 213	4 892 262	323 483
33636	Motor vehicle seating & interior trim mfg .....	-	28	22	4 750	116 916	3 989	8 398	85 407	393 712	955 546	1 348 939	35 455
336360	Motor vehicle seating & interior trim mfg ...	-	28	22	4 750	116 916	3 989	8 398	85 407	393 712	955 546	1 348 939	35 455
33637	Motor vehicle metal stamping .....	-	146	109	30 311	1 471 618	25 947	57 273	1 210 990	2 589 863	3 071 805	5 668 852	365 210
336370	Motor vehicle metal stamping .....	-	146	109	30 311	1 471 618	25 947	57 273	1 210 990	2 589 863	3 071 805	5 668 852	365 210
33639	Other motor vehicle parts mfg .....	-	130	91	21 122	751 205	17 985	37 748	587 180	2 145 746	2 756 135	4 904 404	252 325
336391	Motor vehicle air-conditioning mfg .....	-	6	6	5 912	297 989	5 328	12 036	256 903	633 394	750 788	1 376 299	21 937
336399	All other motor vehicle parts mfg .....	-	124	85	15 210	453 216	12 657	25 712	330 277	1 512 352	2 005 347	3 528 105	230 388
3364	Aerospace product & parts mfg .....	-	75	45	14 935	834 898	7 561	14 694	322 918	2 769 202	2 800 176	5 609 656	186 884
33641	Aerospace product & parts mfg .....	-	75	45	14 935	834 898	7 561	14 694	322 918	2 769 202	2 800 176	5 609 656	186 884
336412	Aircraft engine & engine parts mfg ....	-	29	23	10 281	620 740	4 846	8 739	215 262	1 999 760	2 465 998	4 539 766	142 592
336413	Other aircraft part & auxiliary equipment mfg .....	-	41	20	h	D	D	D	D	D	D	D	D
336415	Guided missile & space vehicle propulsion unit & parts mfg .....	-	1	1	c	D	D	D	D	D	D	D	D
3365	Railroad rolling stock mfg ..	-	13	7	867	25 084	716	1 494	17 562	45 010	191 851	243 705	2 313
33651	Railroad rolling stock mfg .....	-	13	7	867	25 084	716	1 494	17 562	45 010	191 851	243 705	2 313
336510	Railroad rolling stock mfg .....	-	13	7	867	25 084	716	1 494	17 562	45 010	191 851	243 705	2 313
3366	Ship & boat building .....	-	17	4	725	16 684	625	1 293	12 853	48 314	56 540	103 892	2 363
33661	Ship & boat building .....	-	17	4	725	16 684	625	1 293	12 853	48 314	56 540	103 892	2 363
336611	Ship building & repairing .....	2	10	1	166	6 632	140	307	4 659	12 772	3 559	16 331	D
336612	Boat building .....	-	7	3	559	10 052	485	986	8 194	35 542	52 981	87 561	D

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>OHIO—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
336	Transportation equipment mfg—Con.												
3369	Other transportation equipment mfg .....	-	32	16	3 373	110 816	2 607	5 506	72 325	418 576	566 973	983 773	20 608
33699	Other transportation equipment mfg .....	-	32	16	3 373	110 816	2 607	5 506	72 325	418 576	566 973	983 773	20 608
336991	Motorcycle, bicycle, & parts mfg .....	-	15	4	g	D	D	D	D	D	D	D	6 088
336992	Military armored vehicle, tank, & tank component mfg .....	-	7	5	f	D	D	D	D	D	D	D	3 806
336999	All other transportation equipment mfg .....	-	10	7	1 011	35 994	841	1 986	27 555	156 856	229 996	387 258	10 714
337	Furniture & related product mfg .....	-	735	142	20 761	586 361	16 179	32 804	366 203	1 567 444	1 473 593	3 039 424	109 490
3371	Household & institutional furniture & kitchen cabinet mfg .....	-	533	54	13 643	371 345	11 014	22 574	233 710	1 083 097	1 048 180	2 127 373	83 854
33711	Wood kitchen cabinet & counter top mfg .....	-	311	26	6 471	173 600	5 243	11 433	125 026	514 111	442 305	956 766	39 725
337110	Wood kitchen cabinet & counter top mfg ...	-	311	26	6 471	173 600	5 243	11 433	125 026	514 111	442 305	956 766	39 725
33712	Household & institutional furniture mfg .....	-	222	28	7 172	197 745	5 771	11 141	108 684	568 986	605 875	1 170 607	44 129
337121	Upholstered household furniture mfg .....	-	36	4	1 099	33 704	847	1 699	22 927	64 607	50 430	114 482	D
337122	Nonupholstered wood household furniture mfg .....	-	141	13	4 021	117 587	3 345	6 628	60 017	360 569	344 282	702 819	26 669
337124	Metal household furniture mfg .....	-	8	5	1 435	31 785	1 102	1 844	16 075	109 904	185 526	293 923	D
337127	Institutional furniture mfg .....	1	29	5	567	13 481	442	895	8 876	31 968	23 262	55 186	1 316
3372	Office furniture (including fixtures) mfg .....	1	168	73	5 925	181 768	4 383	8 756	114 134	377 615	320 600	700 250	21 463
33721	Office furniture (including fixtures) mfg .....	1	168	73	5 925	181 768	4 383	8 756	114 134	377 615	320 600	700 250	21 463
337211	Wood office furniture mfg .....	3	18	4	236	6 034	182	322	3 912	12 903	9 739	22 645	792
337212	Custom architectural woodwork & millwork mfg .....	-	34	14	637	18 682	453	923	11 452	31 048	26 529	58 033	1 876
337214	Office furniture (except wood) mfg .....	-	5	2	278	5 978	224	293	4 234	13 787	10 939	24 906	706
337215	Showcase, partition, shelving, & locker mfg .....	1	111	53	4 774	151 074	3 524	7 218	94 536	319 877	273 393	594 666	18 089
3379	Other furniture related product mfg .....	-	34	15	1 193	33 248	782	1 474	18 359	106 732	104 813	211 801	4 173
33791	Mattress mfg .....	-	22	13	1 075	31 242	727	1 404	17 736	102 768	97 809	200 817	4 016
337910	Mattress mfg .....	-	22	13	1 075	31 242	727	1 404	17 736	102 768	97 809	200 817	4 016
33792	Blind & shade mfg .....	1	12	2	118	2 006	55	70	623	3 964	7 004	10 984	157
337920	Blind & shade mfg ....	1	12	2	118	2 006	55	70	623	3 964	7 004	10 984	157
339	Miscellaneous mfg .....	1	1 149	255	29 651	844 704	21 168	40 837	476 311	2 464 501	1 688 558	4 143 030	132 865
3391	Medical equipment & supplies mfg .....	1	468	90	11 209	341 126	7 503	14 120	169 743	1 089 619	592 725	1 664 730	49 033
33911	Medical equipment & supplies mfg .....	1	468	90	11 209	341 126	7 503	14 120	169 743	1 089 619	592 725	1 664 730	49 033
339111	Laboratory apparatus & furniture mfg .....	-	17	7	956	37 819	502	1 043	16 099	89 845	55 529	143 906	3 668
339112	Surgical & medical instrument mfg .....	3	51	21	2 615	87 235	1 657	3 026	37 763	279 947	128 161	407 989	15 732
339113	Surgical appliance & supplies mfg .....	-	86	42	5 570	168 433	3 847	7 400	86 301	619 407	356 261	959 155	24 299
339114	Dental equipment & supplies mfg .....	3	24	1	165	3 896	116	187	2 440	11 965	8 869	20 448	1 096
339115	Ophthalmic goods mfg .....	1	25	5	460	9 806	320	608	5 604	21 124	14 571	35 876	1 722
339116	Dental laboratories ...	6	265	14	1 443	33 937	1 061	1 856	21 536	67 331	29 334	97 356	2 516
3399	Other miscellaneous mfg ..	1	681	165	18 442	503 578	13 665	26 717	306 568	1 374 882	1 095 833	2 478 300	83 832
33991	Jewelry & silverware mfg .....	1	59	6	525	13 373	351	629	6 102	29 467	34 346	64 388	1 221
339911	Jewelry (except costume) mfg .....	1	32	3	243	7 358	142	238	2 948	16 442	25 319	42 708	228
339914	Costume jewelry & novelty mfg .....	2	18	2	202	3 832	158	303	2 288	9 432	6 109	15 233	731
33992	Sporting & athletic goods mfg .....	1	57	10	772	18 381	594	1 070	11 974	42 450	37 802	84 044	1 001
339920	Sporting & athletic goods mfg .....	1	57	10	772	18 381	594	1 070	11 974	42 450	37 802	84 044	1 001
33993	Doll, toy, & game mfg ...	-	45	19	3 521	86 935	2 660	5 202	62 485	330 608	228 510	554 772	18 777
339931	Doll & stuffed toy mfg .	-	9	4	259	4 551	197	334	2 717	23 484	12 062	35 196	D
339932	Game, toy, & children's vehicle mfg .....	-	36	15	3 262	82 384	2 463	4 868	59 768	307 124	216 448	519 576	D

**Table 1. Industry Statistics for the State: 1997—Con.**

[Includes data for industry groups and industries with 100 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>OHIO—Con.</b>												
	<b>Manufacturing—Con.</b>												
339	Miscellaneous mfg—Con.												
3399	Other miscellaneous mfg—Con.												
33994	Office supplies (except paper) mfg . . . . .	2	48	9	823	19 216	566	1 006	11 283	45 643	28 446	74 133	1 930
339942	Lead pencil & art good mfg . . . . .	4	7	2	256	5 543	193	344	3 631	14 963	9 306	24 599	368
339943	Marking device mfg . . .	4	28	4	380	9 118	248	449	5 513	19 078	9 141	27 995	1 113
339944	Carbon paper & inked ribbon mfg . . . . .	—	9	2	155	3 577	107	175	1 666	8 992	8 525	17 464	363
33995	Sign mfg . . . . .	2	261	59	4 636	128 376	3 148	6 332	68 227	252 014	208 204	461 345	12 290
339950	Sign mfg . . . . .	2	261	59	4 636	128 376	3 148	6 332	68 227	252 014	208 204	461 345	12 290
33999	All other miscellaneous mfg . . . . .	—	211	62	8 165	237 297	6 346	12 478	146 497	674 700	558 525	1 239 618	48 613
339991	Gasket, packing, & sealing device mfg . . .	—	43	18	2 689	91 455	2 099	4 168	58 578	241 793	143 753	396 712	12 959
339992	Musical instrument mfg . . . . .	—	23	7	596	16 710	510	1 009	13 183	48 810	13 588	63 001	622
339994	Broom, brush, & mop mfg . . . . .	—	32	17	2 042	59 363	1 560	3 053	36 377	196 530	144 221	331 052	9 938
339995	Burial casket mfg . . . .	—	9	1	160	7 873	96	203	3 128	10 288	32 971	43 301	1 521
339999	All other miscellaneous mfg . . . . .	1	99	19	2 642	61 141	2 057	3 998	34 778	175 415	222 392	402 227	23 183

<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>Industries with 100 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 100 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: 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.

**Table 2. Industry Statistics for Metropolitan Areas: 1997**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>CANTON—MASSILLON, OH MSA</b>												
	<b>Manufacturing . . . .</b>	—	<b>669</b>	<b>265</b>	<b>41 134</b>	<b>1 380 775</b>	<b>31 899</b>	<b>63 637</b>	<b>953 346</b>	<b>4 201 488</b>	<b>4 341 495</b>	<b>8 524 742</b>	<b>312 344</b>
311	Food mfg . . . . .	—	37	15	2 841	75 836	2 220	4 614	47 791	396 458	438 656	837 203	21 837
3114	Fruit & vegetable preserving & specialty food mfg . . . . .	—	4	1	f	D	D	D	D	D	D	D	D
31141	Frozen food mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
3115	Dairy product mfg . . . . .	2	8	5	656	19 076	496	1 010	10 919	65 581	133 042	198 027	2 230
31151	Dairy product (except frozen) mfg . . . . .	2	6	5	f	D	D	D	D	D	D	D	D
311513	Cheese mfg . . . . .	3	5	4	e	D	D	D	D	D	D	D	D
3116	Meat product mfg . . . . .	—	4	2	f	D	D	D	D	D	D	D	D
31161	Animal slaughtering & processing . . . . .	—	4	2	f	D	D	D	D	D	D	D	D
311612	Meat processed from carcasses . . . . .	—	2	2	f	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg . . . .	—	10	2	f	D	D	D	D	D	D	D	1 058
31181	Bread & bakery product mfg . . . . .	—	10	2	f	D	D	D	D	D	D	D	1 058
311812	Commercial bakeries . . . . .	—	3	2	e	D	D	D	D	D	D	D	D
3119	Other food mfg . . . . .	—	7	3	325	10 723	224	453	5 556	57 314	23 650	81 257	1 886
31191	Snack food mfg . . . . .	—	4	2	e	D	D	D	D	D	D	D	D
311919	Other snack food mfg . . . .	—	4	2	e	D	D	D	D	D	D	D	D
314	Textile product mills . . . . .	—	11	3	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>CANTON—MASSILLON, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
316	Leather & allied product mfg .	-	4	1	f	D	D	D	D	D	D	D	D
3169	Other leather & allied product mfg . . . . .	-	2	1	f	D	D	D	D	D	D	D	D
31699	Other leather & allied product mfg . . . . .	-	2	1	f	D	D	D	D	D	D	D	D
316999	All other leather good mfg . . . . .	-	1	1	e	D	D	D	D	D	D	D	D
321	Wood product mfg . . . . .	4	17	4	496	9 868	380	703	6 336	19 649	25 658	45 330	1 221
3219	Other wood product mfg . . .	8	13	3	e	D	D	D	D	D	D	D	751
322	Paper mfg . . . . .	-	18	14	989	34 821	771	1 704	24 182	94 044	125 227	219 679	31 670
3222	Converted paper product mfg . . . . .	-	16	12	f	D	D	D	D	D	D	D	D
32221	Paperboard container mfg . . . . .	-	9	8	511	19 397	394	853	13 726	57 243	83 634	142 239	16 600
322211	Corrugated & solid fiber box mfg . . . . .	-	6	5	353	15 267	282	676	10 679	41 683	68 241	111 230	D
323	Printing & related support activities . . . . .	2	63	17	1 914	60 224	1 403	3 032	37 958	115 061	97 546	209 546	20 170
3231	Printing & related support activities . . . . .	2	63	17	1 914	60 224	1 403	3 032	37 958	115 061	97 546	209 546	20 170
32311	Printing . . . . .	2	58	17	1 886	59 586	1 382	3 003	37 518	113 832	97 042	207 804	20 127
323110	Commercial lithographic printing . .	2	31	10	1 293	44 356	1 000	2 300	28 967	77 950	72 981	150 489	9 897
323113	Commercial screen printing . . . . .	-	9	3	376	9 880	246	493	5 838	23 835	14 916	36 126	9 206
324	Petroleum & coal products mfg . . . . .	-	5	1	e	D	D	D	D	D	D	D	D
3241	Petroleum & coal products mfg . . . . .	-	5	1	e	D	D	D	D	D	D	D	D
325	Chemical mfg . . . . .	1	26	13	837	28 099	335	605	8 411	71 989	87 697	160 640	5 293
3259	Other chemical product mfg . . . . .	1	9	4	312	9 804	168	268	3 854	28 193	41 853	70 889	2 000
32599	All other chemical product & preparation mfg . . . . .	1	8	4	e	D	D	D	D	D	D	D	D
325991	Custom compounding of purchased resin . . .	1	6	3	e	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	-	57	27	3 987	92 969	3 207	6 241	61 976	208 781	327 049	537 479	32 152
3261	Plastics product mfg . . . . .	-	43	21	2 175	45 346	1 846	3 419	32 556	123 535	110 334	231 455	23 560
32611	Unsupported plastics film, sheet, & bag mfg . .	-	5	3	264	8 066	222	470	4 567	17 341	31 073	48 128	2 185
32619	Other plastics product mfg . . . . .	-	26	15	1 684	33 214	1 442	2 568	24 697	98 065	74 281	170 211	21 115
326199	All other plastics product mfg . . . . .	-	26	15	1 684	33 214	1 442	2 568	24 697	98 065	74 281	170 211	21 115
3262	Rubber product mfg . . . . .	-	14	6	1 812	47 623	1 361	2 822	29 420	85 246	216 715	306 024	8 592
32629	Other rubber product mfg . . . . .	-	9	5	1 720	45 623	1 282	2 659	27 812	82 064	207 959	293 833	8 459
326299	All other rubber product mfg . . . . .	-	3	3	g	D	D	D	D	D	D	D	5 774
327	Nonmetallic mineral product mfg . . . . .	1	35	14	1 527	38 974	1 219	2 150	25 497	106 830	90 515	194 554	11 652
3271	Clay product & refractory mfg . . . . .	-	12	10	1 039	24 671	840	1 435	16 597	66 996	60 415	125 384	8 315
32712	Clay building material & refractories mfg . . . . .	-	9	7	912	20 998	747	1 302	14 633	54 529	49 799	104 376	D
327122	Ceramic wall & floor tile mfg . . . . .	1	4	3	f	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	-	34	18	8 687	377 410	7 350	15 232	292 834	1 540 931	1 243 097	2 774 883	59 620
3311	Iron & steel mills & ferroalloy mfg . . . . .	-	5	4	h	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg . . . . .	-	5	4	h	D	D	D	D	D	D	D	D
331111	Iron & steel mills . . . . .	-	4	3	h	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel . . . . .	-	8	3	g	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel . . . . .	-	2	1	e	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel . . . . .	-	2	1	e	D	D	D	D	D	D	D	D
33122	Rolling & drawing of purchased steel . . . . .	-	6	2	f	D	D	D	D	D	D	D	D
331221	Cold-rolled steel shape mfg . . . . .	-	6	2	f	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>CANTON—MASSILLON, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
331	Primary metal mfg—Con.												
3315	Foundries .....	-	18	10	2 721	96 917	2 383	4 898	69 431	222 111	122 163	339 988	10 644
33151	Ferrous metal foundries ..	-	10	6	1 493	47 869	1 265	2 552	36 080	88 141	43 488	131 762	5 468
331511	Iron foundries .....	-	4	2	e	D	D	D	D	D	D	D	D
331513	Steel foundries (except investment) .....	-	4	2	f	D	D	D	D	D	D	D	681
33152	Nonferrous metal foundries .....	-	8	4	1 228	49 048	1 118	2 346	33 351	133 970	78 675	208 226	5 176
331528	Other nonferrous foundries (except die-casting) .....	-	2	1	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	160	69	9 306	326 346	7 319	14 529	238 822	735 113	761 113	1 473 425	62 782
3321	Forging & stamping .....	-	14	12	2 067	70 233	1 507	2 898	54 339	164 251	171 655	339 191	13 140
33211	Forging & stamping .....	-	14	12	2 067	70 233	1 507	2 898	54 339	164 251	171 655	339 191	13 140
332111	Iron & steel forging .....	-	7	7	1 325	53 112	963	1 995	43 664	127 975	145 176	275 242	11 704
332112	Nonferrous forging .....	9	1	1	e	D	D	D	D	D	D	D	D
332114	Custom roll forming .....	-	2	1	e	D	D	D	D	D	D	D	D
3322	Cutlery & handtool mfg .....	-	6	3	f	D	D	D	D	D	D	D	D
33221	Cutlery & handtool mfg ..	-	6	3	f	D	D	D	D	D	D	D	D
332213	Saw blade & handsaw mfg .....	-	2	2	e	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg .....	1	15	5	289	9 047	193	374	4 980	21 744	19 066	40 566	765
3324	Boiler, tank, & shipping container mfg .....	-	6	4	597	19 540	479	1 014	14 034	46 997	96 137	136 645	D
33243	Metal can, box, & other metal container (light gauge) mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
332431	Metal can mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	69	23	1 691	51 466	1 234	2 468	32 448	104 890	60 367	161 383	4 390
33271	Machine shops .....	-	58	17	1 013	30 526	743	1 366	18 471	57 283	32 288	85 266	2 311
332710	Machine shops .....	-	58	17	1 013	30 526	743	1 366	18 471	57 283	32 288	85 266	2 311
33272	Turned product & screw, nut, & bolt mfg .....	-	11	6	678	20 940	491	1 102	13 977	47 607	28 079	76 117	2 079
332721	Precision turned product mfg .....	-	6	3	404	11 088	291	634	7 573	22 164	14 309	37 068	1 516
332722	Bolt, nut, screw, rivet, & washer mfg .....	-	5	3	274	9 852	200	468	6 404	25 443	13 770	39 049	563
3328	Coating, engraving, heat treating, & allied activities ..	-	25	10	939	32 001	741	1 263	22 773	43 735	159 988	194 676	9 719
33281	Coating, engraving, heat treating, & allied activities .....	-	25	10	939	32 001	741	1 263	22 773	43 735	159 988	194 676	9 719
332811	Metal heat treating .....	-	3	2	e	D	D	D	D	D	D	D	D
332813	Electroplating, plating, polishing, anodizing, & coloring .....	-	15	5	323	6 256	250	397	4 102	10 587	3 956	14 556	2 257
3329	Other fabricated metal product mfg .....	-	17	7	2 878	120 166	2 465	5 063	94 941	223 567	177 175	401 032	D
33299	All other fabricated metal product mfg .....	-	16	6	h	D	D	D	D	D	D	D	D
332991	Ball & roller bearing mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product mfg .....	-	5	3	e	D	D	D	D	D	D	D	D
333	Machinery mfg .....	2	86	31	2 218	75 446	1 496	2 965	42 896	167 769	135 338	305 135	8 360
3332	Industrial machinery mfg ..	5	18	9	622	22 542	371	809	10 900	44 285	38 520	82 004	2 642
33329	Other industrial machinery mfg .....	6	11	4	463	17 290	274	616	8 202	33 967	28 882	61 566	2 151
333298	All other industrial machinery mfg .....	8	8	3	347	12 032	191	448	5 329	25 940	22 519	48 486	D
3335	Metalworking machinery mfg .....	-	36	10	717	27 128	572	1 178	17 789	68 261	35 464	107 174	4 719
33351	Metalworking machinery mfg .....	-	36	10	717	27 128	572	1 178	17 789	68 261	35 464	107 174	4 719
333511	Industrial mold mfg .....	-	16	5	360	13 895	289	618	9 336	21 822	9 517	31 769	3 196
3339	Other general-purpose machinery mfg .....	-	23	7	712	21 544	441	801	11 579	45 780	52 495	97 498	773
33392	Material handling equipment mfg .....	-	5	3	374	11 508	235	410	6 453	23 732	36 560	61 002	444
333923	Overhead traveling crane, hoist, & monorail system mfg ..	-	2	1	e	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg .....	1	15	4	327	9 816	200	384	5 024	21 488	15 388	35 358	295

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>CANTON—MASSILLON, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
334	Computer & electronic product mfg.....	1	15	5	635	16 198	515	1 039	10 939	32 874	16 135	49 142	2 311
3345	Navigational, measuring, medical, & control instruments mfg.....	—	8	3	451	11 757	372	799	8 227	20 950	9 195	30 101	1 441
33451	Navigational, measuring, medical, & control instruments mfg.....	—	8	3	451	11 757	372	799	8 227	20 950	9 195	30 101	1 441
334512	Automatic environmental control mfg.....	—	1	1	e	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg.....	—	16	11	3 871	142 404	2 681	5 331	88 764	436 393	201 243	651 231	29 747
3352	Household appliance mfg..	—	2	2	h	D	D	D	D	D	D	D	D
33521	Small electrical appliance mfg.....	—	2	2	h	D	D	D	D	D	D	D	D
335212	Household vacuum cleaner mfg.....	—	1	1	h	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	3	10	6	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg.....	3	10	6	f	D	D	D	D	D	D	D	D
335313	Switchgear & switchboard apparatus mfg.....	—	3	1	e	D	D	D	D	D	D	D	D
335314	Relay & industrial control mfg.....	2	6	4	336	10 602	233	402	5 239	11 996	22 862	35 029	1 373
336	Transportation equipment mfg.....	—	24	13	1 524	43 904	1 110	2 002	26 173	86 708	108 251	192 762	11 430
3363	Motor vehicle parts mfg ...	—	16	10	1 268	35 534	902	1 489	20 447	72 188	75 390	145 441	10 694
33631	Motor vehicle gasoline engine & engine parts mfg.....	—	5	2	260	6 707	178	330	3 735	12 904	16 774	29 856	1 099
336312	Gasoline engine & engine parts mfg....	—	4	2	e	D	D	D	D	D	D	D	D
33633	Motor vehicle steering & suspension component (except spring) mfg....	—	1	1	e	D	D	D	D	D	D	D	D
336330	Motor vehicle steering & suspension component (except spring) mfg.....	—	1	1	e	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg.....	—	2	2	e	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg.....	—	2	2	e	D	D	D	D	D	D	D	D
337	Furniture & related product mfg.....	—	22	4	808	20 766	647	1 132	14 418	44 495	51 313	95 426	3 183
3371	Household & institutional furniture & kitchen cabinet mfg.....	—	17	1	e	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) mfg.....	—	5	3	f	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) mfg.....	—	5	3	f	D	D	D	D	D	D	D	D
337215	Showcase, partition, shelving, & locker mfg.....	—	3	2	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg.....	4	26	5	395	9 523	311	610	6 385	18 106	12 332	30 378	D
3399	Other miscellaneous mfg ..	3	16	5	324	7 511	260	515	5 164	13 033	9 932	22 837	D
33995	Sign mfg.....	4	8	4	264	5 898	205	410	3 777	10 386	8 700	18 911	D
339950	Sign mfg.....	4	8	4	264	5 898	205	410	3 777	10 386	8 700	18 911	D
<b>31-33</b>	<b>CINCINNATI—HAMILTON, OH—KY—IN CMSA</b>												
	<b>Manufacturing ....</b>	<b>—</b>	<b>2 686</b>	<b>1 045</b>	<b>139 924</b>	<b>5 357 729</b>	<b>93 955</b>	<b>191 998</b>	<b>3 057 171</b>	<b>18 883 613</b>	<b>16 469 729</b>	<b>35 239 117</b>	<b>1 463 667</b>
	Cincinnati—Hamilton, OH—KY—IN CMSA (IN Part) .....	—	40	14	2 261	87 160	1 607	2 872	53 481	200 394	129 703	305 991	15 556
	Cincinnati—Hamilton, OH—KY—IN CMSA (KY Part) .....	1	410	171	20 072	677 286	14 735	30 367	419 162	2 233 902	2 062 844	4 275 964	161 260
	Cincinnati—Hamilton, OH—KY—IN CMSA (OH Part) .....	—	2 236	860	117 591	4 593 283	77 613	158 759	2 584 528	16 449 317	14 277 182	30 657 162	1 286 851
311	Food mfg.....	1	156	66	j	D	D	D	D	D	D	D	114 135
312	Beverage & tobacco product mfg.....	—	17	13	h	D	D	D	D	D	D	D	D
313	Textile mills.....	3	15	9	f	D	D	D	D	D	D	D	D
314	Textile product mills.....	—	48	15	g	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>CINCINNATI-HAMILTON, OH-KY-IN CMSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
315	Apparel mfg .....	2	29	12	g	D	D	D	D	D	D	D	D
321	Wood product mfg .....	1	72	18	g	D	D	D	D	D	D	D	D
322	Paper mfg .....	1	103	71	8 810	313 604	6 665	14 634	215 767	882 076	1 008 549	1 887 737	89 233
323	Printing & related support activities.....	1	393	116	10 814	369 598	7 805	15 484	225 743	902 215	521 822	1 419 311	54 918
324	Petroleum & coal products mfg .....	—	38	8	g	D	D	D	D	D	D	D	D
325	Chemical mfg .....	—	152	71	9 633	431 555	5 808	11 709	235 572	2 633 385	2 428 589	5 040 623	172 010
326	Plastics & rubber products mfg .....	1	140	75	9 036	274 527	6 916	13 781	173 554	731 575	683 985	1 413 317	91 751
327	Nonmetallic mineral product mfg .....	1	111	42	2 786	95 365	2 139	4 204	64 893	269 394	239 083	510 028	25 724
331	Primary metal mfg .....	—	40	26	i	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	1	535	188	18 623	623 307	13 784	27 607	407 199	1 394 083	1 186 888	2 588 580	113 506
333	Machinery mfg .....	—	288	133	20 476	842 261	11 313	23 183	383 084	2 018 845	1 663 052	3 583 195	122 495
334	Computer & electronic product mfg .....	1	85	34	h	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	—	63	35	5 710	192 502	3 948	8 324	107 711	516 102	437 358	959 982	D
336	Transportation equipment mfg .....	—	74	43	14 925	870 824	9 140	18 433	429 461	2 670 791	3 751 560	6 499 887	D
337	Furniture & related product mfg .....	1	117	26	2 365	63 427	1 701	3 181	37 445	144 366	124 860	271 190	5 900
339	Miscellaneous mfg .....	1	205	42	5 327	156 781	3 571	6 912	78 515	442 440	308 165	739 313	27 121
	<b>Cincinnati, OH-KY-IN PMSA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>—</b>	<b>2 290</b>	<b>890</b>	<b>119 533</b>	<b>4 538 513</b>	<b>78 998</b>	<b>159 800</b>	<b>2 494 921</b>	<b>14 558 177</b>	<b>14 203 781</b>	<b>28 671 346</b>	<b>1 267 606</b>
	Cincinnati, OH-KY-IN PMSA (IN Part).....	—	40	14	2 261	87 160	1 607	2 872	53 481	200 394	129 703	305 991	15 556
	Cincinnati, OH-KY-IN PMSA (KY Part) .....	1	410	171	20 072	677 286	14 735	30 367	419 162	2 233 902	2 062 844	4 275 964	161 260
	Cincinnati, OH-KY-IN PMSA (OH Part).....	—	1 840	705	97 200	3 774 067	62 656	126 561	2 022 278	12 123 881	12 011 234	24 089 391	1 090 790
311	Food mfg .....	1	139	62	10 102	322 426	6 324	13 455	183 844	1 787 723	1 479 877	3 240 819	113 098
3112	Grain & oilseed milling ....	—	4	3	e	D	D	D	D	D	D	D	D
31122	Starch & vegetable fats & oils mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
311225	Fats & oils refining & blending.....	—	1	1	e	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg .....	3	9	8	2 048	57 313	1 592	3 419	39 713	174 543	274 311	448 738	26 064
31141	Frozen food mfg .....	4	4	4	1 538	43 037	1 170	2 653	28 862	119 316	214 415	333 742	24 892
311412	Frozen specialty food mfg .....	4	4	4	1 538	43 037	1 170	2 653	28 862	119 316	214 415	333 742	24 892
31142	Fruit & vegetable canning, pickling, & drying .....	—	5	4	510	14 276	422	766	10 851	55 227	59 896	114 996	1 172
311421	Fruit & vegetable canning .....	—	5	4	510	14 276	422	766	10 851	55 227	59 896	114 996	1 172
3115	Dairy product mfg .....	2	7	4	586	19 777	299	703	9 713	57 838	142 051	200 505	D
31151	Dairy product (except frozen) mfg .....	—	4	2	e	D	D	D	D	D	D	D	D
311511	Fluid milk mfg .....	—	3	2	e	D	D	D	D	D	D	D	D
3116	Meat product mfg .....	1	22	11	2 320	72 415	1 302	2 826	40 845	261 469	268 933	526 216	12 700
31161	Animal slaughtering & processing.....	1	22	11	2 320	72 415	1 302	2 826	40 845	261 469	268 933	526 216	12 700
311612	Meat processed from carcasses .....	—	12	6	1 998	66 854	1 052	2 409	36 925	244 454	238 764	479 018	D



**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CINCINNATI—HAMILTON, OH—KY—IN CMSA—Con.</b>												
	<b>Cincinnati, OH—KY—IN PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
311	Food mfg—Con.												
3118	Bakeries & tortilla mfg . . . . .	—	63	19	2 492	77 807	1 621	3 272	49 666	767 568	216 374	982 176	9 788
31181	Bread & bakery product mfg . . . . .	—	56	13	1 373	33 100	710	1 298	15 302	108 373	49 738	158 225	1 975
311811	Retail bakeries . . . . .	1	41	7	436	5 675	267	355	3 663	11 862	5 098	16 982	580
311812	Commercial bakeries . . . . .	—	15	6	937	27 425	443	943	11 639	96 511	44 640	141 243	1 395
31182	Cookie, cracker, & pasta mfg . . . . .	—	7	6	1 119	44 707	911	1 974	34 364	659 195	166 636	823 951	7 813
311821	Cookie & cracker mfg . . . . .	—	5	5	g	D	D	D	D	D	D	D	D
3119	Other food mfg . . . . .	3	23	14	1 942	66 339	989	2 242	26 609	220 315	307 210	525 553	39 322
31193	Flavoring syrup & concentrate mfg . . . . .	5	4	2	440	18 390	166	434	8 417	100 156	154 182	253 483	D
311930	Flavoring syrup & concentrate mfg . . . . .	5	4	2	440	18 390	166	434	8 417	100 156	154 182	253 483	D
31194	Seasoning & dressing mfg . . . . .	—	7	6	706	26 576	273	605	6 505	59 371	79 992	138 621	25 422
311941	Mayonnaise, dressing, & other prepared sauce mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
311942	Spice & extract mfg . . . . .	1	5	4	e	D	D	D	D	D	D	D	D
31199	All other food mfg . . . . .	5	8	3	521	12 776	411	880	8 809	34 152	50 114	84 192	3 500
311999	All other miscellaneous food mfg . . . . .	9	6	2	e	D	D	D	D	D	D	D	D
312	Beverage & tobacco product mfg . . . . .	—	15	12	g	D	D	D	D	D	D	D	D
3121	Beverage mfg . . . . .	—	15	12	g	D	D	D	D	D	D	D	D
31211	Soft drink & ice mfg . . . . .	—	6	5	g	D	D	D	D	D	D	D	D
312111	Soft drink mfg . . . . .	—	4	3	961	34 504	391	882	14 765	368 051	265 894	634 974	D
31214	Distilleries . . . . .	—	3	3	f	D	D	D	D	D	D	D	D
312140	Distilleries . . . . .	—	3	3	f	D	D	D	D	D	D	D	D
313	Textile mills . . . . .	3	14	9	f	D	D	D	D	D	D	D	D
3132	Fabric mills . . . . .	3	7	6	f	D	D	D	D	D	D	D	D
31322	Narrow fabric mills & schiffli machine embroidery . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
31323	Nonwoven fabric mills . . . . .	5	4	4	e	D	D	D	D	D	D	D	D
313230	Nonwoven fabric mills . . . . .	5	4	4	e	D	D	D	D	D	D	D	D
314	Textile product mills . . . . .	—	42	12	993	25 230	619	1 242	13 673	39 367	58 586	103 085	1 385
3141	Textile furnishings mills . . . . .	—	17	5	e	D	D	D	D	D	D	D	522
31412	Curtain & linen mills . . . . .	—	16	5	e	D	D	D	D	D	D	D	D
314129	Other household textile product mills . . . . .	—	6	4	409	10 356	239	491	4 688	16 383	29 908	50 688	450
3149	Other textile product mills . . . . .	1	25	7	f	D	D	D	D	D	D	D	863
31499	All other textile product mills . . . . .	—	16	4	357	9 147	223	453	6 203	15 930	22 259	38 926	535
314999	All other miscellaneous textile product mills . . . . .	—	16	4	357	9 147	223	453	6 203	15 930	22 259	38 926	535
315	Apparel mfg . . . . .	—	27	11	801	13 311	608	961	9 009	43 529	78 944	121 859	D
3152	Cut & sew apparel mfg . . . . .	—	18	8	583	9 175	462	678	6 552	35 190	70 303	104 775	D
31522	Men's & boys' cut & sew apparel mfg . . . . .	—	8	6	478	7 143	382	551	5 459	30 850	64 083	94 196	878
315222	Men's & boys' cut & sew suit, coat, & overcoat mfg . . . . .	—	3	2	e	D	D	D	D	D	D	D	D
321	Wood product mfg . . . . .	3	57	13	g	D	D	D	D	D	D	D	D
3219	Other wood product mfg . . . . .	3	46	10	g	D	D	D	D	D	D	D	D
32191	Millwork . . . . .	2	20	3	266	6 253	211	433	4 878	12 324	18 512	30 748	D
32199	All other wood product mfg . . . . .	4	12	5	637	13 971	507	892	9 611	27 106	26 794	54 440	1 599
321999	All other miscellaneous wood product mfg . . . . .	7	11	4	f	D	D	D	D	D	D	D	D
322	Paper mfg . . . . .	2	73	51	5 215	164 903	4 114	9 054	112 929	440 170	582 972	1 021 788	47 982
3221	Pulp, paper, & paperboard mills . . . . .	—	5	5	388	14 734	302	684	10 876	51 205	35 692	85 762	2 338
32213	Paperboard mills . . . . .	—	3	3	e	D	D	D	D	D	D	D	D
322130	Paperboard mills . . . . .	—	3	3	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CINCINNATI—HAMILTON, OH—KY—IN CMSA—Con.</b>												
	<b>Cincinnati, OH—KY—IN PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
322	Paper mfg—Con.												
3222	Converted paper product mfg . . . . .	2	68	46	4 827	150 169	3 812	8 370	102 053	388 965	547 280	936 026	45 644
32221	Paperboard container mfg . . . . .	1	36	28	2 604	85 626	2 016	4 353	56 114	216 646	308 482	527 467	28 567
322211	Corrugated & solid fiber box mfg . . . . .	—	16	13	1 196	40 971	856	1 820	23 745	101 483	158 653	256 590	17 530
322212	Folding paperboard box mfg . . . . .	3	10	8	1 042	33 363	874	1 956	25 225	82 342	99 525	187 695	7 303
322214	Fiber can, tube, drum, & similar products mfg . . . . .	—	7	5	279	9 106	215	455	5 767	29 118	43 455	72 333	D
32222	Paper bag & coated & treated paper mfg . . . . .	3	12	7	1 562	46 601	1 292	3 121	34 860	127 368	181 205	306 400	14 105
322224	Uncoated paper & multiwall bag mfg . . . . .	3	3	3	g	D	D	D	D	D	D	D	D
32229	Other converted paper product mfg . . . . .	2	13	8	420	11 883	324	531	6 494	26 981	30 918	58 274	1 520
322299	All other converted paper product mfg . . . . .	2	13	8	420	11 883	324	531	6 494	26 981	30 918	58 274	1 520
323	Printing & related support activities . . . . .	1	350	102	10 100	346 741	7 271	14 460	210 618	835 607	482 910	1 314 479	51 924
3231	Printing & related support activities . . . . .	1	350	102	10 100	346 741	7 271	14 460	210 618	835 607	482 910	1 314 479	51 924
32311	Printing . . . . .	1	300	81	8 828	299 063	6 356	12 606	179 485	742 138	460 561	1 198 650	44 401
323110	Commercial												
323111	lithographic printing . . . . .	1	138	35	5 249	181 061	3 839	7 666	110 998	455 775	237 002	692 369	21 831
323111	Commercial gravure printing . . . . .	5	2	2	e	D	D	D	D	D	D	D	D
323112	Commercial flexographic printing . . . . .	—	22	11	663	23 483	423	794	10 810	44 797	74 583	118 720	7 739
323113	Commercial screen printing . . . . .	—	28	9	895	25 981	644	1 310	14 805	77 286	64 530	138 702	3 875
323114	Quick printing . . . . .	2	60	6	430	10 313	308	487	6 074	21 182	10 692	31 865	1 189
323116	Manifold business form printing . . . . .	3	10	7	621	21 153	410	894	11 437	47 399	28 686	76 044	1 060
323117	Book printing . . . . .	—	6	3	e	D	D	D	D	D	D	D	D
32312	Support activities for printing . . . . .	1	50	21	1 272	47 678	915	1 854	31 133	93 469	22 349	115 829	7 523
323122	Prepress services . . . . .	1	43	19	1 079	43 243	743	1 513	27 422	85 210	20 929	106 379	6 683
324	Petroleum & coal products mfg . . . . .	—	35	8	1 141	47 714	699	1 508	25 970	133 932	350 114	485 518	8 114
3241	Petroleum & coal products mfg . . . . .	—	35	8	1 141	47 714	699	1 508	25 970	133 932	350 114	485 518	8 114
32412	Asphalt paving, roofing, & saturated materials mfg . . . . .	—	29	6	508	19 814	381	932	13 868	53 433	204 153	259 714	4 357
324122	Asphalt shingle & coating materials mfg . . . . .	—	5	3	337	13 602	262	677	10 467	24 782	76 438	100 708	2 331
32419	Other petroleum & coal products mfg . . . . .	—	6	2	633	27 900	318	576	12 102	80 499	145 961	225 804	3 757
324191	Petroleum lubricating oil & grease mfg . . . . .	—	6	2	633	27 900	318	576	12 102	80 499	145 961	225 804	3 757
325	Chemical mfg . . . . .	—	130	65	9 182	413 196	5 554	11 162	226 692	2 536 562	2 355 482	4 875 290	158 466
3251	Basic chemical mfg . . . . .	—	27	14	2 706	127 553	1 788	3 603	78 473	543 368	649 586	1 192 412	68 707
32513	Dye & pigment mfg . . . . .	2	5	4	1 056	49 219	709	1 595	32 245	234 015	144 417	380 450	D
325132	Synthetic organic dye & pigment mfg . . . . .	2	5	4	1 056	49 219	709	1 595	32 245	234 015	144 417	380 450	D
32518	Other basic inorganic chemical mfg . . . . .	—	8	4	304	14 302	205	427	8 858	73 958	71 993	145 709	17 259
325188	All other basic inorganic chemical mfg . . . . .	—	8	4	304	14 302	205	427	8 858	73 958	71 993	145 709	17 259
32519	Other basic organic chemical mfg . . . . .	—	7	5	1 299	62 321	831	1 491	35 909	224 153	429 131	651 027	31 565
325199	All other basic organic chemical mfg . . . . .	—	5	4	g	D	D	D	D	D	D	D	D
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg . . . . .	—	4	3	872	45 399	611	1 308	29 621	168 382	193 499	366 065	12 239
32521	Resin & synthetic rubber mfg . . . . .	—	4	3	872	45 399	611	1 308	29 621	168 382	193 499	366 065	12 239
325211	Plastics material & resin mfg . . . . .	—	3	3	f	D	D	D	D	D	D	D	D
3254	Pharmaceutical & medicine mfg . . . . .	—	9	4	994	38 293	404	751	12 613	395 344	187 902	571 698	8 012
32541	Pharmaceutical & medicine mfg . . . . .	—	9	4	994	38 293	404	751	12 613	395 344	187 902	571 698	8 012
325412	Pharmaceutical preparation mfg . . . . .	—	7	4	f	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CINCINNATI—HAMILTON, OH—KY—IN CMSA—Con.</b>												
	<b>Cincinnati, OH—KY—IN PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
325	Chemical mfg—Con.												
3255	Paint, coating, & adhesive mfg . . . . .	—	25	13	991	39 685	472	898	14 568	124 588	170 031	297 613	22 236
32551	Paint & coating mfg . . . . .	—	17	10	684	27 260	327	612	9 449	83 669	112 556	198 923	19 858
325510	Paint & coating mfg . . . . .	—	17	10	684	27 260	327	612	9 449	83 669	112 556	198 923	19 858
32552	Adhesive mfg . . . . .	—	8	3	307	12 425	145	286	5 119	40 919	57 475	98 690	2 378
325520	Adhesive mfg . . . . .	—	8	3	307	12 425	145	286	5 119	40 919	57 475	98 690	2 378
3256	Soap, cleaning compound, & toilet preparation mfg . . . . .	1	24	16	h	D	D	D	D	D	D	D	D
32561	Soap & cleaning compound mfg . . . . .	—	20	12	g	D	D	D	D	D	D	D	D
325611	Soap & other detergent mfg . . . . .	—	10	7	1 235	59 376	988	1 843	44 921	454 832	668 175	1 113 059	23 314
325612	Polish & other sanitation good mfg . . . . .	—	7	3	e	D	D	D	D	D	D	D	D
32562	Toilet preparation mfg . . . . .	2	4	4	g	D	D	D	D	D	D	D	D
325620	Toilet preparation mfg . . . . .	2	4	4	g	D	D	D	D	D	D	D	D
3259	Other chemical product mfg . . . . .	1	38	14	f	D	D	D	D	D	D	D	D
32591	Printing ink mfg . . . . .	1	18	8	528	18 314	209	436	6 922	40 870	54 984	95 101	3 167
325910	Printing ink mfg . . . . .	1	18	8	528	18 314	209	436	6 922	40 870	54 984	95 101	3 167
32599	All other chemical product & preparation mfg . . . . .	2	19	6	e	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	1	113	59	7 218	221 100	5 553	11 053	141 275	612 965	585 014	1 200 308	80 565
3261	Plastics product mfg . . . . .	1	99	54	6 856	210 669	5 282	10 504	134 724	589 315	563 929	1 155 358	80 008
32611	Unsupported plastics film, sheet, & bag mfg . . . . .	—	10	6	641	25 600	473	991	15 210	81 954	80 982	163 102	D
326113	Unsupported plastics film & sheet (except packaging) mfg . . . . .	—	7	3	345	16 236	238	509	8 711	60 410	58 653	119 151	D
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg . . . . .	—	5	2	e	D	D	D	D	D	D	D	D
326121	Unsupported plastics profile shape mfg . . . . .	—	4	1	e	D	D	D	D	D	D	D	D
32613	Laminated plastics plate, sheet, & shape mfg . . . . .	—	5	1	f	D	D	D	D	D	D	D	D
326130	Laminated plastics plate, sheet, & shape mfg . . . . .	—	5	1	f	D	D	D	D	D	D	D	D
32616	Plastics bottle mfg . . . . .	—	6	6	862	26 369	763	1 649	21 911	91 680	87 060	177 534	12 235
326160	Plastics bottle mfg . . . . .	—	6	6	862	26 369	763	1 649	21 911	91 680	87 060	177 534	12 235
32619	Other plastics product mfg . . . . .	3	60	33	3 903	109 958	2 988	5 670	66 353	255 404	248 069	502 415	27 845
326199	All other plastics product mfg . . . . .	3	59	32	h	D	D	D	D	D	D	D	D
3262	Rubber product mfg . . . . .	—	14	5	362	10 431	271	549	6 551	23 650	21 085	44 950	557
327	Nonmetallic mineral product mfg . . . . .	1	89	36	2 455	84 815	1 868	3 650	56 484	236 548	209 497	447 332	22 638
3272	Glass & glass product mfg . . . . .	—	18	6	509	17 657	412	783	12 947	49 438	24 627	73 752	4 633
32721	Glass & glass product mfg . . . . .	—	18	6	509	17 657	412	783	12 947	49 438	24 627	73 752	4 633
3273	Cement & concrete product mfg . . . . .	2	48	18	1 050	35 762	803	1 545	23 102	90 799	85 510	176 368	10 575
32732	Ready-mix concrete mfg . . . . .	3	31	14	689	22 653	531	1 042	15 926	55 380	67 416	123 138	7 816
327320	Ready-mix concrete mfg . . . . .	3	31	14	689	22 653	531	1 042	15 926	55 380	67 416	123 138	7 816
32739	Other concrete product mfg . . . . .	1	12	3	288	10 478	213	387	5 585	25 410	12 876	38 290	1 671
327390	Other concrete product mfg . . . . .	1	12	3	288	10 478	213	387	5 585	25 410	12 876	38 290	1 671
3274	Lime & gypsum product mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
32741	Lime mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
327410	Lime mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
3279	Other nonmetallic mineral product mfg . . . . .	—	14	8	442	14 812	294	546	7 746	50 271	50 241	100 706	3 504
32799	All other nonmetallic mineral product mfg . . . . .	—	11	8	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CINCINNATI—HAMILTON, OH—KY—IN CMSA—Con.</b>												
	<b>Cincinnati, OH—KY—IN PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
331	Primary metal mfg . . . . .	-	32	19	2 914	105 765	2 090	4 481	70 728	272 565	275 948	538 374	16 783
3311	Iron & steel mills & ferroalloy mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
331111	Iron & steel mills . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing . . . . .	-	4	2	304	11 009	159	415	5 109	20 114	33 875	55 347	D
33142	Copper rolling, drawing, extruding, & alloying . . . . .	-	2	1	e	D	D	D	D	D	D	D	D
3315	Foundries . . . . .	-	24	14	1 648	52 738	1 255	2 625	36 958	98 411	51 175	150 468	5 864
33151	Ferrous metal foundries . . . . .	-	5	5	860	29 191	679	1 378	21 762	54 789	28 627	84 138	4 067
331511	Iron foundries . . . . .	-	4	4	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries . . . . .	-	19	9	788	23 547	576	1 159	15 196	43 622	22 548	66 330	1 797
331524	Aluminum foundries (except die-casting) . . . . .	-	12	8	709	21 892	510	1 037	13 946	39 829	20 456	60 415	D
332	Fabricated metal product mfg . . . . .	-	446	161	16 330	539 133	12 104	23 786	352 623	1 179 584	976 738	2 163 816	88 268
3321	Forging & stamping . . . . .	1	20	10	869	24 910	681	1 378	17 920	54 100	70 458	123 695	9 726
33211	Forging & stamping . . . . .	1	20	10	869	24 910	681	1 378	17 920	54 100	70 458	123 695	9 726
332116	Metal stamping . . . . .	1	16	8	797	22 648	628	1 284	16 488	50 260	68 492	117 931	D
3322	Cutlery & handtool mfg . . . . .	-	14	4	401	13 824	225	447	6 271	29 453	20 405	49 647	D
33221	Cutlery & handtool mfg . . . . .	-	14	4	401	13 824	225	447	6 271	29 453	20 405	49 647	D
332212	Hand & edge tool mfg . . . . .	-	13	3	e	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg . . . . .	-	95	36	3 488	114 184	2 492	5 037	71 933	264 023	223 338	487 640	17 934
33231	Plate work & fabricated structural product mfg . . . . .	-	37	14	901	31 267	591	1 186	17 793	75 218	87 867	163 486	4 458
332312	Fabricated structural metal mfg . . . . .	-	25	9	610	20 555	426	839	12 757	51 957	65 636	117 748	3 428
33232	Ornamental & architectural metal products mfg . . . . .	-	58	22	2 587	82 917	1 901	3 851	54 140	188 805	135 471	324 154	13 476
332321	Metal window & door mfg . . . . .	-	9	4	1 265	40 972	944	1 963	26 980	105 860	81 835	187 470	6 828
332322	Sheet metal work mfg . . . . .	1	36	16	1 146	36 297	849	1 659	24 011	68 733	42 304	111 287	6 171
3324	Boiler, tank, & shipping container mfg . . . . .	-	13	9	2 035	66 641	1 731	3 007	53 699	107 295	153 392	271 182	D
33242	Metal tank (heavy gauge) mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
332420	Metal tank (heavy gauge) mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
33243	Metal can, box, & other metal container (light gauge) mfg . . . . .	-	10	7	g	D	D	D	D	D	D	D	D
332431	Metal can mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
332439	Other metal container mfg . . . . .	1	8	5	454	13 096	327	673	7 870	32 426	55 354	88 218	D
3325	Hardware mfg . . . . .	-	12	7	619	18 363	502	903	12 035	30 944	45 497	77 321	D
33251	Hardware mfg . . . . .	-	12	7	619	18 363	502	903	12 035	30 944	45 497	77 321	D
332510	Hardware mfg . . . . .	-	12	7	619	18 363	502	903	12 035	30 944	45 497	77 321	D
3326	Spring & wire product mfg . . . . .	1	10	5	1 430	48 820	1 045	1 760	32 197	101 003	151 325	251 719	7 142
33261	Spring & wire product mfg . . . . .	1	10	5	1 430	48 820	1 045	1 760	32 197	101 003	151 325	251 719	7 142
332612	Spring (light gauge) mfg . . . . .	3	3	2	e	D	D	D	D	D	D	D	D
332618	Other fabricated wire product mfg . . . . .	-	5	3	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	1	182	44	3 971	130 684	2 933	6 294	87 262	309 225	128 979	433 855	20 566
33271	Machine shops . . . . .	-	155	28	2 539	90 133	1 951	4 250	60 970	217 438	76 151	289 446	15 565
332710	Machine shops . . . . .	-	155	28	2 539	90 133	1 951	4 250	60 970	217 438	76 151	289 446	15 565
33272	Turned product & screw, nut, & bolt mfg . . . . .	1	27	16	1 432	40 551	982	2 044	26 292	91 787	52 828	144 409	5 001
332721	Precision turned product mfg . . . . .	-	21	11	1 138	31 178	750	1 608	19 418	72 383	34 679	106 978	2 584
332722	Bolt, nut, screw, rivet, & washer mfg . . . . .	4	6	5	294	9 373	232	436	6 874	19 404	18 149	37 431	2 417

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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)
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	<b>CINCINNATI—HAMILTON, OH—KY—IN CMSA—Con.</b>												
	<b>Cincinnati, OH—KY—IN PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg—Con.												
3328	Coating, engraving, heat treating, & allied activities .	-	55	24	1 468	47 771	1 084	2 091	29 797	112 712	57 707	170 216	8 331
33281	Coating, engraving, heat treating, & allied activities . . . . .	-	55	24	1 468	47 771	1 084	2 091	29 797	112 712	57 707	170 216	8 331
332811	Metal heat treating . . . . .	-	15	9	364	11 815	269	382	7 509	36 116	4 244	40 344	1 587
332812	Metal coating/engraving (exc jewelry/silverware)/allied services . . . . .	-	20	7	607	18 215	445	928	12 383	33 552	31 635	65 031	3 790
332813	Electroplating, plating, polishing, anodizing, & coloring . . . . .	-	20	8	497	17 741	370	781	9 905	43 044	21 828	64 841	2 954
3329	Other fabricated metal product mfg . . . . .	2	45	22	2 049	73 936	1 411	2 869	41 509	170 829	125 637	298 541	16 848
33291	Metal valve mfg . . . . .	1	13	11	1 339	46 367	884	1 770	24 675	119 034	96 963	218 333	13 109
332911	Industrial valve mfg . . . . .	1	7	7	856	30 559	522	1 039	14 943	74 308	71 934	148 550	3 541
332912	Fluid power valve & hose fitting mfg . . . . .	-	3	2	e	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg . . . . .	4	32	11	710	27 569	527	1 099	16 834	51 795	28 674	80 208	3 739
332999	All other miscellaneous fabricated metal product mfg . . . . .	1	19	7	355	12 679	237	455	5 918	22 184	14 346	36 482	1 491
333	Machinery mfg . . . . .	-	245	112	18 628	769 395	10 340	21 275	348 789	1 891 638	1 482 643	3 272 013	112 957
3331	Agriculture, construction, & mining machinery mfg . . . . .	1	10	3	345	11 236	268	482	6 923	29 348	23 241	54 196	D
3332	Industrial machinery mfg . . . . .	-	41	21	2 677	115 458	1 260	2 525	49 101	427 555	276 178	707 310	14 136
33322	Plastics & rubber industry machinery mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
333220	Plastics & rubber industry machinery mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
33329	Other industrial machinery mfg . . . . .	1	37	18	g	D	D	D	D	D	D	D	D
333293	Printing machinery & equipment mfg . . . . .	-	7	4	e	D	D	D	D	D	D	D	D
333298	All other industrial machinery mfg . . . . .	1	19	10	737	28 916	451	1 020	14 757	54 198	42 618	101 434	2 678
3333	Commercial & service industry machinery mfg . . . . .	-	24	9	2 045	68 681	1 424	3 026	39 234	164 459	96 235	262 673	D
33331	Commercial & service industry machinery mfg . . . . .	-	24	9	2 045	68 681	1 424	3 026	39 234	164 459	96 235	262 673	D
333312	Commercial laundry, drycleaning, & pressing machine mfg . . . . .	-	2	1	e	D	D	D	D	D	D	D	D
333314	Optical instrument & lens mfg . . . . .	-	3	1	g	D	D	D	D	D	D	D	D
333319	Other commercial & service industry machinery mfg . . . . .	2	14	4	468	14 957	302	641	8 808	34 559	35 277	68 934	D
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	-	12	6	942	30 792	616	1 323	14 473	83 254	44 251	127 823	2 129
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	-	12	6	942	30 792	616	1 323	14 473	83 254	44 251	127 823	2 129
333415	AC & warm air heating & commercial/industrial refrig equip mfg . . . . .	-	4	3	e	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg . . . . .	-	81	29	5 768	259 584	2 858	5 612	110 268	583 536	535 789	1 008 087	50 660
33351	Metalworking machinery mfg . . . . .	-	81	29	5 768	259 584	2 858	5 612	110 268	583 536	535 789	1 008 087	50 660
333512	Machine tool (metal cutting types) mfg . . . . .	-	8	8	3 430	159 085	1 397	2 492	53 709	434 967	415 948	742 101	D
333513	Machine tool (metal forming types) mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
333514	Special die & tool, die set, jig, & fixture mfg . . . . .	1	35	8	501	15 167	359	613	10 134	29 454	19 018	47 770	3 564
333515	Cutting tool & machine tool accessory mfg . . . . .	2	22	6	376	13 615	260	575	7 820	25 474	11 729	38 121	3 181
333516	Rolling mill machinery & equipment mfg . . . . .	-	1	1	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CINCINNATI—HAMILTON, OH—KY—IN CMSA—Con.</b>												
	<b>Cincinnati, OH—KY—IN PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
333	Machinery mfg—Con.												
3336	Engine, turbine, & power transmission equipment mfg .....	3	8	5	637	27 671	354	754	12 016	45 789	65 302	113 565	1 799
33361	Engine, turbine, & power transmission equipment mfg .....	3	8	5	637	27 671	354	754	12 016	45 789	65 302	113 565	1 799
333613	Mechanical power transmission equipment mfg .....	5	6	3	e	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg .....	—	69	39	6 214	255 973	3 560	7 553	116 774	557 697	441 647	998 359	21 986
33391	Pump & compressor mfg .....	—	12	8	1 900	63 414	1 112	2 382	28 764	146 447	174 528	316 454	5 717
333911	Pump & pumping equipment mfg .....	—	5	4	f	D	D	D	D	D	D	D	D
333912	Air & gas compressor mfg .....	—	4	2	f	D	D	D	D	D	D	D	D
333913	Measuring & dispensing pump mfg .....	—	3	2	467	21 329	325	680	13 208	59 748	49 132	107 860	2 322
33392	Material handling equipment mfg .....	—	14	10	1 531	73 936	743	1 508	29 855	115 060	122 977	239 203	3 302
333921	Elevator & moving stairway mfg .....	—	3	3	e	D	D	D	D	D	D	D	D
333922	Conveyor & conveying equipment mfg .....	1	9	6	1 206	53 156	580	1 197	16 820	83 316	100 010	183 932	2 110
33399	All other general-purpose machinery mfg .....	1	43	21	2 783	118 623	1 705	3 663	58 155	296 190	144 142	442 702	12 967
333991	Power-driven handtool mfg .....	—	4	2	f	D	D	D	D	D	D	D	D
333993	Packaging machinery mfg .....	—	7	4	684	35 785	459	1 143	20 313	127 900	34 607	160 754	2 543
333999	All other miscellaneous general-purpose machinery mfg .....	2	19	9	923	33 888	556	1 150	15 762	87 192	49 939	138 085	3 804
334	Computer & electronic product mfg .....	1	78	34	4 781	168 782	2 525	5 190	66 683	329 639	397 049	724 161	40 223
3342	Communications equipment mfg .....	5	13	5	1 401	51 962	629	1 394	16 544	116 024	68 031	182 075	6 423
33422	Radio & TV broadcasting & wireless communications equipment mfg .....	5	13	5	1 401	51 962	629	1 394	16 544	116 024	68 031	182 075	6 423
334220	Radio & TV broadcasting & wireless communications equipment mfg .....	5	13	5	1 401	51 962	629	1 394	16 544	116 024	68 031	182 075	6 423
3343	Audio & video equipment mfg .....	—	3	2	f	D	D	D	D	D	D	D	D
33431	Audio & video equipment mfg .....	—	3	2	f	D	D	D	D	D	D	D	D
334310	Audio & video equipment mfg .....	—	3	2	f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg .....	—	17	9	g	D	D	D	D	D	D	D	19 861
33441	Semiconductor & other electronic component mfg .....	—	17	9	g	D	D	D	D	D	D	D	19 861
334413	Semiconductor & related device mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	1	37	16	g	D	D	D	D	D	D	D	5 146
33451	Navigational, measuring, medical, & control instruments mfg .....	1	37	16	g	D	D	D	D	D	D	D	5 146
334510	Electromedical & electrotherapeutic apparatus mfg .....	—	2	1	e	D	D	D	D	D	D	D	D
334511	Search, detection, navigation, & guidance instrument mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
334519	Other measuring & controlling device mfg .....	1	9	3	278	10 157	139	285	4 402	23 545	18 463	41 983	760

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CINCINNATI—HAMILTON, OH—KY—IN CMSA—Con.</b>												
	<b>Cincinnati, OH—KY—IN PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
335	Electrical equipment, appliance, & component mfg .....	-	51	28	4 236	141 730	2 865	6 044	74 290	369 672	324 209	700 852	D
3351	Electric lighting equipment mfg .....	-	7	5	g	D	D	D	D	D	D	D	D
33512	Lighting fixture mfg .....	-	6	5	f	D	D	D	D	D	D	D	D
335129	Other lighting equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3352	Household appliance mfg..	-	3	2	f	D	D	D	D	D	D	D	D
33521	Small electrical appliance mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335211	Electric housewares & household fan mfg...	-	1	1	f	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	-	28	13	1 710	63 555	1 094	2 468	34 011	159 313	107 927	276 878	7 293
33531	Electrical equipment mfg .....	-	28	13	1 710	63 555	1 094	2 468	34 011	159 313	107 927	276 878	7 293
335312	Motor & generator mfg .....	-	8	5	705	25 838	474	1 064	14 977	71 939	33 440	108 261	D
335314	Relay & industrial control mfg .....	-	12	5	833	32 728	491	1 164	15 924	74 366	68 599	150 023	3 850
3359	Other electrical equipment & component mfg .....	-	13	8	f	D	D	D	D	D	D	D	D
33593	Wiring device mfg .....	-	7	4	647	22 627	446	933	12 916	54 586	46 362	100 452	2 717
335931	Current-carrying wiring device mfg .....	-	7	4	647	22 627	446	933	12 916	54 586	46 362	100 452	2 717
336	Transportation equipment mfg .....	-	65	39	14 369	849 608	8 806	17 777	417 336	2 627 112	3 682 402	6 385 830	436 555
3362	Motor vehicle body & trailer mfg .....	-	6	4	e	D	D	D	D	D	D	D	152
33621	Motor vehicle body & trailer mfg .....	-	6	4	e	D	D	D	D	D	D	D	152
3363	Motor vehicle parts mfg ...	-	37	23	i	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical & electronic equipment mfg .....	-	9	6	f	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical & electronic equipment mfg .....	-	7	4	f	D	D	D	D	D	D	D	D
33633	Motor vehicle steering & suspension component (except spring) mfg ....	-	1	1	e	D	D	D	D	D	D	D	D
336330	Motor vehicle steering & suspension component (except spring) mfg .....	-	1	1	e	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system mfg .....	2	3	3	f	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system mfg .....	2	3	3	f	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg .....	-	3	2	h	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg .....	-	3	2	h	D	D	D	D	D	D	D	D
33636	Motor vehicle seating & interior trim mfg .....	7	2	2	e	D	D	D	D	D	D	D	D
336360	Motor vehicle seating & interior trim mfg ...	7	2	2	e	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	5	2	331	12 096	261	554	9 771	33 568	22 668	55 758	D
336370	Motor vehicle metal stamping .....	-	5	2	331	12 096	261	554	9 771	33 568	22 668	55 758	D
33639	Other motor vehicle parts mfg .....	3	11	6	789	25 370	593	1 285	15 266	62 137	102 129	166 616	8 773
336399	All other motor vehicle parts mfg .....	3	11	6	789	25 370	593	1 285	15 266	62 137	102 129	166 616	8 773
3364	Aerospace product & parts mfg .....	-	15	9	i	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	-	15	9	i	D	D	D	D	D	D	D	D
336412	Aircraft engine & engine parts mfg ....	-	9	7	i	D	D	D	D	D	D	D	D
3365	Railroad rolling stock mfg..	-	1	1	e	D	D	D	D	D	D	D	D
33651	Railroad rolling stock mfg .....	-	1	1	e	D	D	D	D	D	D	D	D
336510	Railroad rolling stock mfg .....	-	1	1	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CINCINNATI—HAMILTON, OH—KY—IN CMSA—Con.</b>												
	<b>Cincinnati, OH—KY—IN PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
337	Furniture & related product mfg.....	1	103	20	1 728	46 907	1 245	2 387	28 075	108 636	96 068	205 628	4 849
3371	Household & institutional furniture & kitchen cabinet mfg.....	1	64	6	e	D	D	D	D	D	D	D	D
33711	Wood kitchen cabinet & counter top mfg.....	1	42	2		6 818	214	420	4 628	19 788	15 275	35 938	361
337110	Wood kitchen cabinet & counter top mfg....	1	42	2		6 818	214	420	4 628	19 788	15 275	35 938	361
3372	Office furniture (including fixtures) mfg.....	2	29	9	786	21 347	603	1 174	13 887	42 975	32 067	75 128	2 429
33721	Office furniture (including fixtures) mfg.....	2	29	9	786	21 347	603	1 174	13 887	42 975	32 067	75 128	2 429
337215	Showcase, partition, shelving, & locker mfg.....	3	19	7	634	17 282	503	969	10 987	34 569	27 096	61 783	2 138
3379	Other furniture related product mfg.....	-	10	5	e	D	D	D	D	D	D	D	D
33791	Mattress mfg.....	-	7	4	426	13 529	272	480	6 242	36 305	38 843	75 258	1 722
337910	Mattress mfg.....	-	7	4	426	13 529	272	480	6 242	36 305	38 843	75 258	1 722
339	Miscellaneous mfg.....	1	181	35	4 750	142 236	3 148	6 022	70 653	383 554	276 252	655 426	26 029
3391	Medical equipment & supplies mfg.....	-	74	11	1 655	52 136	1 099	2 074	24 886	165 906	122 220	288 967	9 761
33911	Medical equipment & supplies mfg.....	-	74	11	1 655	52 136	1 099	2 074	24 886	165 906	122 220	288 967	9 761
339112	Surgical & medical instrument mfg.....	-	13	5	857	25 964	551	1 048	12 235	65 223	42 927	108 956	3 065
339113	Surgical appliance & supplies mfg.....	-	9	2	e	D	D	D	D	D	D	D	5 184
3399	Other miscellaneous mfg...	1	107	24	3 095	90 100	2 049	3 948	45 767	217 648	154 032	366 459	16 268
33991	Jewelry & silverware mfg.....	-	18	4	291	7 479	194	395	3 751	20 499	19 504	40 790	774
33995	Sign mfg.....	2	49	9	1 221	33 843	814	1 677	18 411	78 500	64 217	139 380	D
339950	Sign mfg.....	2	49	9	1 221	33 843	814	1 677	18 411	78 500	64 217	139 380	D
33999	All other miscellaneous mfg.....	1	17	6	1 255	41 659	787	1 436	19 255	104 003	62 155	163 398	D
339991	Gasket, packing, & sealing device mfg....	4	4	3	329	8 459	235	405	4 301	14 989	12 905	27 879	1 406
339995	Burial casket mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
	<b>Hamilton—Middletown, OH PMSA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>396</b>	<b>155</b>	<b>20 391</b>	<b>819 216</b>	<b>14 957</b>	<b>32 198</b>	<b>562 250</b>	<b>4 325 436</b>	<b>2 265 948</b>	<b>6 567 771</b>	<b>196 061</b>
311	Food mfg.....	1	17	4	e	D	D	D	D	D	D	D	1 037
312	Beverage & tobacco product mfg.....	-	2	1	f	D	D	D	D	D	D	D	D
3121	Beverage mfg.....	-	2	1	f	D	D	D	D	D	D	D	D
31212	Breweries.....	-	2	1	f	D	D	D	D	D	D	D	D
312120	Breweries.....	-	2	1	f	D	D	D	D	D	D	D	D
315	Apparel mfg.....	9	2	1	e	D	D	D	D	D	D	D	D
3152	Cut & sew apparel mfg....	9	2	1	e	D	D	D	D	D	D	D	D
31523	Women's & girls' cut & sew apparel mfg.....	9	1	1	e	D	D	D	D	D	D	D	D
315239	Women's & girls' cut & sew other outerwear mfg.....	9	1	1	e	D	D	D	D	D	D	D	D
321	Wood product mfg.....	-	15	5	532	14 245	421	1 003	10 408	33 826	75 176	110 155	2 103
3212	Veneer, plywood, & engineered wood product mfg.....	-	3	1	e	D	D	D	D	D	D	D	D
32121	Veneer, plywood, & engineered wood product mfg.....	-	3	1	e	D	D	D	D	D	D	D	D
321211	Hardwood veneer & plywood mfg.....	-	1	1	e	D	D	D	D	D	D	D	D



**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CINCINNATI-HAMILTON, OH-KY-IN CMSA—Con.</b>												
	<b>Hamilton-Middletown, OH PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
322	Paper mfg .....	-	30	20	3 595	148 701	2 551	5 580	102 838	441 906	425 577	865 949	41 251
3221	Pulp, paper, & paperboard mills .....	-	7	7	g	D	D	D	D	D	D	D	D
32212	Paper mills .....	-	5	5	1 919	92 399	1 451	3 155	67 701	276 716	232 058	508 284	27 536
322121	Paper (except newsprint) mills .....	-	5	5	1 919	92 399	1 451	3 155	67 701	276 716	232 058	508 284	27 536
3222	Converted paper product mfg .....	-	23	13	g	D	D	D	D	D	D	D	D
32221	Paperboard container mfg .....	-	14	10	1 041	33 387	713	1 567	22 052	80 037	121 029	200 930	8 724
322211	Corrugated & solid fiber box mfg .....	-	10	8	755	22 848	479	1 010	14 059	54 876	90 973	146 144	D
322212	Folding paperboard box mfg .....	-	2	2	e	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg .....	1	6	1	296	9 613	112	248	3 300	43 080	34 678	78 101	3 065
322222	Coated & laminated paper mfg .....	1	3	1	e	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	1	43	14	714	22 857	534	1 024	15 125	66 608	38 912	104 832	2 994
3231	Printing & related support activities .....	1	43	14	714	22 857	534	1 024	15 125	66 608	38 912	104 832	2 994
32311	Printing .....	1	41	12	f	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing ..	1	16	6	322	8 639	231	426	5 714	17 836	15 469	33 138	1 339
325	Chemical mfg .....	1	22	6	451	18 359	254	547	8 880	96 823	73 107	165 333	13 544
326	Plastics & rubber products mfg .....	1	27	16	1 818	53 427	1 363	2 728	32 279	118 610	98 971	213 009	11 186
3261	Plastics product mfg .....	1	25	15	g	D	D	D	D	D	D	D	D
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	-	4	4	564	19 176	389	824	11 477	34 151	34 441	66 978	4 961
326121	Unsupported plastics profile shape mfg .....	-	3	3	e	D	D	D	D	D	D	D	D
32616	Plastics bottle mfg .....	9	1	1	e	D	D	D	D	D	D	D	D
326160	Plastics bottle mfg .....	9	1	1	e	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	12	6	631	17 748	452	921	9 859	45 188	25 367	68 186	1 960
326199	All other plastics product mfg .....	-	10	6	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	4	22	6	331	10 550	271	554	8 409	32 846	29 586	62 696	3 086
331	Primary metal mfg .....	-	8	7	h	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
331111	Iron & steel mills .....	-	1	1	h	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	1	89	27	2 293	84 174	1 680	3 821	54 576	214 499	210 150	424 764	25 238
3321	Forging & stamping .....	5	5	5	272	11 311	236	528	8 009	18 844	18 222	37 050	2 997
33211	Forging & stamping .....	5	5	5	272	11 311	236	528	8 009	18 844	18 222	37 050	2 997
332116	Metal stamping .....	5	5	5	272	11 311	236	528	8 009	18 844	18 222	37 050	2 997
3323	Architectural & structural metals mfg .....	-	16	4	542	18 136	331	803	9 941	46 083	41 834	90 312	3 116
33232	Ornamental & architectural metal products mfg .....	-	11	2	398	12 880	239	600	7 121	33 691	33 146	69 264	D
332321	Metal window & door mfg .....	-	2	1	e	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	2	40	5	f	D	D	D	D	D	D	D	D
33271	Machine shops .....	2	38	5	516	19 387	416	932	13 706	42 581	23 374	65 704	4 261
332710	Machine shops .....	2	38	5	516	19 387	416	932	13 706	42 581	23 374	65 704	4 261
3328	Coating, engraving, heat treating, & allied activities ..	-	11	5	450	18 913	354	811	13 173	59 825	91 157	150 860	12 094
33281	Coating, engraving, heat treating, & allied activities .....	-	11	5	450	18 913	354	811	13 173	59 825	91 157	150 860	12 094

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CINCINNATI—HAMILTON, OH—KY—IN CMSA—Con.</b>												
	<b>Hamilton—Middletown, OH PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
333	Machinery mfg .....	-	43	21	1 848	72 866	973	1 908	34 295	127 207	180 409	311 182	9 538
3332	Industrial machinery mfg ..	-	15	9	925	40 139	437	809	18 354	68 629	105 899	179 628	4 345
33329	Other industrial machinery mfg .....	-	14	9	f	D	D	D	D	D	D	D	D
333291	Paper industry machinery mfg .....	-	4	4	445	21 401	163	275	7 505	39 359	76 958	122 392	3 121
3339	Other general-purpose machinery mfg .....	-	12	5	410	12 986	216	439	5 255	29 762	45 074	72 978	968
335	Electrical equipment, appliance, & component mfg .....	-	12	7	1 474	50 772	1 083	2 280	33 421	146 430	113 149	259 130	5 758
3353	Electrical equipment mfg ..	-	8	4	g	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg .....	-	8	4	g	D	D	D	D	D	D	D	D
335313	Switchgear & switchboard apparatus mfg .....	-	3	3	g	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg .....	-	4	3	e	D	D	D	D	D	D	D	D
33593	Wiring device mfg .....	-	3	2	e	D	D	D	D	D	D	D	D
335931	Current-carrying wiring device mfg .....	-	3	2	e	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	3	9	4	556	21 216	334	656	12 125	43 679	69 158	114 057	D
3369	Other transportation equipment mfg .....	-	2	1	e	D	D	D	D	D	D	D	D
33699	Other transportation equipment mfg .....	-	2	1	e	D	D	D	D	D	D	D	D
336992	Military armored vehicle, tank, & tank component mfg .....	-	1	1	e	D	D	D	D	D	D	D	D
337	Furniture & related product mfg .....	-	14	6	637	16 520	456	794	9 370	35 730	28 792	65 562	1 051
3372	Office furniture (including fixtures) mfg .....	-	6	4	533	14 005	393	672	8 195	29 224	25 112	55 449	858
33721	Office furniture (including fixtures) mfg .....	-	6	4	533	14 005	393	672	8 195	29 224	25 112	55 449	858
337215	Showcase, partition, shelving, & locker mfg .....	-	3	2	e	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	-	24	7	577	14 545	423	890	7 862	58 886	31 913	83 887	1 092
3399	Other miscellaneous mfg ..	-	19	7	552	13 616	407	858	7 437	55 916	30 468	79 434	906
	<b>CLEVELAND—AKRON, OH CMSA</b>												
<b>31-33</b>	<b>Manufacturing .....</b>	-	<b>6 021</b>	<b>2 212</b>	<b>255 158</b>	<b>9 467 537</b>	<b>180 155</b>	<b>375 649</b>	<b>5 785 740</b>	<b>26 087 404</b>	<b>27 142 358</b>	<b>53 188 994</b>	<b>2 483 981</b>
311	Food mfg .....	1	238	58	7 617	225 934	4 856	8 929	116 034	949 653	885 896	1 840 605	38 303
312	Beverage & tobacco product mfg .....	3	26	10	1 293	37 420	503	947	15 710	73 212	256 228	331 119	D
313	Textile mills .....	2	27	2	e	D	D	D	D	D	D	D	D
314	Textile product mills .....	2	79	11	f	D	D	D	D	D	D	D	D
315	Apparel mfg .....	2	46	9	f	D	D	D	D	D	D	D	D
321	Wood product mfg .....	3	86	16	1 353	30 473	1 083	2 190	20 796	62 569	80 345	143 179	D
322	Paper mfg .....	-	94	64	6 751	262 865	4 853	10 967	151 997	747 417	763 355	1 512 195	67 865
323	Printing & related support activities .....	1	574	114	11 975	360 276	8 807	17 445	219 934	829 220	467 490	1 295 292	68 391
324	Petroleum & coal products mfg .....	4	48	17	1 423	61 593	816	1 459	25 644	228 112	367 566	592 602	35 585
325	Chemical mfg .....	1	266	149	17 989	733 732	10 471	21 821	361 634	2 821 049	2 996 364	5 829 343	283 383
326	Plastics & rubber products mfg .....	-	427	258	25 428	712 806	19 770	40 543	463 584	1 781 717	1 704 126	3 478 407	153 685
327	Nonmetallic mineral product mfg .....	2	197	65	4 292	153 964	3 181	7 004	103 150	452 760	371 566	834 583	37 516
331	Primary metal mfg .....	-	151	101	20 242	943 752	16 458	37 031	716 352	2 176 149	3 274 276	5 414 818	317 259

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>CLEVELAND-AKRON, OH CMSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg .....	-	1 775	580	49 120	1 684 043	36 625	76 004	1 073 291	3 935 060	2 942 510	6 899 794	317 447
333	Machinery mfg .....	1	849	323	34 114	1 311 333	21 193	46 307	687 546	3 097 265	2 819 204	5 875 786	174 169
334	Computer & electronic product mfg .....	-	195	94	10 636	386 664	5 311	10 255	126 403	985 401	787 062	1 783 054	63 206
335	Electrical equipment, appliance, & component mfg .....	-	166	92	14 813	539 328	8 848	17 503	235 453	1 626 034	1 202 292	2 825 701	72 567
336	Transportation equipment mfg .....	-	194	121	31 557	1 561 195	25 545	53 876	1 199 562	4 963 111	7 225 146	12 183 179	751 027
337	Furniture & related product mfg .....	1	174	29	4 346	130 065	3 164	6 718	80 386	268 511	324 525	592 894	23 178
339	Miscellaneous mfg .....	1	400	96	10 062	285 330	6 982	13 582	159 709	974 685	574 386	1 539 539	46 626
	<b>Akron, OH PMSA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>1 389</b>	<b>531</b>	<b>55 296</b>	<b>1 923 910</b>	<b>38 816</b>	<b>79 873</b>	<b>1 170 601</b>	<b>4 705 320</b>	<b>4 270 263</b>	<b>9 000 911</b>	<b>480 437</b>
311	Food mfg .....	-	45	11	1 907	55 333	1 032	1 822	24 215	125 789	213 727	341 064	5 787
3113	Sugar & confectionery product mfg .....	-	6	1	289	4 297	202	354	2 906	5 980	7 757	13 899	229
31133	Confectionery mfg from purchased chocolate ...	-	3	1	e	D	D	D	D	D	D	D	213
311330	Confectionery mfg from purchased chocolate .....	-	3	1	e	D	D	D	D	D	D	D	213
3118	Bakeries & tortilla mfg .....	1	28	4	1 086	34 678	425	640	9 213	77 933	38 655	116 239	1 864
31181	Bread & bakery product mfg .....	-	26	3	f	D	D	D	D	D	D	D	D
311812	Commercial bakeries ..	-	6	2	f	D	D	D	D	D	D	D	1 010
312	Beverage & tobacco product mfg .....	4	7	4	582	16 469	193	368	6 403	37 883	156 291	195 521	D
3121	Beverage mfg .....	4	7	4	582	16 469	193	368	6 403	37 883	156 291	195 521	D
31211	Soft drink & ice mfg .....	4	3	2	e	D	D	D	D	D	D	D	D
312111	Soft drink mfg .....	4	3	2	e	D	D	D	D	D	D	D	D
315	Apparel mfg .....	1	10	2	e	D	D	D	D	D	D	D	136
321	Wood product mfg .....	3	18	3	331	8 181	267	596	5 781	17 048	24 985	42 207	D
3219	Other wood product mfg ...	3	16	3	e	D	D	D	D	D	D	D	D
322	Paper mfg .....	-	18	13	1 612	61 101	1 045	2 290	33 231	110 126	184 939	293 150	17 444
3222	Converted paper product mfg .....	-	17	12	g	D	D	D	D	D	D	D	D
32221	Paperboard container mfg .....	-	7	6	e	D	D	D	D	D	D	D	D
322211	Corrugated & solid fiber box mfg .....	-	5	4	259	9 234	186	401	5 339	17 974	31 283	48 704	D
32222	Paper bag & coated & treated paper mfg .....	-	7	5	1 028	42 131	590	1 315	20 537	66 444	126 242	191 183	D
322222	Coated & laminated paper mfg .....	-	5	4	f	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	-	132	34	3 605	99 688	2 656	5 114	63 227	274 136	137 496	410 323	27 967
3231	Printing & related support activities .....	-	132	34	3 605	99 688	2 656	5 114	63 227	274 136	137 496	410 323	27 967
32311	Printing .....	-	116	30	3 343	93 219	2 449	4 748	58 939	261 979	134 645	395 343	26 383
323110	Commercial lithographic printing ..	1	63	16	1 214	36 754	807	1 521	21 753	77 004	34 082	110 668	4 688
323113	Commercial screen printing .....	-	17	7	1 017	22 870	831	1 564	14 003	30 520	30 700	61 050	1 519
323117	Book printing .....	-	2	1	e	D	D	D	D	D	D	D	D
32312	Support activities for printing .....	-	16	4	262	6 469	207	366	4 288	12 157	2 851	14 980	1 584
324	Petroleum & coal products mfg .....	2	11	3	379	10 097	247	384	5 457	32 425	62 643	93 642	4 454
3241	Petroleum & coal products mfg .....	2	11	3	379	10 097	247	384	5 457	32 425	62 643	93 642	4 454
32419	Other petroleum & coal products mfg .....	2	3	2	e	D	D	D	D	D	D	D	D
324191	Petroleum lubricating oil & grease mfg .....	2	3	2	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CLEVELAND-AKRON, OH CMSA—Con.</b>												
	<b>Akron, OH PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
325	Chemical mfg .....	2	73	43	4 179	158 523	2 674	5 684	81 993	537 258	570 579	1 116 065	63 315
3251	Basic chemical mfg .....	3	11	9	799	33 593	482	1 022	18 615	103 312	104 134	212 677	14 086
32519	Other basic organic chemical mfg .....	1	4	4	330	14 863	183	362	7 282	66 957	60 935	125 174	5 633
325199	All other basic organic chemical mfg .....	1	4	4	330	14 863	183	362	7 282	66 957	60 935	125 174	5 633
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg .....	3	7	4	335	14 193	228	487	7 517	69 921	63 893	139 738	5 504
32521	Resin & synthetic rubber mfg .....	3	7	4	335	14 193	228	487	7 517	69 921	63 893	139 738	5 504
325211	Plastics material & resin mfg .....	3	4	4	308	13 177	210	455	6 867	66 215	57 526	129 679	4 951
3255	Paint, coating, & adhesive mfg .....	1	16	8	643	25 608	379	733	13 197	124 530	124 881	249 258	D
32551	Paint & coating mfg .....	4	8	4	321	12 370	168	288	5 262	50 353	43 059	93 458	D
325510	Paint & coating mfg ...	4	8	4	321	12 370	168	288	5 262	50 353	43 059	93 458	D
32552	Adhesive mfg .....	—	8	4	322	13 238	211	445	7 935	74 177	81 822	155 800	2 250
325520	Adhesive mfg .....	—	8	4	322	13 238	211	445	7 935	74 177	81 822	155 800	2 250
3256	Soap, cleaning compound, & toilet preparation mfg ..	—	6	3	1 080	33 657	730	1 563	14 672	115 401	113 360	227 861	7 327
32561	Soap & cleaning compound mfg .....	—	4	3	g	D	D	D	D	D	D	D	D
325612	Polish & other sanitation good mfg ..	—	3	2	f	D	D	D	D	D	D	D	D
3259	Other chemical product mfg .....	—	28	17	g	D	D	D	D	D	D	D	D
32599	All other chemical product & preparation mfg .....	—	26	16	1 154	46 787	764	1 753	25 883	109 114	155 355	262 612	31 263
325991	Custom compounding of purchased resin...	—	17	12	888	37 057	578	1 305	18 888	90 287	136 666	224 269	30 225
325998	All other miscellaneous chemical product & preparation mfg .....	—	9	4	266	9 730	186	448	6 995	18 827	18 689	38 343	1 038
326	Plastics & rubber products mfg .....	—	162	97	9 357	276 528	7 109	15 113	175 413	708 686	677 105	1 382 822	68 434
3261	Plastics product mfg .....	—	101	60	6 046	165 346	4 738	9 919	108 200	439 304	364 537	799 933	45 748
32611	Unsupported plastics film, sheet, & bag mfg ..	—	5	4	479	15 833	338	734	9 185	60 932	60 878	121 564	8 724
326112	Unsupported plastics packaging film & sheet mfg .....	—	3	3	e	D	D	D	D	D	D	D	D
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	5	10	6	448	13 885	336	675	9 043	34 837	19 996	55 723	3 259
326121	Unsupported plastics profile shape mfg .....	—	9	5	e	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	—	78	44	4 741	123 181	3 831	7 983	84 247	309 614	252 228	559 135	32 530
326199	All other plastics product mfg .....	—	76	43	h	D	D	D	D	D	D	D	D
3262	Rubber product mfg .....	—	61	37	3 311	111 182	2 371	5 194	67 213	269 382	312 568	582 889	22 686
32622	Rubber & plastics hoses & belting mfg .....	—	2	2	f	D	D	D	D	D	D	D	D
326220	Rubber & plastics hoses & belting mfg ..	—	2	2	f	D	D	D	D	D	D	D	D
32629	Other rubber product mfg .....	—	53	34	2 371	77 184	1 724	3 768	46 255	187 477	179 554	368 368	15 205
326291	Rubber product mfg for mechanical use .....	—	31	19	1 506	46 586	1 097	2 427	27 890	123 345	74 179	198 117	8 089
326299	All other rubber product mfg .....	—	22	15	865	30 598	627	1 341	18 365	64 132	105 375	170 251	7 116
327	Nonmetallic mineral product mfg .....	2	46	14	722	25 533	552	1 195	18 079	67 351	72 113	153 189	6 151
3273	Cement & concrete product mfg .....	2	27	9	461	15 924	361	793	11 460	36 124	56 971	106 421	4 076
331	Primary metal mfg .....	—	24	17	2 094	60 820	1 653	3 412	42 774	161 941	155 943	317 072	19 808
3315	Foundries .....	—	18	11	1 757	50 984	1 404	2 933	37 011	130 370	111 542	241 363	18 704
33152	Nonferrous metal foundries .....	—	10	8	1 594	47 072	1 268	2 689	34 269	122 797	107 368	229 629	18 263
331521	Aluminum die-casting foundries .....	—	2	2	e	D	D	D	D	D	D	D	D
331524	Aluminum foundries (except die-casting) ..	—	6	4	g	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>CLEVELAND-AKRON, OH CMSA—Con.</b> <b>Akron, OH PMSA—Con.</b> <b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg.....	-	368	110	9 372	298 459	7 135	14 533	190 807	638 552	430 084	1 057 370	53 537
3321	Forging & stamping.....	-	22	9	608	22 753	467	1 003	14 743	42 565	54 069	93 942	3 389
33211	Forging & stamping.....	-	22	9	608	22 753	467	1 003	14 743	42 565	54 069	93 942	3 389
332116	Metal stamping.....	-	15	6	436	16 041	343	752	11 122	28 188	30 825	58 962	2 862
3322	Cutlery & handtool mfg....	1	14	6	554	17 797	398	805	9 589	45 490	19 995	65 410	1 942
33221	Cutlery & handtool mfg..	1	14	6	554	17 797	398	805	9 589	45 490	19 995	65 410	1 942
332212	Hand & edge tool mfg..	1	14	6	554	17 797	398	805	9 589	45 490	19 995	65 410	1 942
3323	Architectural & structural metals mfg.....	-	49	17	1 264	38 352	935	1 864	23 771	79 657	90 601	170 427	3 848
33231	Plate work & fabricated structural product mfg..	-	22	7	661	22 628	496	1 053	14 222	48 275	60 268	108 779	2 718
332313	Plate work mfg.....	-	6	3	271	9 705	225	515	7 274	21 136	22 066	43 032	659
33232	Ornamental & architectural metal products mfg.....	1	27	10	603	15 724	439	811	9 549	31 382	30 333	61 648	1 130
332322	Sheet metal work mfg..	2	17	7	323	10 043	251	501	6 718	18 139	10 721	28 688	730
3324	Boiler, tank, & shipping container mfg.....	-	7	4	f	D	D	D	D	D	D	D	D
33242	Metal tank (heavy gauge) mfg.....	-	5	3	747	31 843	446	857	15 447	49 209	39 962	89 036	2 738
332420	Metal tank (heavy gauge) mfg.....	-	5	3	747	31 843	446	857	15 447	49 209	39 962	89 036	2 738
3325	Hardware mfg.....	-	3	2	e	D	D	D	D	D	D	D	D
33251	Hardware mfg.....	-	3	2	e	D	D	D	D	D	D	D	D
332510	Hardware mfg.....	-	3	2	e	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg.....	1	187	44	3 717	103 852	3 058	6 078	72 905	227 144	102 582	327 965	14 666
33271	Machine shops.....	-	168	35	3 172	86 570	2 624	5 108	60 764	172 400	80 342	252 686	12 675
332710	Machine shops.....	-	168	35	3 172	86 570	2 624	5 108	60 764	172 400	80 342	252 686	12 675
33272	Turned product & screw, nut, & bolt mfg.....	1	19	9	545	17 282	434	970	12 141	54 744	22 240	75 279	1 991
332721	Precision turned product mfg.....	3	13	6	330	11 091	261	601	8 268	21 975	9 324	29 919	973
3328	Coating, engraving, heat treating, & allied activities.	2	43	12	860	28 389	669	1 409	18 930	54 285	18 085	72 494	6 308
33281	Coating, engraving, heat treating, & allied activities.....	2	43	12	860	28 389	669	1 409	18 930	54 285	18 085	72 494	6 308
332812	Metal coating/engraving (exc jewelry/silverware)/allied services.....	4	17	6	332	9 984	249	511	6 170	18 773	8 363	27 186	1 481
332813	Electroplating, plating, polishing, anodizing, & coloring.....	-	20	4	413	14 044	332	705	9 818	23 362	6 144	29 606	4 398
3329	Other fabricated metal product mfg.....	-	37	16	1 224	42 485	898	1 998	28 219	111 535	85 693	190 678	18 835
33291	Metal valve mfg.....	-	9	7	640	23 923	490	1 125	16 858	72 599	40 439	106 219	9 019
332912	Fluid power valve & hose fitting mfg.....	-	6	5	e	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg.....	-	28	9	584	18 562	408	873	11 361	38 936	45 254	84 459	9 816
332991	Ball & roller bearing mfg.....	-	3	2	e	D	D	D	D	D	D	D	D
333	Machinery mfg.....	2	222	93	7 795	304 645	4 529	9 390	146 663	671 905	431 323	1 098 765	45 975
3331	Agriculture, construction, & mining machinery mfg....	2	9	4	259	8 990	178	344	4 355	19 816	18 312	38 213	659
3332	Industrial machinery mfg..	3	45	20	1 392	57 224	763	1 598	25 380	128 243	126 218	256 027	7 548
33322	Plastics & rubber industry machinery mfg.....	3	20	12	797	32 620	422	947	14 445	68 659	79 508	149 707	4 783
333220	Plastics & rubber industry machinery mfg.....	3	20	12	797	32 620	422	947	14 445	68 659	79 508	149 707	4 783
33329	Other industrial machinery mfg.....	3	23	8	f	D	D	D	D	D	D	D	D
333298	All other industrial machinery mfg.....	3	13	5	409	16 679	221	391	6 862	43 639	41 238	84 920	D
3333	Commercial & service industry machinery mfg..	9	3	2	g	D	D	D	D	D	D	D	D
33331	Commercial & service industry machinery mfg.....	9	3	2	g	D	D	D	D	D	D	D	D
333319	Other commercial & service industry machinery mfg.....	9	2	2	g	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CLEVELAND-AKRON, OH CMSA—Con.</b>												
	<b>Akron, OH PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
333	Machinery mfg—Con.												
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg .....	—	4	3	253	8 204	158	309	3 864	14 668	13 763	29 193	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg .	—	4	3	253	8 204	158	309	3 864	14 668	13 763	29 193	D
3335	Metalworking machinery mfg .....	—	128	51	3 353	125 086	2 637	5 419	88 194	268 880	145 005	408 316	26 359
33351	Metalworking machinery mfg .....	—	128	51	3 353	125 086	2 637	5 419	88 194	268 880	145 005	408 316	26 359
333511	Industrial mold mfg ...	—	70	33	2 104	81 606	1 688	3 673	58 046	144 810	60 752	203 100	17 377
333514	Special die & tool, die set, jig, & fixture mfg .	2	31	6	403	14 445	324	672	10 058	28 300	10 218	38 255	2 171
333515	Cutting tool & machine tool accessory mfg ..	—	17	7	589	21 606	451	794	15 857	65 037	30 415	94 933	5 728
3339	Other general-purpose machinery mfg .....	—	27	10	1 128	39 975	503	1 148	15 003	81 896	60 992	142 948	4 383
33399	All other general-purpose machinery mfg .....	—	19	6	909	31 829	352	805	10 581	67 062	46 880	113 669	3 224
333993	Packaging machinery mfg .....	—	5	3	655	23 557	210	541	6 726	44 922	34 103	79 157	2 507
334	Computer & electronic product mfg .....	—	41	22	1 579	49 719	950	1 925	20 608	138 213	130 790	269 945	5 690
3344	Semiconductor & other electronic component mfg .....	—	15	12	656	19 385	459	1 004	10 684	62 977	68 758	131 757	3 457
33441	Semiconductor & other electronic component mfg .....	—	15	12	656	19 385	459	1 004	10 684	62 977	68 758	131 757	3 457
334419	Other electronic component mfg .....	—	3	3	e	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	—	22	10	899	29 411	479	898	9 333	73 442	60 302	134 596	D
33451	Navigational, measuring, medical, & control instruments mfg .....	—	22	10	899	29 411	479	898	9 333	73 442	60 302	134 596	D
334519	Other measuring & controlling device mfg .....	—	6	4	376	11 853	211	342	3 102	45 679	29 777	76 206	773
335	Electrical equipment, appliance, & component mfg .....	—	29	13	1 635	59 846	1 255	2 700	39 349	179 391	109 043	291 428	5 680
3351	Electric lighting equipment mfg .....	—	4	3	f	D	D	D	D	D	D	D	D
33511	Electric lamp bulb & part mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	2	16	6	444	13 120	325	585	7 107	35 436	32 554	68 588	1 162
33531	Electrical equipment mfg .....	2	16	6	444	13 120	325	585	7 107	35 436	32 554	68 588	1 162
335312	Motor & generator mfg .....	2	7	3	258	6 294	223	452	4 883	25 282	23 422	49 434	756
3359	Other electrical equipment & component mfg .....	—	9	4	f	D	D	D	D	D	D	D	D
33592	Communication & energy wire & cable mfg .....	—	2	2	e	D	D	D	D	D	D	D	D
335929	Other communication & energy wire mfg ...	—	2	2	e	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	—	38	23	6 184	336 580	4 848	10 350	255 182	647 637	600 080	1 254 888	113 338
3362	Motor vehicle body & trailer mfg .....	—	4	3	f	D	D	D	D	D	D	D	D
33621	Motor vehicle body & trailer mfg .....	—	4	3	f	D	D	D	D	D	D	D	D
336212	Truck trailer mfg .....	—	2	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	—	29	17	4 200	253 767	3 675	7 822	215 831	370 738	415 218	790 197	101 896
33637	Motor vehicle metal stamping .....	—	9	5	2 844	210 351	2 555	5 624	184 769	257 356	313 060	574 139	D
336370	Motor vehicle metal stamping .....	—	9	5	2 844	210 351	2 555	5 624	184 769	257 356	313 060	574 139	D
33639	Other motor vehicle parts mfg .....	—	5	4	648	24 530	508	1 087	16 518	61 712	56 814	118 670	D
336399	All other motor vehicle parts mfg .....	—	5	4	648	24 530	508	1 087	16 518	61 712	56 814	118 670	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
	<b>CLEVELAND-AKRON, OH CMSA—Con.</b>													
<b>31-33</b>	<b>Akron, OH PMSA—Con.</b>													
	<b>Manufacturing—Con.</b>													
336	Transportation equipment mfg—Con.													
3364	Aerospace product & parts mfg .....	-	5	3	g	D	D	D	D	D	D	D	D	
33641	Aerospace product & parts mfg .....	-	5	3	g	D	D	D	D	D	D	D	D	
336412	Aircraft engine & engine parts mfg .....	-	1	1	e	D	D	D	D	D	D	D	D	
336413	Other aircraft part & auxiliary equipment mfg .....	-	4	2	g	D	D	D	D	D	D	D	D	
337	Furniture & related product mfg .....	2	31	4		782	19 217	532	760	8 771	46 341	75 843	124 076	3 854
3371	Household & institutional furniture & kitchen cabinet mfg .....	-	21	1		426	11 365	268	341	4 057	31 619	60 633	92 459	2 827
33712	Household & institutional furniture mfg .....	-	10	1	e	D	D	D	D	D	D	D	D	D
337124	Metal household furniture mfg .....	-	1	1	e	D	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) mfg .....	7	8	2	e	D	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) mfg .....	7	8	2	e	D	D	D	D	D	D	D	D	D
337215	Showcase, partition, shelving, & locker mfg .....	9	4	1	e	D	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	-	84	21		2 616	69 847	1 732	3 464	46 182	288 756	203 869	503 849	13 202
3391	Medical equipment & supplies mfg .....	2	33	8		482	12 211	316	668	6 249	31 160	22 760	52 696	1 781
33911	Medical equipment & supplies mfg .....	2	33	8		482	12 211	316	668	6 249	31 160	22 760	52 696	1 781
3399	Other miscellaneous mfg ..	-	51	13		2 134	57 636	1 416	2 796	39 933	257 596	181 109	451 153	11 421
33993	Doll, toy, & game mfg ...	-	5	1	g	D	D	D	D	D	D	D	D	D
339932	Game, toy, & children's vehicle mfg .....	-	4	1	g	D	D	D	D	D	D	D	D	D
33999	All other miscellaneous mfg .....	1	17	7		524	15 850	341	665	7 743	68 011	48 416	127 411	901
339991	Gasket, packing, & sealing device mfg ...	-	5	5		389	12 932	241	513	6 164	60 551	42 982	114 450	532
	<b>Cleveland-Lorain-Elyria, OH PMSA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>4 632</b>	<b>1 681</b>		<b>199 862</b>	<b>7 543 627</b>	<b>141 339</b>	<b>295 776</b>	<b>4 615 139</b>	<b>21 382 084</b>	<b>22 872 095</b>	<b>44 188 083</b>	<b>2 003 544</b>
311	Food mfg .....	1	193	47		5 710	170 601	3 824	7 107	91 819	823 864	672 169	1 499 541	32 516
3113	Sugar & confectionery product mfg .....	1	19	6		356	5 951	246	302	3 307	19 225	57 262	77 574	1 483
3114	Fruit & vegetable preserving & specialty food mfg .....	-	6	4	g	D	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	-	5	3	g	D	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg .....	-	3	1	f	D	D	D	D	D	D	D	D	D
3115	Dairy product mfg .....	-	10	6		631	20 288	291	643	7 616	55 078	165 185	223 613	8 640
31151	Dairy product (except frozen) mfg .....	-	7	5	f	D	D	D	D	D	D	D	D	8 436
311511	Fluid milk mfg .....	-	3	3		432	14 640	150	327	4 261	38 036	93 819	131 796	D
3118	Bakeries & tortilla mfg .....	-	109	14		2 223	66 399	1 343	2 218	25 457	179 515	78 391	258 380	4 665
31181	Bread & bakery product mfg .....	-	103	10		1 974	58 219	1 143	1 882	20 972	138 682	50 034	188 877	4 437
311811	Retail bakeries .....	5	83	1		440	5 989	293	330	3 238	12 765	7 207	20 033	529
311812	Commercial bakeries ..	-	20	9		1 534	52 230	850	1 552	17 734	125 917	42 827	168 844	3 908
3119	Other food mfg .....	3	27	11		1 086	27 905	825	1 621	18 320	174 110	149 221	321 824	6 556
31199	All other food mfg .....	-	10	6		664	16 760	517	1 026	10 647	87 559	86 345	173 589	2 929
311991	Perishable prepared food mfg .....	-	6	5	e	D	D	D	D	D	D	D	D	1 981
312	Beverage & tobacco product mfg .....	2	19	6		711	20 951	310	579	9 307	35 329	99 937	135 598	D
3121	Beverage mfg .....	2	19	6		711	20 951	310	579	9 307	35 329	99 937	135 598	D
31211	Soft drink & ice mfg .....	1	12	4	f	D	D	D	D	D	D	D	D	1 046
312111	Soft drink mfg .....	1	6	2		468	13 499	178	314	6 344	10 205	73 930	85 020	406
314	Textile product mills .....	2	58	9		651	12 041	541	846	7 800	21 942	22 846	44 781	1 476
3149	Other textile product mills ..	2	35	9		577	10 911	478	758	7 086	19 561	20 142	39 706	1 377
31499	All other textile product mills .....	2	15	6		417	7 705	350	562	5 206	14 323	16 065	30 429	1 162
314999	All other miscellaneous textile product mills ..	2	12	5	e	D	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>CLEVELAND—AKRON, OH CMSA—Con.</b> <b>Cleveland—Lorain—Elyria, OH PMSA—Con.</b> <b>Manufacturing—Con.</b>												
315	Apparel mfg . . . . .	3	36	7	653	13 893	544	1 072	10 404	56 035	26 846	83 728	D
3152	Cut & sew apparel mfg . . . . .	3	22	5	f	D	D	D	D	D	D	D	D
31522	Men's & boys' cut & sew apparel mfg . . . . .	8	2	1	e	D	D	D	D	D	D	D	D
315222	Men's & boys' cut & sew suit, coat, & overcoat mfg . . . . .	8	2	1	e	D	D	D	D	D	D	D	D
321	Wood product mfg . . . . .	3	68	13	1 022	22 292	816	1 594	15 015	45 521	55 360	100 972	2 802
3219	Other wood product mfg . . . . .	4	58	10	862	18 853	693	1 339	12 863	37 092	41 774	78 948	1 927
32191	Millwork . . . . .	5	20	6	511	11 095	406	777	7 549	22 770	25 970	48 700	1 317
321918	Other millwork (including flooring) . . . . .	6	15	4	444	9 627	351	677	6 562	18 976	19 437	38 663	D
32192	Wood container & pallet mfg . . . . .	4	26	3	260	5 789	212	420	3 948	10 313	10 375	20 689	468
321920	Wood container & pallet mfg . . . . .	4	26	3	260	5 789	212	420	3 948	10 313	10 375	20 689	468
322	Paper mfg . . . . .	—	76	51	5 139	201 764	3 808	8 677	118 766	637 291	578 416	1 219 045	50 421
3222	Converted paper product mfg . . . . .	—	74	50	i	D	D	D	D	D	D	D	D
32221	Paperboard container mfg . . . . .	—	48	33	2 487	80 217	1 870	3 914	50 573	185 052	258 343	441 751	22 488
322211	Corrugated & solid fiber box mfg . . . . .	—	24	18	1 313	40 010	928	1 868	22 831	94 684	139 504	234 488	6 912
322212	Folding paperboard box mfg . . . . .	—	14	9	764	26 636	618	1 378	18 419	65 183	77 407	141 589	14 977
32222	Paper bag & coated & treated paper mfg . . . . .	—	14	8	1 598	88 228	1 153	3 161	48 645	385 295	236 277	626 120	22 841
322222	Coated & laminated paper mfg . . . . .	—	10	7	1 347	76 643	952	2 597	39 499	355 941	189 717	552 220	D
32223	Stationery product mfg . . . . .	—	6	4	f	D	D	D	D	D	D	D	1 612
322232	Envelope mfg . . . . .	—	4	4	511	15 422	390	746	9 957	28 314	37 628	65 332	D
32229	Other converted paper product mfg . . . . .	—	6	5	464	15 464	330	699	7 696	30 646	37 419	69 030	D
322299	All other converted paper product mfg . . . . .	—	5	4	e	D	D	D	D	D	D	D	1 418
323	Printing & related support activities . . . . .	1	442	80	8 370	260 588	6 151	12 331	156 707	555 084	329 994	884 969	40 424
3231	Printing & related support activities . . . . .	1	442	80	8 370	260 588	6 151	12 331	156 707	555 084	329 994	884 969	40 424
32311	Printing . . . . .	1	390	71	7 624	237 676	5 569	11 185	141 535	510 568	319 824	830 376	38 489
323110	Commercial lithographic printing . . . . .	1	221	52	5 892	186 313	4 359	8 851	117 140	388 279	250 973	640 070	27 040
323112	Commercial flexographic printing . . . . .	1	6	4	452	17 495	317	751	5 573	54 168	30 274	83 572	D
323113	Commercial screen printing . . . . .	—	29	4	346	8 749	244	427	4 737	17 558	8 258	25 715	1 187
323114	Quick printing . . . . .	4	77	2	379	9 040	246	360	4 804	18 092	8 721	26 833	932
323119	Other commercial printing . . . . .	9	40	3	271	7 777	195	370	4 528	16 111	11 176	27 320	1 122
32312	Support activities for printing . . . . .	1	52	9	746	22 912	582	1 146	15 172	44 516	10 170	54 593	1 935
323121	Tradebinding & related work . . . . .	—	17	2	332	7 357	290	570	5 199	15 248	2 288	17 592	774
323122	Prepress services . . . . .	1	35	7	414	15 555	292	576	9 973	29 268	7 882	37 001	1 161
324	Petroleum & coal products mfg . . . . .	4	37	14	1 044	51 496	569	1 075	20 187	195 687	304 923	498 960	31 131
3241	Petroleum & coal products mfg . . . . .	4	37	14	1 044	51 496	569	1 075	20 187	195 687	304 923	498 960	31 131
32412	Asphalt paving, roofing, & saturated materials mfg . . . . .	3	19	8	615	33 021	316	605	10 942	134 716	148 362	281 076	15 887
324122	Asphalt shingle & coating materials mfg . . . . .	3	6	5	467	25 976	222	424	6 649	109 494	92 387	199 803	14 503
325	Chemical mfg . . . . .	1	193	106	13 810	575 209	7 797	16 137	279 641	2 283 791	2 425 785	4 713 278	220 068
3251	Basic chemical mfg . . . . .	—	35	27	3 379	154 560	1 948	4 439	85 127	671 219	893 607	1 555 539	62 347
32513	Dye & pigment mfg . . . . .	—	7	6	914	45 640	516	1 139	26 765	200 374	217 269	413 067	15 320
325131	Inorganic dye & pigment mfg . . . . .	—	4	4	f	D	D	D	D	D	D	D	D
32518	Other basic inorganic chemical mfg . . . . .	—	12	8	f	D	D	D	D	D	D	D	D
325188	All other basic inorganic chemical mfg . . . . .	1	11	7	f	D	D	D	D	D	D	D	D
32519	Other basic organic chemical mfg . . . . .	—	13	11	1 353	62 067	863	1 846	35 677	275 568	447 073	721 490	33 353
325199	All other basic organic chemical mfg . . . . .	—	12	10	g	D	D	D	D	D	D	D	D



**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CLEVELAND—AKRON, OH CMSA—Con.</b>												
	<b>Cleveland—Lorain—Elyria, OH PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
325	Chemical mfg—Con.												
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg . . . . .	—	15	13	1 217	57 020	741	1 629	33 579	217 701	255 405	475 196	58 325
32521	Resin & synthetic rubber mfg . . . . .	—	15	13	1 217	57 020	741	1 629	33 579	217 701	255 405	475 196	58 325
325211	Plastics material & resin mfg . . . . .	—	12	10	f	D	D	D	D	D	D	D	D
325212	Synthetic rubber mfg . . . . .	—	3	3	f	D	D	D	D	D	D	D	D
3254	Pharmaceutical & medicine mfg . . . . .	—	7	3	542	18 975	401	851	13 131	93 887	51 576	145 748	D
32541	Pharmaceutical & medicine mfg . . . . .	—	7	3	542	18 975	401	851	13 131	93 887	51 576	145 748	D
325412	Pharmaceutical preparation mfg . . . . .	—	3	3	f	D	D	D	D	D	D	D	D
3255	Paint, coating, & adhesive mfg . . . . .	1	41	21	3 539	162 016	1 687	3 378	64 693	492 062	587 662	1 084 204	26 212
32551	Paint & coating mfg . . . . .	—	27	14	2 544	122 303	1 024	2 169	42 136	323 663	406 804	734 051	16 779
325510	Paint & coating mfg . . . . .	—	27	14	2 544	122 303	1 024	2 169	42 136	323 663	406 804	734 051	16 779
32552	Adhesive mfg . . . . .	2	14	7	995	39 713	663	1 209	22 557	168 399	180 858	350 153	9 433
325520	Adhesive mfg . . . . .	2	14	7	995	39 713	663	1 209	22 557	168 399	180 858	350 153	9 433
3256	Soap, cleaning compound, & toilet preparation mfg . . . . .	—	23	8	1 975	65 498	1 068	2 007	26 387	398 490	241 165	647 812	17 557
32561	Soap & cleaning compound mfg . . . . .	—	20	6	f	D	D	D	D	D	D	D	D
325612	Polish & other sanitation good mfg . . . . .	—	8	3	353	14 041	203	370	4 131	181 592	79 934	262 372	3 033
32562	Toilet preparation mfg . . . . .	1	3	2	g	D	D	D	D	D	D	D	D
325620	Toilet preparation mfg . . . . .	1	3	2	g	D	D	D	D	D	D	D	D
3259	Other chemical product mfg . . . . .	2	67	32	3 047	112 355	1 883	3 678	54 200	396 977	387 668	782 402	36 541
32591	Printing ink mfg . . . . .	2	13	4	288	11 178	168	370	5 183	18 717	33 941	55 562	1 184
325910	Printing ink mfg . . . . .	2	13	4	288	11 178	168	370	5 183	18 717	33 941	55 562	1 184
32599	All other chemical product & preparation mfg . . . . .	2	54	28	2 759	101 177	1 715	3 308	49 017	378 260	353 727	726 840	35 357
325991	Custom compounding of purchased resin . . . . .	—	17	10	g	D	D	D	D	D	D	D	D
325998	All other miscellaneous chemical product & preparation mfg . . . . .	3	35	16	1 436	54 492	833	1 443	23 774	237 855	214 387	451 080	21 392
326	Plastics & rubber products mfg . . . . .	—	265	161	16 071	436 278	12 661	25 430	288 171	1 073 031	1 027 021	2 095 585	85 251
3261	Plastics product mfg . . . . .	1	204	124	11 956	318 541	9 469	18 923	211 851	806 943	769 237	1 571 710	66 263
32611	Unsupported plastics film, sheet, & bag mfg . . . . .	1	17	14	722	22 423	581	1 268	15 769	62 415	58 060	120 133	3 547
326111	Unsupported plastics bag mfg . . . . .	—	7	6	364	10 698	321	691	8 679	34 852	23 635	58 544	1 834
326113	Unsupported plastics film & sheet (except packaging) mfg . . . . .	2	10	8	358	11 725	260	577	7 090	27 563	34 425	61 589	1 713
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg . . . . .	—	22	11	918	25 480	689	1 193	15 225	68 425	70 351	137 994	4 783
326121	Unsupported plastics profile shape mfg . . . . .	—	17	7	523	13 432	406	637	8 148	29 962	28 502	58 484	2 009
326122	Plastics pipe & pipe fitting mfg . . . . .	—	5	4	395	12 048	283	556	7 077	38 463	41 849	79 510	2 774
32613	Laminated plastics plate, sheet, & shape mfg . . . . .	1	17	6	611	21 880	479	980	13 312	56 492	46 068	102 861	2 029
326130	Laminated plastics plate, sheet, & shape mfg . . . . .	1	17	6	611	21 880	479	980	13 312	56 492	46 068	102 861	2 029
32616	Plastics bottle mfg . . . . .	—	5	2	652	17 885	583	1 327	14 161	39 396	69 057	107 070	D
326160	Plastics bottle mfg . . . . .	—	5	2	652	17 885	583	1 327	14 161	39 396	69 057	107 070	D
32619	Other plastics product mfg . . . . .	1	133	86	8 751	222 578	6 905	13 701	148 397	561 639	505 771	1 065 166	48 386
326199	All other plastics product mfg . . . . .	1	127	82	8 533	215 831	6 753	13 350	144 233	535 121	485 330	1 016 325	46 595
3262	Rubber product mfg . . . . .	—	61	37	4 115	117 737	3 192	6 507	76 320	266 088	257 784	523 875	18 988
32629	Other rubber product mfg . . . . .	—	49	34	3 899	111 944	3 032	6 174	72 567	254 982	240 710	495 641	18 149
326291	Rubber product mfg for mechanical use . . . . .	—	36	26	2 992	82 984	2 379	4 988	57 373	168 548	113 963	282 752	13 042
326299	All other rubber product mfg . . . . .	—	13	8	907	28 960	653	1 186	15 194	86 434	126 747	212 889	5 107

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CLEVELAND—AKRON, OH CMSA—Con.</b>												
	<b>Cleveland—Lorain—Elyria, OH PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
327	Nonmetallic mineral product mfg . . . . .	2	151	51	3 570	128 431	2 629	5 809	85 071	385 409	299 453	681 394	31 365
3271	Clay product & refractory mfg . . . . .	—	22	6	843	31 819	597	1 347	18 666	59 960	51 436	110 350	4 641
32711	Pottery, ceramics, & plumbing fixture mfg . . .	—	12	2	337	12 395	223	449	6 003	22 147	22 928	45 525	145
327113	Porcelain electrical supply mfg . . . . .	—	3	2	e	D	D	D	D	D	D	D	D
32712	Clay building material & refractories mfg . . . . .	—	10	4	506	19 424	374	898	12 663	37 813	28 508	64 825	4 496
327125	Nonclay refractory mfg . . . . .	—	7	3	477	18 659	348	826	12 134	36 310	27 088	62 315	4 437
3272	Glass & glass product mfg . . . . .	—	20	5	521	19 795	417	1 047	15 711	131 376	28 409	160 395	11 633
32721	Glass & glass product mfg . . . . .	—	20	5	521	19 795	417	1 047	15 711	131 376	28 409	160 395	11 633
327212	Other pressed & blown glass & glassware mfg . . . . .	—	6	2	e	D	D	D	D	D	D	D	D
3273	Cement & concrete product mfg . . . . .	5	63	24	1 171	44 797	858	1 842	29 792	94 260	127 438	219 911	9 299
32732	Ready-mix concrete mfg . . . . .	6	34	14	620	22 893	481	1 082	17 021	57 386	85 927	142 623	6 318
327320	Ready-mix concrete mfg . . . . .	6	34	14	620	22 893	481	1 082	17 021	57 386	85 927	142 623	6 318
32739	Other concrete product mfg . . . . .	3	17	4	355	15 068	254	515	9 038	22 214	27 605	48 884	1 784
327390	Other concrete product mfg . . . . .	3	17	4	355	15 068	254	515	9 038	22 214	27 605	48 884	1 784
3279	Other nonmetallic mineral product mfg . . . . .	4	42	14	911	27 143	661	1 350	17 443	71 178	62 416	132 300	4 505
32791	Abrasive product mfg . . . . .	1	10	5	368	9 850	241	465	5 846	19 246	23 240	42 453	976
327910	Abrasive product mfg . . . . .	1	10	5	368	9 850	241	465	5 846	19 246	23 240	42 453	976
32799	All other nonmetallic mineral product mfg . . . . .	5	32	9	543	17 293	420	885	11 597	51 932	39 176	89 847	3 529
331	Primary metal mfg . . . . .	—	127	84	18 148	882 932	14 805	33 619	673 578	2 014 208	3 118 333	5 097 746	297 451
3311	Iron & steel mills & ferroalloy mfg . . . . .	—	5	4	7 534	412 612	6 280	14 394	321 052	978 088	2 164 329	3 104 563	147 465
33111	Iron & steel mills & ferroalloy mfg . . . . .	—	5	4	7 534	412 612	6 280	14 394	321 052	978 088	2 164 329	3 104 563	147 465
331111	Iron & steel mills . . . . .	—	5	4	7 534	412 612	6 280	14 394	321 052	978 088	2 164 329	3 104 563	147 465
3312	Steel product mfg from purchased steel . . . . .	—	17	10	1 146	40 915	846	1 821	27 796	119 587	235 937	357 139	D
33121	Iron & steel pipes & tubes mfg from purchased steel . . . . .	—	4	3	373	11 616	246	523	7 674	23 727	51 037	75 834	D
331210	Iron & steel pipes & tubes mfg from purchased steel . . . . .	—	4	3	373	11 616	246	523	7 674	23 727	51 037	75 834	D
33122	Rolling & drawing of purchased steel . . . . .	—	13	7	773	29 299	600	1 298	20 122	95 860	184 900	281 305	9 903
331221	Cold-rolled steel shape mfg . . . . .	—	8	4	337	13 864	253	547	8 083	53 031	107 625	160 865	D
331222	Steel wire drawing . . . . .	—	5	3	436	15 435	347	751	12 039	42 829	77 275	120 440	D
3314	Nonferrous metal (except aluminum) production & processing . . . . .	1	25	16	1 650	71 438	1 244	2 832	46 268	150 785	230 823	386 270	14 932
33142	Copper rolling, drawing, extruding, & alloying . . . . .	—	6	6	f	D	D	D	D	D	D	D	D
331421	Copper rolling, drawing, & extruding . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
331423	Secondary smelting, refining, & alloying of copper . . . . .	—	4	4	e	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying . . . . .	2	16	8	918	40 853	725	1 647	29 106	107 611	66 536	173 900	D
331491	Other nonferrous metal rolling, drawing, & extruding . . . . .	3	8	6	460	21 553	372	850	15 945	66 040	42 673	108 250	3 774
331492	Other nonferrous metal secondary smelting, refining, & alloying . . . . .	1	8	2	458	19 300	353	797	13 161	41 571	23 863	65 650	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CLEVELAND—AKRON, OH CMSA—Con.</b>												
	<b>Cleveland—Lorain—Elyria, OH PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
331	Primary metal mfg—Con.												
3315	Foundries .....	-	74	49	7 570	349 460	6 225	14 056	272 350	727 330	421 087	1 143 776	118 380
33151	Ferrous metal foundries ..	-	19	12	4 034	238 970	3 395	8 059	194 188	480 495	215 375	695 434	83 889
331511	Iron foundries .....	-	11	5	3 142	208 121	2 713	6 471	174 818	410 814	164 755	577 110	D
331512	Steel investment foundries .....	-	5	5	f	D	D	D	D	D	D	D	D
331513	Steel foundries (except investment) .....	-	3	2	e	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	-	55	37	3 536	110 490	2 830	5 997	78 162	246 835	205 712	448 342	34 491
331521	Aluminum die-casting foundries .....	-	11	8	955	27 383	836	1 636	22 450	57 009	53 723	109 659	4 353
331522	Nonferrous (except aluminum) die-casting foundries .....	-	8	6	383	12 451	242	538	6 857	29 986	25 243	54 886	1 726
331524	Aluminum foundries (except die-casting) ..	1	22	14	1 279	41 701	1 070	2 359	30 470	79 564	67 567	145 577	17 682
331525	Copper foundries (except die-casting) ..	1	7	5	291	10 584	245	470	7 717	22 033	10 742	32 867	D
331528	Other nonferrous foundries (except die-casting) .....	-	7	4	628	18 371	437	994	10 668	58 243	48 437	105 353	D
332	Fabricated metal product mfg .....	-	1 407	470	39 748	1 385 584	29 490	61 471	882 484	3 296 508	2 512 426	5 842 424	263 910
3321	Forging & stamping .....	-	115	72	6 323	252 400	4 958	11 236	177 748	607 267	610 687	1 218 370	77 754
33211	Forging & stamping .....	-	115	72	6 323	252 400	4 958	11 236	177 748	607 267	610 687	1 218 370	77 754
332111	Iron & steel forging .....	-	16	12	1 092	47 781	802	1 855	29 761	104 385	128 999	236 182	14 844
332112	Nonferrous forging .....	-	4	1	g	D	D	D	D	D	D	D	D
332114	Custom roll forming .....	-	12	11	f	D	D	D	D	D	D	D	D
332116	Metal stamping .....	1	76	44	2 786	88 051	2 172	4 531	58 286	173 981	135 658	309 278	8 655
3322	Cutlery & handtool mfg .....	-	26	9	1 401	46 951	864	1 632	23 030	211 904	128 352	338 159	6 724
33221	Cutlery & handtool mfg ..	-	26	9	1 401	46 951	864	1 632	23 030	211 904	128 352	338 159	6 724
332212	Hand & edge tool mfg ..	-	20	7	1 295	43 460	789	1 505	21 034	201 419	113 034	313 584	6 239
3323	Architectural & structural metals mfg .....	1	139	43	3 044	96 389	2 119	4 189	54 722	201 363	187 177	388 939	9 087
33231	Plate work & fabricated structural product mfg ..	-	55	18	987	35 107	684	1 333	18 888	76 616	84 700	161 414	2 534
332312	Fabricated structural metal mfg .....	-	27	7	425	15 166	266	506	6 522	39 071	52 936	92 273	D
332313	Plate work mfg .....	-	24	10	493	17 971	372	744	11 423	32 819	27 652	60 301	1 197
33232	Ornamental & architectural metal products mfg .....	1	84	25	2 057	61 282	1 435	2 856	35 834	124 747	102 477	227 525	6 553
332322	Sheet metal work mfg ..	1	54	16	1 540	45 415	1 116	2 176	27 159	87 772	74 842	163 015	5 266
332323	Ornamental & architectural metal work mfg .....	-	13	6	323	10 369	213	462	5 934	26 427	15 638	41 950	855
3324	Boiler, tank, & shipping container mfg .....	3	25	9	800	29 358	641	1 322	21 214	54 383	84 141	140 658	3 960
33243	Metal can, box, & other metal container (light gauge) mfg .....	4	16	5	439	18 303	347	732	12 970	26 626	46 680	74 615	1 906
332439	Other metal container mfg .....	6	13	4	e	D	D	D	D	D	D	D	1 819
3325	Hardware mfg .....	4	17	7	1 219	30 753	565	1 237	13 873	79 590	49 310	127 449	3 844
33251	Hardware mfg .....	4	17	7	1 219	30 753	565	1 237	13 873	79 590	49 310	127 449	3 844
332510	Hardware mfg .....	4	17	7	1 219	30 753	565	1 237	13 873	79 590	49 310	127 449	3 844
3326	Spring & wire product mfg ..	-	41	23	1 679	50 490	1 301	2 701	32 109	104 910	76 773	180 533	5 579
33261	Spring & wire product mfg .....	-	41	23	1 679	50 490	1 301	2 701	32 109	104 910	76 773	180 533	5 579
332612	Spring (light gauge) mfg .....	2	14	8	f	D	D	D	D	D	D	D	2 656
332618	Other fabricated wire product mfg .....	-	24	13	962	30 708	734	1 539	17 509	60 898	44 143	104 748	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	690	156	12 791	445 028	9 880	20 355	298 773	953 503	542 568	1 501 898	77 146
33271	Machine shops .....	1	543	87	6 100	207 083	4 686	9 108	135 733	397 243	163 348	560 059	26 214
332710	Machine shops .....	1	543	87	6 100	207 083	4 686	9 108	135 733	397 243	163 348	560 059	26 214
33272	Turned product & screw, nut, & bolt mfg .....	-	147	69	6 691	237 945	5 194	11 247	163 040	556 260	379 220	941 839	50 932
332721	Precision turned product mfg .....	-	94	41	4 042	137 695	3 366	7 469	101 759	336 560	180 072	515 549	27 396
332722	Bolt, nut, screw, rivet, & washer mfg .....	-	53	28	2 649	100 250	1 828	3 778	61 281	219 700	199 148	426 290	23 536

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CLEVELAND—AKRON, OH CMSA—Con.</b>												
	<b>Cleveland—Lorain—Elyria, OH PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg—Con.												
3328	Coating, engraving, heat treating, & allied activities.	1	205	80	5 194	159 192	4 044	8 177	101 735	372 340	260 904	638 764	26 481
33281	Coating, engraving, heat treating, & allied activities.....	1	205	80	5 194	159 192	4 044	8 177	101 735	372 340	260 904	638 764	26 481
332811	Metal heat treating....	1	50	20	1 468	49 388	1 164	2 389	34 060	107 839	46 878	154 671	7 712
332812	Metal coating/engraving (exc jewelry/silverware)/allied services.....	—	44	16	1 183	35 864	880	1 810	19 584	86 511	130 218	220 944	6 852
332813	Electroplating, plating, polishing, anodizing, & coloring.....	—	111	44	2 543	73 940	2 000	3 978	48 091	177 990	83 808	263 149	11 917
3329	Other fabricated metal product mfg.....	—	149	71	7 297	275 023	5 118	10 622	159 280	711 248	572 514	1 307 654	53 335
33291	Metal valve mfg.....	—	53	38	4 601	178 902	3 251	6 936	107 526	530 854	407 168	958 009	42 739
332911	Industrial valve mfg...	1	16	12	g	D	D	D	D	D	D	D	14 213
332912	Fluid power valve & hose fitting mfg.....	—	20	13	2 409	100 721	1 623	3 472	55 022	360 493	220 954	583 027	14 322
332913	Plumbing fixture fitting & trim mfg.....	—	6	6	e	D	D	D	D	D	D	D	D
332919	Other metal valve & pipe fitting mfg.....	—	11	7	622	23 151	445	977	15 642	57 745	93 273	162 606	D
33299	All other fabricated metal product mfg.....	1	96	33	2 696	96 121	1 867	3 686	51 754	180 394	165 346	349 645	10 596
332993	Ammunition (except small arms) mfg.....	—	2	1	e	D	D	D	D	D	D	D	D
332996	Fabricated pipe & pipe fitting mfg.....	2	18	8	680	20 959	492	1 014	12 291	31 847	34 830	66 860	2 823
332997	Industrial pattern mfg..	—	18	4	391	13 802	338	687	11 320	19 627	5 924	25 708	1 228
332999	All other miscellaneous fabricated metal product mfg.....	1	51	18	1 089	37 018	788	1 589	20 916	80 174	69 435	151 296	4 896
333	Machinery mfg.....	—	627	230	26 319	1 006 688	16 664	36 917	540 883	2 425 360	2 387 881	4 777 021	128 194
3331	Agriculture, construction, & mining machinery mfg....	2	12	6	770	28 042	561	1 217	16 177	113 893	84 417	191 764	3 263
33312	Construction machinery mfg.....	—	7	4	f	D	D	D	D	D	D	D	2 137
333120	Construction machinery mfg.....	—	7	4	f	D	D	D	D	D	D	D	2 137
3332	Industrial machinery mfg..	—	66	27	2 488	98 000	1 392	2 730	45 652	274 122	210 622	468 717	6 003
33321	Sawmill & woodworking machinery mfg.....	—	5	1	e	D	D	D	D	D	D	D	D
333210	Sawmill & woodworking machinery mfg.....	—	5	1	e	D	D	D	D	D	D	D	D
33322	Plastics & rubber industry machinery mfg.....	—	11	4	f	D	D	D	D	D	D	D	D
333220	Plastics & rubber industry machinery mfg.....	—	11	4	f	D	D	D	D	D	D	D	D
33329	Other industrial machinery mfg.....	—	50	22	1 373	49 631	777	1 574	23 486	115 313	93 278	208 473	3 953
333298	All other industrial machinery mfg.....	—	23	11	800	28 722	444	921	13 770	69 601	51 629	120 991	2 108
3333	Commercial & service industry machinery mfg..	—	21	7	601	27 885	397	809	13 210	84 301	75 987	162 219	2 131
33331	Commercial & service industry machinery mfg.....	—	21	7	601	27 885	397	809	13 210	84 301	75 987	162 219	2 131
333319	Other commercial & service industry machinery mfg.....	—	15	5	474	24 988	311	644	12 019	77 303	70 333	150 438	1 851
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg.....	—	28	21	2 896	96 811	1 968	4 439	52 592	245 306	327 982	581 567	10 991
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg..	—	28	21	2 896	96 811	1 968	4 439	52 592	245 306	327 982	581 567	10 991
333412	Industrial & commercial fan & blower mfg.....	—	4	4	284	10 295	203	423	4 767	22 739	40 256	62 980	D
333414	Heating equipment (except warm air furnaces) mfg.....	—	10	7	1 180	43 940	663	1 393	18 563	97 258	78 291	173 478	3 909
333415	AC & warm air heating & commercial/ industrial refrig equip mfg.....	—	10	8	1 299	39 021	1 002	2 411	26 806	116 146	200 696	327 002	5 762

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CLEVELAND—AKRON, OH CMSA—Con.</b>												
	<b>Cleveland—Lorain—Elyria, OH PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
333	Machinery mfg—Con.												
3335	Metalworking machinery mfg . . . . .	—	331	99	8 314	319 924	5 990	12 418	205 236	705 437	350 694	1 069 369	49 681
33351	Metalworking machinery mfg . . . . .	—	331	99	8 314	319 924	5 990	12 418	205 236	705 437	350 694	1 069 369	49 681
333511	Industrial mold mfg . . .	—	67	19	1 087	44 746	894	1 942	32 683	76 179	21 203	97 220	5 453
333512	Machine tool (metal cutting types) mfg . . .	—	18	13	993	41 471	663	1 465	24 585	66 883	61 194	125 749	1 684
333514	Special die & tool, die set, jig, & fixture mfg .	—	149	32	2 936	111 325	2 155	4 204	72 825	244 275	128 459	370 238	22 575
333515	Cutting tool & machine tool accessory mfg . .	—	69	23	2 467	88 188	1 823	3 771	59 191	258 670	68 689	324 448	13 346
333516	Rolling mill machinery & equipment mfg . . . .	—	7	5	333	14 018	180	430	6 252	19 709	43 671	86 973	1 619
333518	Other metalworking machinery mfg . . . . .	2	14	4	333	14 041	171	372	6 291	26 159	16 689	42 839	4 525
3336	Engine, turbine, & power transmission equipment mfg . . . . .	4	23	16	1 545	61 558	914	1 879	30 416	134 902	97 569	230 540	8 704
33361	Engine, turbine, & power transmission equipment mfg . . . . .	4	23	16	1 545	61 558	914	1 879	30 416	134 902	97 569	230 540	8 704
333612	Speed changer, industrial high-speed drive, & gear mfg . . . .	5	10	5	654	24 826	426	834	13 820	42 023	39 540	82 157	3 892
333613	Mechanical power transmission equipment mfg . . . . .	4	9	7	598	27 168	271	538	9 787	75 834	32 489	105 640	D
333618	Other engine equipment mfg . . . . .	—	4	4	293	9 564	217	507	6 809	17 045	25 540	42 743	D
3339	Other general-purpose machinery mfg . . . . .	—	146	54	9 705	374 468	5 442	13 425	177 600	867 399	1 240 610	2 072 845	47 421
33391	Pump & compressor mfg . . . . .	4	11	5	263	7 919	126	217	3 317	17 530	13 668	31 147	783
33392	Material handling equipment mfg . . . . .	—	31	21	1 848	71 831	1 014	2 232	31 363	164 566	189 489	344 615	4 812
333922	Conveyor & conveying equipment mfg . . . . .	1	16	10	944	38 476	532	1 292	16 711	80 589	63 104	143 958	2 224
333923	Overhead traveling crane, hoist, & monorail system mfg .	—	5	3	e	D	D	D	D	D	D	D	D
333924	Industrial truck, tractor, trailer, & stacker machinery mfg . . . . .	1	9	7	389	12 809	252	489	6 496	26 470	32 682	58 811	1 717
33399	All other general-purpose machinery mfg . . . . .	—	104	28	7 594	294 718	4 302	10 976	142 920	685 303	1 037 453	1 697 083	41 826
333991	Power-driven handtool mfg . . . . .	—	11	5	583	25 260	319	521	13 033	62 088	48 554	110 869	3 941
333992	Welding & soldering equipment mfg . . . . .	—	9	6	4 706	177 265	2 868	6 189	94 862	423 670	802 199	1 194 343	D
333993	Packaging machinery mfg . . . . .	—	11	5	1 335	57 163	536	1 099	17 316	135 587	140 514	279 666	D
333994	Industrial process furnace & oven mfg . .	—	17	5	292	10 981	161	2 418	5 177	19 811	22 717	41 422	658
333999	All other miscellaneous general-purpose machinery mfg . . . . .	3	47	5	510	17 351	317	547	9 005	30 547	13 712	45 308	1 226
334	Computer & electronic product mfg . . . . .	—	154	72	9 057	336 945	4 361	8 330	105 795	847 188	656 272	1 513 109	57 516
3341	Computer & peripheral equipment mfg . . . . .	5	20	6	664	22 551	326	607	11 225	38 950	45 343	87 922	3 167
33411	Computer & peripheral equipment mfg . . . . .	5	20	6	664	22 551	326	607	11 225	38 950	45 343	87 922	3 167
334119	Other computer peripheral equipment mfg . . . . .	6	9	3	e	D	D	D	D	D	D	D	D
3342	Communications equipment mfg . . . . .	—	14	6	g	D	D	D	D	D	D	D	6 872
33422	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	—	10	4	1 105	31 789	547	1 187	7 594	78 724	67 639	144 877	6 491
334220	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	—	10	4	1 105	31 789	547	1 187	7 594	78 724	67 639	144 877	6 491

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CLEVELAND—AKRON, OH CMSA—Con.</b>												
	<b>Cleveland—Lorain—Elyria, OH PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
334	Computer & electronic product mfg—Con.												
3344	Semiconductor & other electronic component mfg .....	1	52	26	1 906	49 552	1 339	2 636	27 612	135 606	98 119	236 098	12 439
33441	Semiconductor & other electronic component mfg .....	1	52	26	1 906	49 552	1 339	2 636	27 612	135 606	98 119	236 098	12 439
334412	Bare printed circuit board mfg .....	3	11	5	255	5 888	219	417	4 167	10 331	8 360	18 925	797
334418	Printed circuit assembly (electronic assembly) mfg .....	—	7	6	456	12 174	321	689	6 879	27 617	36 844	62 036	2 578
334419	Other electronic component mfg .....	2	25	9	660	16 225	475	894	8 967	26 869	24 215	54 061	2 151
3345	Navigational, measuring, medical, & control instruments mfg .....	—	60	33	5 068	224 432	1 957	3 635	55 503	581 477	423 923	1 010 053	34 324
33451	Navigational, measuring, medical, & control instruments mfg .....	—	60	33	5 068	224 432	1 957	3 635	55 503	581 477	423 923	1 010 053	34 324
334510	Electromedical & electrotherapeutic apparatus mfg .....	—	5	2	e	D	D	D	D	D	D	D	D
334513	Industrial process control instrument mfg .....	—	12	10	1 586	71 319	481	698	13 617	188 453	66 928	254 510	10 304
334515	Electricity measuring & testing instrument mfg .....	—	11	8	1 277	52 719	549	1 135	18 230	123 314	63 221	188 853	11 306
334516	Analytical laboratory instrument mfg .....	—	4	1	e	D	D	D	D	D	D	D	D
334517	Irradiation apparatus mfg .....	—	4	3	f	D	D	D	D	D	D	D	D
334519	Other measuring & controlling device mfg .....	—	13	6	550	23 052	293	754	8 618	61 029	29 449	91 942	2 260
335	Electrical equipment, appliance, & component mfg .....	—	137	79	13 178	479 482	7 593	14 803	196 104	1 446 643	1 093 249	2 534 273	66 887
3351	Electric lighting equipment mfg .....	—	26	12	1 942	60 175	1 558	2 993	43 380	191 102	123 942	312 360	9 522
33511	Electric lamp bulb & part mfg .....	—	4	4	997	32 334	815	1 627	25 887	112 488	60 358	169 174	D
335110	Electric lamp bulb & part mfg .....	—	4	4	997	32 334	815	1 627	25 887	112 488	60 358	169 174	D
33512	Lighting fixture mfg .....	1	22	8	945	27 841	743	1 366	17 493	78 614	63 584	143 186	D
335121	Residential electric lighting fixture mfg ...	1	7	4	f	D	D	D	D	D	D	D	D
3352	Household appliance mfg ..	—	10	10	1 867	63 268	1 059	1 947	22 938	162 759	316 736	480 392	10 515
33521	Small electrical appliance mfg .....	—	9	9	g	D	D	D	D	D	D	D	D
335211	Electric housewares & household fan mfg ...	—	2	2	f	D	D	D	D	D	D	D	D
335212	Household vacuum cleaner mfg .....	—	7	7	g	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	—	47	20	5 454	238 416	2 484	5 211	75 787	762 402	373 211	1 137 316	29 753
33531	Electrical equipment mfg .....	—	47	20	5 454	238 416	2 484	5 211	75 787	762 402	373 211	1 137 316	29 753
335312	Motor & generator mfg .....	—	13	6	1 208	43 866	957	2 149	30 743	101 322	65 814	164 346	3 628
335313	Switchgear & switchboard apparatus mfg .....	—	13	5	443	14 985	272	543	7 462	52 303	26 494	78 465	799
335314	Relay & industrial control mfg .....	—	21	9	3 803	179 565	1 255	2 519	37 582	608 777	280 903	894 505	25 326
3359	Other electrical equipment & component mfg .....	—	54	37	3 915	117 623	2 492	4 652	53 999	330 380	279 360	604 205	17 097
33592	Communication & energy wire & cable mfg .....	—	8	8	f	D	D	D	D	D	D	D	D
335929	Other communication & energy wire mfg ...	—	6	6	e	D	D	D	D	D	D	D	D
33593	Wiring device mfg .....	—	18	14	1 044	36 163	618	1 291	17 797	65 036	88 739	151 115	6 796
335931	Current-carrying wiring device mfg .....	—	11	7	379	12 315	297	608	7 363	20 927	32 238	52 565	3 485
335932	Noncurrent-carrying wiring device mfg .....	—	7	7	665	23 848	321	683	10 434	44 109	56 501	98 550	3 311

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>CLEVELAND-AKRON, OH CMSA—Con.</b>												
	<b>Cleveland-Lorain-Elyria, OH PMSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
335	Electrical equipment, appliance, & component mfg—Con.												
3359	Other electrical equipment & component mfg—Con.												
33599	All other electrical equipment & component mfg .....	-	25	13	2 107	62 277	1 338	2 445	26 043	193 466	134 008	324 539	7 946
335991	Carbon & graphite product mfg .....	-	8	4	534	18 674	374	805	11 665	34 209	42 639	77 011	4 571
335999	All other miscellaneous electrical equipment & component mfg .....	-	17	9	1 573	43 603	964	1 640	14 378	159 257	91 369	247 528	3 375
336	Transportation equipment mfg .....	-	156	98	25 373	1 224 615	20 697	43 526	944 380	4 315 474	6 625 066	10 928 291	637 689
3361	Motor vehicle mfg .....	-	3	3	i	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg .....	-	3	3	i	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg .....	-	2	2	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	104	68	15 695	743 108	13 063	28 274	582 164	1 493 685	1 889 071	3 399 930	442 712
33631	Motor vehicle gasoline engine & engine parts mfg .....	-	15	7	h	D	D	D	D	D	D	D	D
336311	Carburetor, piston, piston ring, & valve mfg .....	-	7	4	g	D	D	D	D	D	D	D	D
336312	Gasoline engine & engine parts mfg ....	-	8	3	g	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical & electronic equipment mfg .....	1	10	4	678	16 508	450	825	7 608	43 730	44 152	86 721	D
336322	Other motor vehicle electrical & electronic equipment mfg .....	1	9	4	f	D	D	D	D	D	D	D	D
33636	Motor vehicle seating & interior trim mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating & interior trim mfg ...	-	4	3	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	44	35	10 261	510 829	8 804	20 245	416 918	856 579	1 064 454	1 924 860	D
336370	Motor vehicle metal stamping .....	-	44	35	10 261	510 829	8 804	20 245	416 918	856 579	1 064 454	1 924 860	D
33639	Other motor vehicle parts mfg .....	3	22	14	895	24 402	716	1 288	15 813	63 983	54 360	115 804	D
336399	All other motor vehicle parts mfg .....	3	20	12	f	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg .....	-	26	19	h	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	-	26	19	h	D	D	D	D	D	D	D	D
336412	Aircraft engine & engine parts mfg ....	-	11	10	g	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg .....	-	15	9	g	D	D	D	D	D	D	D	D
3369	Other transportation equipment mfg .....	2	12	7	f	D	D	D	D	D	D	D	D
33699	Other transportation equipment mfg .....	2	12	7	f	D	D	D	D	D	D	D	D
337	Furniture & related product mfg .....	-	143	25	3 564	110 848	2 632	5 958	71 615	222 170	248 682	468 818	19 324
3371	Household & institutional furniture & kitchen cabinet mfg .....	-	104	8	2 461	74 986	1 948	4 471	53 432	154 942	170 030	323 580	12 196
33711	Wood kitchen cabinet & counter top mfg .....	-	77	5	2 204	69 743	1 750	4 132	50 211	142 241	152 419	293 254	11 943
337110	Wood kitchen cabinet & counter top mfg ...	-	77	5	2 204	69 743	1 750	4 132	50 211	142 241	152 419	293 254	11 943
33712	Household & institutional furniture mfg .....	2	27	3	257	5 243	198	339	3 221	12 701	17 611	30 326	253
3372	Office furniture (including fixtures) mfg .....	1	31	14	846	29 631	502	1 097	13 390	41 892	51 908	93 094	6 135
33721	Office furniture (including fixtures) mfg .....	1	31	14	846	29 631	502	1 097	13 390	41 892	51 908	93 094	6 135
337215	Showcase, partition, shelving, & locker mfg .....	2	18	8	581	21 806	332	745	9 433	27 232	43 807	70 699	5 076
3379	Other furniture related product mfg .....	-	8	3	257	6 231	182	390	4 793	25 336	26 744	52 144	993

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CLEVELAND—AKRON, OH CMSA—Con.</b>												
	<b>Cleveland—Lorain—Elyria, OH PMSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
339	Miscellaneous mfg.....	1	316	75	7 446	215 483	5 250	10 118	113 527	685 929	370 517	1 035 690	33 424
3391	Medical equipment & supplies mfg.....	1	140	35	3 916	118 812	2 709	5 284	61 330	453 880	235 400	669 460	23 586
33911	Medical equipment & supplies mfg.....	1	140	35	3 916	118 812	2 709	5 284	61 330	453 880	235 400	669 460	23 586
339112	Surgical & medical instrument mfg.....	2	18	9	475	18 411	280	502	7 151	80 863	23 215	103 721	6 423
339113	Surgical appliance & supplies mfg.....	—	29	16	2 614	79 209	1 873	3 776	43 033	329 387	186 550	497 559	14 829
339116	Dental laboratories...	5	74	5	424	10 365	310	532	6 351	19 387	7 317	26 922	682
3399	Other miscellaneous mfg.....	1	176	40	3 530	96 671	2 541	4 834	52 197	232 049	135 117	366 230	9 838
33993	Doll, toy, & game mfg....	—	8	5	548	12 712	436	880	6 562	37 582	15 098	49 448	510
339932	Game, toy, & children's vehicle mfg.....	—	5	3	e	D	D	D	D	D	D	D	D
33995	Sign mfg.....	—	58	13	885	26 867	549	1 057	11 656	53 059	34 179	86 931	2 302
339950	Sign mfg.....	—	58	13	885	26 867	549	1 057	11 656	53 059	34 179	86 931	2 302
33999	All other miscellaneous mfg.....	1	70	18	1 753	49 280	1 303	2 445	29 220	124 528	73 534	198 167	6 369
339992	Musical instrument mfg.....	—	13	4	418	11 701	361	713	9 398	39 909	9 854	50 293	460
339994	Broom, brush, & mop mfg.....	—	16	7	702	19 248	567	1 028	11 734	43 586	35 589	79 762	1 624
339999	All other miscellaneous mfg.....	3	22	3	381	10 572	197	364	3 764	26 795	14 406	40 269	3 063
	<b>COLUMBUS, OH MSA</b>												
<b>31-33</b>	<b>Manufacturing.....</b>	<b>—</b>	<b>1 577</b>	<b>554</b>	<b>77 263</b>	<b>2 742 889</b>	<b>56 012</b>	<b>111 328</b>	<b>1 710 259</b>	<b>9 658 829</b>	<b>8 550 968</b>	<b>18 153 077</b>	<b>719 163</b>
311	Food mfg.....	—	100	36	6 086	208 754	4 204	8 083	125 364	1 614 126	1 011 633	2 644 169	34 653
3111	Animal food mfg.....	—	4	3	f	D	D	D	D	D	D	D	D
31111	Animal food mfg.....	—	4	3	f	D	D	D	D	D	D	D	D
311111	Dog & cat food mfg....	—	1	1	e	D	D	D	D	D	D	D	D
3112	Grain & oilseed milling....	—	3	3	676	28 535	413	874	16 773	139 628	142 719	283 911	6 664
31122	Starch & vegetable fats & oils mfg.....	—	1	1	e	D	D	D	D	D	D	D	D
311225	Fats & oils refining & blending.....	—	1	1	e	D	D	D	D	D	D	D	D
31123	Breakfast cereal mfg....	—	1	1	e	D	D	D	D	D	D	D	D
311230	Breakfast cereal mfg..	—	1	1	e	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg.....	7	7	2	e	D	D	D	D	D	D	D	D
31141	Frozen food mfg.....	9	4	2	e	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg.....	9	4	2	e	D	D	D	D	D	D	D	D
3115	Dairy product mfg.....	—	9	6	1 064	37 912	738	1 915	25 986	395 183	233 076	645 324	5 071
31151	Dairy product (except frozen) mfg.....	—	6	4	f	D	D	D	D	D	D	D	D
311511	Fluid milk mfg.....	—	4	2	e	D	D	D	D	D	D	D	D
311514	Dry, condensed, & evaporated dairy product mfg.....	—	2	2	f	D	D	D	D	D	D	D	D
3116	Meat product mfg.....	1	13	9	660	13 359	548	956	9 562	39 264	130 528	170 385	2 041
31161	Animal slaughtering & processing.....	1	13	9	660	13 359	548	956	9 562	39 264	130 528	170 385	2 041
311612	Meat processed from carcasses.....	—	7	5	416	8 442	354	630	6 253	26 526	99 362	126 395	1 073
3118	Bakeries & tortilla mfg....	—	44	6	1 717	52 316	1 000	1 554	27 295	126 634	83 296	209 240	2 241
31181	Bread & bakery product mfg.....	—	44	6	1 717	52 316	1 000	1 554	27 295	126 634	83 296	209 240	2 241
311812	Commercial bakeries..	—	9	3	g	D	D	D	D	D	D	D	1 883
3119	Other food mfg.....	—	11	5	628	20 227	431	855	12 606	486 864	197 927	684 724	9 033
31194	Seasoning & dressing mfg.....	—	2	2	e	D	D	D	D	D	D	D	D
311941	Mayonnaise, dressing, & other prepared sauce mfg.....	—	1	1	e	D	D	D	D	D	D	D	D
312	Beverage & tobacco product mfg.....	—	12	7	1 967	85 566	1 156	2 055	51 320	577 321	442 185	1 020 140	67 698
3121	Beverage mfg.....	—	12	7	1 967	85 566	1 156	2 055	51 320	577 321	442 185	1 020 140	67 698
31211	Soft drink & ice mfg....	—	9	5	f	D	D	D	D	D	D	D	D
312111	Soft drink mfg.....	—	4	4	f	D	D	D	D	D	D	D	D
31212	Breweries.....	—	2	1	f	D	D	D	D	D	D	D	D
312120	Breweries.....	—	2	1	f	D	D	D	D	D	D	D	D
314	Textile product mills.....	3	27	5	277	5 328	206	318	3 048	10 236	8 906	19 228	320



**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>COLUMBUS, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
315	Apparel mfg . . . . .	8	16	4	f	D	D	D	D	D	D	D	D
3152	Cut & sew apparel mfg . . . . .	8	12	4	f	D	D	D	D	D	D	D	D
31522	Men's & boys' cut & sew apparel mfg . . . . .	8	3	2	e	D	D	D	D	D	D	D	D
315223	Men's & boys' cut & sew shirt (exc work shirt) mfg . . . . .	9	2	1	e	D	D	D	D	D	D	D	D
316	Leather & allied product mfg . . . . .	—	5	2	e	D	D	D	D	D	D	D	272
321	Wood product mfg . . . . .	1	53	15	1 089	24 479	882	1 631	16 417	58 335	66 382	123 413	2 744
3212	Veneer, plywood, & engineered wood product mfg . . . . .	—	10	8	599	14 220	491	947	9 348	34 757	25 486	59 936	1 102
32121	Veneer, plywood, & engineered wood product mfg . . . . .	—	10	8	599	14 220	491	947	9 348	34 757	25 486	59 936	1 102
321214	Truss mfg . . . . .	—	5	5	255	5 744	210	403	3 469	11 041	13 798	24 576	371
3219	Other wood product mfg . . . . .	3	37	7	449	9 529	358	634	6 494	19 739	22 301	42 080	1 526
322	Paper mfg . . . . .	—	29	23	1 761	59 681	1 351	2 785	38 526	161 227	223 052	381 324	12 962
3221	Pulp, paper, & paperboard mills . . . . .	—	4	4	356	13 728	270	596	9 044	36 309	38 390	73 281	4 200
32213	Paperboard mills . . . . .	—	3	3	e	D	D	D	D	D	D	D	D
322130	Paperboard mills . . . . .	—	3	3	e	D	D	D	D	D	D	D	D
3222	Converted paper product mfg . . . . .	—	25	19	1 405	45 953	1 081	2 189	29 482	124 918	184 662	308 043	8 762
32221	Paperboard container mfg . . . . .	—	16	15	1 178	39 432	891	1 813	24 762	104 980	146 883	250 364	7 746
322211	Corrugated & solid fiber box mfg . . . . .	—	9	9	781	26 224	575	1 076	16 223	67 262	110 312	177 658	5 291
323	Printing & related support activities . . . . .	1	238	54	5 303	166 209	3 826	7 142	103 540	359 051	265 910	623 834	25 875
3231	Printing & related support activities . . . . .	1	238	54	5 303	166 209	3 826	7 142	103 540	359 051	265 910	623 834	25 875
32311	Printing . . . . .	1	213	48	4 930	152 539	3 539	6 591	95 279	334 463	259 041	592 385	24 484
323110	Commercial lithographic printing . . . . .	1	100	38	3 719	118 955	2 776	5 190	78 114	263 614	210 367	472 887	21 261
323113	Commercial screen printing . . . . .	—	32	5	618	16 877	367	758	7 600	32 821	17 901	51 154	1 776
323114	Quick printing . . . . .	3	54	1	293	7 142	193	297	4 494	15 933	9 216	25 144	775
32312	Support activities for printing . . . . .	2	25	6	373	13 670	287	551	8 261	24 588	6 869	31 449	1 391
323122	Prepress services . . . . .	1	17	5	297	12 275	220	453	7 235	22 461	6 202	26 659	1 353
325	Chemical mfg . . . . .	—	75	34	5 025	211 716	2 571	5 135	85 563	1 020 537	922 532	1 916 982	96 978
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg . . . . .	2	6	3	374	20 016	203	436	10 010	36 799	175 175	210 730	4 293
32521	Resin & synthetic rubber mfg . . . . .	2	6	3	374	20 016	203	436	10 010	36 799	175 175	210 730	4 293
325211	Plastics material & resin mfg . . . . .	2	4	3	e	D	D	D	D	D	D	D	D
3254	Pharmaceutical & medicine mfg . . . . .	—	6	5	1 019	41 836	653	1 213	20 989	275 437	111 780	371 737	D
32541	Pharmaceutical & medicine mfg . . . . .	—	6	5	1 019	41 836	653	1 213	20 989	275 437	111 780	371 737	D
325412	Pharmaceutical preparation mfg . . . . .	—	2	2	f	D	D	D	D	D	D	D	D
3255	Paint, coating, & adhesive mfg . . . . .	—	25	13	2 663	117 732	1 096	2 325	37 934	548 034	435 493	971 824	32 882
32551	Paint & coating mfg . . . . .	—	13	6	1 968	90 034	787	1 698	29 000	459 938	351 674	799 812	27 478
325510	Paint & coating mfg . . . . .	—	13	6	1 968	90 034	787	1 698	29 000	459 938	351 674	799 812	27 478
32552	Adhesive mfg . . . . .	2	12	7	695	27 698	309	627	8 934	88 096	83 819	172 012	5 404
325520	Adhesive mfg . . . . .	2	12	7	695	27 698	309	627	8 934	88 096	83 819	172 012	5 404
3259	Other chemical product mfg . . . . .	—	16	7	422	14 010	242	403	6 956	67 928	122 320	193 525	3 355
32599	All other chemical product & preparation mfg . . . . .	—	13	5	336	11 150	203	327	5 942	59 071	112 230	174 546	3 296
326	Plastics & rubber products mfg . . . . .	1	94	46	7 597	249 512	5 932	11 449	157 481	646 403	526 549	1 168 788	69 353
3261	Plastics product mfg . . . . .	1	83	43	7 199	238 637	5 625	10 883	150 843	621 581	507 334	1 124 598	68 303
32611	Unsupported plastics film, sheet, & bag mfg . . . . .	—	8	5	1 499	69 734	1 068	2 041	39 764	233 573	183 699	417 239	D
326113	Unsupported plastics film & sheet (except packaging) mfg . . . . .	—	5	3	1 340	65 687	933	1 839	37 499	221 218	172 820	393 799	D
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg . . . . .	—	7	4	677	26 532	548	1 086	19 046	51 025	47 016	96 495	6 986
326121	Unsupported plastics profile shape mfg . . . . .	—	3	2	f	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>COLUMBUS, OH MSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
326	Plastics & rubber products mfg—Con.												
3261	Plastics product mfg—Con.												
32619	Other plastics product mfg .....	2	53	28	4 696	132 347	3 742	7 229	85 424	300 323	246 749	545 265	34 292
326199	All other plastics product mfg .....	2	48	26	4 628	129 972	3 686	7 126	84 132	296 009	244 585	538 764	34 182
3262	Rubber product mfg .....	—	11	3	398	10 875	307	566	6 638	24 822	19 215	44 190	1 050
32621	Tire mfg .....	—	9	2	e	D	D	D	D	D	D	D	D
326211	Tire mfg (except retreading) .....	—	1	1	e	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	—	88	45	9 143	339 807	7 012	14 481	230 955	1 096 322	547 848	1 633 893	121 544
3271	Clay product & refractory mfg .....	—	11	4	e	D	D	D	D	D	D	D	D
32712	Clay building material & refractories mfg .....	—	8	3	309	12 141	157	313	4 531	34 936	33 291	68 097	4 874
3272	Glass & glass product mfg .	—	21	12	4 662	162 940	3 692	7 720	113 238	573 434	202 757	756 148	81 984
32721	Glass & glass product mfg .....	—	21	12	4 662	162 940	3 692	7 720	113 238	573 434	202 757	756 148	81 984
327212	Other pressed & blown glass & glassware mfg .....	—	11	8	4 286	153 644	3 394	7 218	106 853	555 263	185 242	720 577	80 533
327215	Glass product mfg made of purchased glass .....	1	10	4	376	9 296	298	502	6 385	18 171	17 515	35 571	1 451
3273	Cement & concrete product mfg .....	1	37	18	971	31 482	671	1 474	19 177	74 351	87 338	161 508	8 913
32732	Ready-mix concrete mfg .	—	20	9	508	16 689	418	929	12 239	40 418	54 374	94 894	4 261
327320	Ready-mix concrete mfg .....	—	20	9	508	16 689	418	929	12 239	40 418	54 374	94 894	4 261
32733	Concrete pipe, brick, & block mfg .....	1	8	6	308	10 738	145	328	4 271	24 980	21 665	46 590	3 271
3279	Other nonmetallic mineral product mfg .....	—	17	10	3 102	129 938	2 443	4 863	92 943	408 475	222 604	640 938	25 586
32791	Abrasive product mfg .	—	2	2	f	D	D	D	D	D	D	D	D
327910	Abrasive product mfg .	—	2	2	f	D	D	D	D	D	D	D	D
32799	All other nonmetallic mineral product mfg ...	—	15	8	g	D	D	D	D	D	D	D	D
327993	Mineral wool mfg .....	—	9	7	2 174	88 400	1 833	3 535	70 430	249 394	150 328	400 821	D
331	Primary metal mfg .....	—	32	19	3 650	121 570	3 013	6 018	89 829	349 204	385 226	737 728	20 346
3312	Steel product mfg from purchased steel .....	—	4	3	f	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel .....	—	1	1	e	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel .....	—	1	1	e	D	D	D	D	D	D	D	D
33122	Rolling & drawing of purchased steel .....	—	3	2	e	D	D	D	D	D	D	D	D
331221	Cold-rolled steel shape mfg .....	—	2	1	e	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing ..	—	4	2	e	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing .....	—	4	2	e	D	D	D	D	D	D	D	D
331319	Other aluminum rolling & drawing .....	—	1	1	e	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing .....	—	5	3	359	11 877	247	490	6 845	43 042	33 040	76 407	3 994
33142	Copper rolling, drawing, extruding, & alloying ...	—	2	1	e	D	D	D	D	D	D	D	D
331421	Copper rolling, drawing, & extruding .	—	1	1	e	D	D	D	D	D	D	D	D
3315	Foundries .....	—	19	11	2 216	70 432	1 903	3 601	57 523	163 512	80 457	244 647	6 667
33151	Ferrous metal foundries .	—	13	10	2 171	69 433	1 864	3 535	56 779	161 195	79 200	241 063	6 590
331511	Iron foundries .....	1	8	6	e	D	D	D	D	D	D	D	D
331512	Steel investment foundries .....	—	4	3	1 488	43 259	1 250	2 259	34 054	82 004	37 168	119 621	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>COLUMBUS, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg . . . . .	-	295	96	10 639	372 525	8 285	16 361	254 080	1 000 404	973 391	1 962 011	43 964
3321	Forging & stamping . . . . .	-	13	9	840	31 484	613	1 292	18 453	93 421	70 707	162 398	5 900
33211	Forging & stamping . . . . .	-	13	9	840	31 484	613	1 292	18 453	93 421	70 707	162 398	5 900
332114	Custom roll forming . . . . .	-	2	e	D	D	D	D	D	D	D	D	D
332116	Metal stamping . . . . .	2	10	6	442	15 272	345	726	9 422	31 863	20 524	51 433	D
3322	Cutlery & handtool mfg . . . . .	-	12	3	479	15 006	344	545	7 204	44 998	39 016	83 808	1 772
33221	Cutlery & handtool mfg . . . . .	-	12	3	479	15 006	344	545	7 204	44 998	39 016	83 808	1 772
332212	Hand & edge tool mfg . . . . .	-	7	2	354	10 910	249	363	4 587	39 053	34 106	73 004	954
3323	Architectural & structural metals mfg . . . . .	-	62	25	1 534	48 899	1 108	2 035	29 578	145 271	139 702	286 453	2 994
33231	Plate work & fabricated structural product mfg . . . . .	-	27	10	576	17 163	413	708	9 808	74 402	45 500	118 255	1 483
332312	Fabricated structural metal mfg . . . . .	-	19	7	396	12 377	268	468	6 748	65 093	39 527	103 296	1 059
33232	Ornamental & architectural metal products mfg . . . . .	1	35	15	958	31 736	695	1 327	19 770	70 869	94 202	168 198	1 511
332322	Sheet metal work mfg . . . . .	1	23	10	682	23 290	492	948	14 466	53 230	82 454	138 630	1 339
3324	Boiler, tank, & shipping container mfg . . . . .	-	15	10	1 549	58 552	1 168	2 413	39 429	141 518	259 686	393 310	9 544
33241	Power boiler & heat exchanger mfg . . . . .	-	4	3	f	D	D	D	D	D	D	D	D
332410	Power boiler & heat exchanger mfg . . . . .	-	4	3	f	D	D	D	D	D	D	D	D
33242	Metal tank (heavy gauge) mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
332420	Metal tank (heavy gauge) mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
33243	Metal can, box, & other metal container (light gauge) mfg . . . . .	-	8	4	394	17 564	339	700	14 284	42 205	173 712	211 721	8 105
332431	Metal can mfg . . . . .	-	3	2	e	D	D	D	D	D	D	D	D
3325	Hardware mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
33251	Hardware mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
332510	Hardware mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
3326	Spring & wire product mfg . . . . .	2	14	5	e	D	D	D	D	D	D	D	D
33261	Spring & wire product mfg . . . . .	2	14	5	e	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	1	126	20	1 374	41 877	1 100	2 119	29 627	81 654	39 599	119 992	6 014
33271	Machine shops . . . . .	2	112	18	1 187	35 461	939	1 758	25 028	65 474	27 230	91 756	3 553
332710	Machine shops . . . . .	2	112	18	1 187	35 461	939	1 758	25 028	65 474	27 230	91 756	3 553
3328	Coating, engraving, heat treating, & allied activities . . . . .	-	25	10	1 329	36 435	1 106	2 213	25 127	108 792	49 628	157 546	4 657
33281	Coating, engraving, heat treating, & allied activities . . . . .	-	25	10	1 329	36 435	1 106	2 213	25 127	108 792	49 628	157 546	4 657
332813	Electroplating, plating, polishing, anodizing, & coloring . . . . .	-	11	6	1 016	27 588	873	1 774	19 260	84 881	42 865	127 079	3 269
3329	Other fabricated metal product mfg . . . . .	-	24	11	1 861	59 002	1 437	2 693	38 687	186 975	171 860	362 445	8 957
33291	Metal valve mfg . . . . .	-	3	3	989	28 122	777	1 367	17 486	88 201	64 006	152 968	2 954
332911	Industrial valve mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg . . . . .	-	21	8	872	30 880	660	1 326	21 201	98 774	107 854	209 477	6 003
332991	Ball & roller bearing mfg . . . . .	-	1	1	e	D	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product mfg . . . . .	-	10	4	408	12 513	295	582	7 179	42 346	51 565	96 287	2 513
333	Machinery mfg . . . . .	-	129	52	5 696	213 668	3 521	7 290	108 535	554 642	465 459	1 018 361	31 544
3331	Agriculture, construction, & mining machinery mfg . . . . .	-	8	5	279	9 929	150	317	4 691	24 195	32 305	57 919	727
3332	Industrial machinery mfg . . . . .	1	23	7	522	18 794	249	431	5 816	32 564	21 628	52 093	1 889
33329	Other industrial machinery mfg . . . . .	1	19	5	429	15 480	173	294	4 062	25 133	15 080	39 139	1 614
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	-	13	10	2 443	90 958	1 591	3 527	48 621	243 343	216 127	462 887	13 457
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	-	13	10	2 443	90 958	1 591	3 527	48 621	243 343	216 127	462 887	13 457
333411	Air purification equipment mfg . . . . .	-	7	5	585	16 094	399	840	8 209	39 619	37 465	76 759	D
333415	AC & warm air heating & commercial/ industrial refig equip mfg . . . . .	-	6	5	1 858	74 864	1 192	2 687	40 412	203 724	178 662	386 128	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>COLUMBUS, OH MSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
333	Machinery mfg—Con.												
3335	Metalworking machinery mfg .....	1	32	10	567	25 349	367	795	16 685	73 576	33 909	103 244	2 265
33351	Metalworking machinery mfg .....	1	32	10	567	25 349	367	795	16 685	73 576	33 909	103 244	2 265
3336	Engine, turbine, & power transmission equipment mfg .....	—	5	3	276	9 526	235	494	7 840	26 724	24 973	51 531	D
33361	Engine, turbine, & power transmission equipment mfg .....	—	5	3	276	9 526	235	494	7 840	26 724	24 973	51 531	D
3339	Other general-purpose machinery mfg .....	1	42	16	1 522	56 480	869	1 627	23 802	141 204	125 325	266 299	6 217
33392	Material handling equipment mfg .....	3	17	5	e	D	D	D	D	D	D	D	D
333922	Conveyor & conveying equipment mfg .....	3	9	4	279	8 135	170	319	3 729	13 923	13 216	26 711	287
33399	All other general-purpose machinery mfg .....	1	24	10	1 105	43 840	608	1 128	17 777	117 942	103 569	220 990	5 809
333997	Scale & balance (except laboratory) mfg .....	—	4	3	e	D	D	D	D	D	D	D	D
333999	All other miscellaneous general-purpose machinery mfg .....	—	8	3	366	15 731	199	431	6 472	41 011	29 038	70 836	2 375
334	Computer & electronic product mfg .....	—	72	30	6 129	281 827	3 913	7 406	166 586	1 020 936	1 086 111	2 093 778	53 430
3341	Computer & peripheral equipment mfg .....	—	6	2	f	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg .....	—	6	2	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg .....	—	4	2	f	D	D	D	D	D	D	D	D
3342	Communications equipment mfg .....	—	7	4	h	D	D	D	D	D	D	D	D
33421	Telephone apparatus mfg .....	—	4	2	h	D	D	D	D	D	D	D	D
334210	Telephone apparatus mfg .....	—	4	2	h	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg .....	3	24	9	f	D	D	D	D	D	D	D	5 282
33441	Semiconductor & other electronic component mfg .....	3	24	9	f	D	D	D	D	D	D	D	5 282
334419	Other electronic component mfg .....	3	15	8	842	27 527	551	1 185	12 772	60 862	40 802	103 812	4 529
3345	Navigational, measuring, medical, & control instruments mfg .....	—	29	14	1 323	63 712	630	1 112	20 143	139 615	113 331	254 999	6 047
33451	Navigational, measuring, medical, & control instruments mfg .....	—	29	14	1 323	63 712	630	1 112	20 143	139 615	113 331	254 999	6 047
334513	Industrial process control instrument mfg .....	—	5	4	525	30 297	238	378	9 072	54 891	70 236	126 984	1 765
335	Electrical equipment, appliance, & component mfg .....	—	18	8	1 934	62 065	1 489	3 291	43 126	274 718	139 056	412 998	9 234
3351	Electric lighting equipment mfg .....	—	5	4	1 386	46 259	1 087	2 448	33 864	233 027	104 614	336 950	6 698
33511	Electric lamp bulb & part mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
33512	Lighting fixture mfg .....	—	4	3	f	D	D	D	D	D	D	D	D
335122	Commercial/industrial/institutional electric lighting fixture mfg .....	—	2	2	f	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	—	7	3	284	8 852	208	394	5 064	28 413	22 257	50 643	1 947
33531	Electrical equipment mfg .....	—	7	3	284	8 852	208	394	5 064	28 413	22 257	50 643	1 947
3359	Other electrical equipment & component mfg .....	—	6	1	264	6 954	194	449	4 198	13 278	12 185	25 405	589

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>COLUMBUS, OH MSA—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>												
336	Transportation equipment mfg .....	—	59	30	6 122	204 188	5 090	10 985	155 495	614 376	1 149 120	1 757 367	113 984
3362	Motor vehicle body & trailer mfg .....	—	10	6	f	D	D	D	D	D	D	D	857
33621	Motor vehicle body & trailer mfg .....	—	10	6	f	D	D	D	D	D	D	D	857
336211	Motor vehicle body mfg .....	—	8	5	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	—	39	22	5 191	178 991	4 356	9 324	135 520	568 417	1 068 273	1 635 368	112 960
33633	Motor vehicle steering & suspension component (except spring) mfg ....	—	2	2	e	D	D	D	D	D	D	D	D
336330	Motor vehicle steering & suspension component (except spring) mfg .....	—	2	2	e	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg .....	—	3	2	g	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg .....	—	3	2	g	D	D	D	D	D	D	D	D
33636	Motor vehicle seating & interior trim mfg .....	—	5	4	g	D	D	D	D	D	D	D	14 449
336360	Motor vehicle seating & interior trim mfg ...	—	5	4	g	D	D	D	D	D	D	D	14 449
33637	Motor vehicle metal stamping .....	—	6	4	707	23 816	541	1 000	17 570	68 291	81 915	151 634	D
336370	Motor vehicle metal stamping .....	—	6	4	707	23 816	541	1 000	17 570	68 291	81 915	151 634	D
33639	Other motor vehicle parts mfg .....	—	15	8	1 452	48 126	1 197	2 647	32 693	146 310	269 523	416 637	50 819
336399	All other motor vehicle parts mfg .....	—	15	8	1 452	48 126	1 197	2 647	32 693	146 310	269 523	416 637	50 819
337	Furniture & related product mfg .....	1	79	16	1 607	47 443	1 169	2 274	28 470	105 200	91 453	196 620	3 849
3371	Household & institutional furniture & kitchen cabinet mfg .....	2	51	4	e	D	D	D	D	D	D	D	655
33711	Wood kitchen cabinet & counter top mfg .....	2	32	3	263	6 485	184	361	4 049	10 320	8 575	18 938	450
337110	Wood kitchen cabinet & counter top mfg ...	2	32	3	263	6 485	184	361	4 049	10 320	8 575	18 938	450
3372	Office furniture (including fixtures) mfg .....	2	22	9	956	30 047	696	1 369	17 618	55 104	38 861	93 936	2 555
33721	Office furniture (including fixtures) mfg .....	2	22	9	956	30 047	696	1 369	17 618	55 104	38 861	93 936	2 555
337215	Showcase, partition, shelving, & locker mfg .....	2	18	8	872	27 693	627	1 219	16 010	51 227	35 923	87 031	2 529
3379	Other furniture related product mfg .....	—	6	3	e	D	D	D	D	D	D	D	639
33791	Mattress mfg .....	—	4	2	253	8 296	195	384	5 257	30 406	24 955	55 375	D
337910	Mattress mfg .....	—	4	2	253	8 296	195	384	5 257	30 406	24 955	55 375	D
339	Miscellaneous mfg .....	2	137	27	2 094	62 405	1 398	2 685	32 575	125 011	115 671	241 409	7 339
3391	Medical equipment & supplies mfg .....	3	64	11	918	27 624	589	1 083	13 857	63 577	38 579	102 582	3 068
33911	Medical equipment & supplies mfg .....	3	64	11	918	27 624	589	1 083	13 857	63 577	38 579	102 582	3 068
3399	Other miscellaneous mfg ...	2	73	16	1 176	34 781	809	1 602	18 718	61 434	77 092	138 827	4 271
33995	Sign mfg .....	2	40	13	812	22 121	577	1 165	12 931	38 957	35 423	74 781	2 202
339950	Sign mfg .....	2	40	13	812	22 121	577	1 165	12 931	38 957	35 423	74 781	2 202
<b>DAYTON—SPRINGFIELD, OH MSA</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>—</b>	<b>1 563</b>	<b>590</b>	<b>88 330</b>	<b>3 478 374</b>	<b>65 314</b>	<b>136 948</b>	<b>2 330 102</b>	<b>10 487 572</b>	<b>12 724 446</b>	<b>23 155 930</b>	<b>650 759</b>
311	Food mfg .....	—	51	14	1 755	52 706	1 158	2 246	33 174	335 228	480 937	816 898	24 307
3112	Grain & oilseed milling ....	—	3	2	e	D	D	D	D	D	D	D	D
31122	Starch & vegetable fats & oils mfg .....	—	2	2	e	D	D	D	D	D	D	D	D
311221	Wet corn milling .....	—	1	1	e	D	D	D	D	D	D	D	D
3115	Dairy product mfg .....	—	4	3	570	13 322	366	735	9 460	49 959	108 688	158 434	9 110
31151	Dairy product (except frozen) mfg .....	—	3	2	e	D	D	D	D	D	D	D	D
3119	Other food mfg .....	2	6	3	259	9 611	166	327	4 564	57 234	41 814	99 002	1 729

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>DAYTON-SPRINGFIELD, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
312	Beverage & tobacco product mfg . . . . .	—	5	2	364	12 341	155	345	3 019	28 871	54 773	83 441	D
3121	Beverage mfg . . . . .	—	5	2	364	12 341	155	345	3 019	28 871	54 773	83 441	D
31211	Soft drink & ice mfg . . . . .	—	3	2	e	D	D	D	D	D	D	D	D
312111	Soft drink mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
313	Textile mills . . . . .	1	6	4	281	6 781	221	393	3 948	15 715	12 993	29 400	347
314	Textile product mills . . . . .	1	18	6	438	10 400	318	643	5 996	23 293	24 086	47 722	974
3149	Other textile product mills . . . . .	—	9	5	362	9 095	262	535	5 074	20 292	20 158	40 832	861
321	Wood product mfg . . . . .	1	35	13	904	21 571	697	1 383	13 565	47 475	51 885	99 182	4 374
3219	Other wood product mfg . . . . .	1	32	11	788	18 950	598	1 173	11 549	42 844	46 561	89 233	D
32192	Wood container & pallet mfg . . . . .	1	13	4	308	5 539	256	407	4 069	11 747	8 137	20 011	2 573
321920	Wood container & pallet mfg . . . . .	1	13	4	308	5 539	256	407	4 069	11 747	8 137	20 011	2 573
32199	All other wood product mfg . . . . .	1	12	5	410	11 814	291	671	6 314	28 078	35 459	63 242	1 608
322	Paper mfg . . . . .	—	31	19	2 282	94 398	1 568	3 338	57 849	300 721	334 181	636 636	51 987
3221	Pulp, paper, & paperboard mills . . . . .	—	2	2	f	D	D	D	D	D	D	D	D
32212	Paper mills . . . . .	—	2	2	f	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
322122	Newsprint mills . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
3222	Converted paper product mfg . . . . .	—	29	17	g	D	D	D	D	D	D	D	D
32221	Paperboard container mfg . . . . .	1	13	9	475	13 942	328	694	8 807	30 711	40 406	70 953	D
32222	Paper bag & coated & treated paper mfg . . . . .	—	8	5	743	31 294	462	969	16 379	73 068	125 363	197 801	3 652
322222	Coated & laminated paper mfg . . . . .	—	8	5	743	31 294	462	969	16 379	73 068	125 363	197 801	3 652
323	Printing & related support activities . . . . .	1	176	41	4 867	170 237	3 048	5 854	85 852	382 560	227 613	604 577	30 124
3231	Printing & related support activities . . . . .	1	176	41	4 867	170 237	3 048	5 854	85 852	382 560	227 613	604 577	30 124
32311	Printing . . . . .	1	154	34	4 510	160 386	2 774	5 357	78 808	360 852	222 543	577 776	28 143
323110	Commercial lithographic printing . . . . .	2	70	16	1 687	57 382	1 245	2 442	35 817	114 068	81 455	195 248	8 987
323112	Commercial flexographic printing . . . . .	—	8	4	g	D	D	D	D	D	D	D	D
323113	Commercial screen printing . . . . .	5	18	5	439	11 455	265	525	5 891	18 111	20 370	38 580	1 296
323116	Manifold business form printing . . . . .	—	6	3	480	17 824	298	528	10 392	55 555	22 303	77 604	1 819
32312	Support activities for printing . . . . .	2	22	7	357	9 851	274	497	7 044	21 708	5 070	26 801	1 981
323122	Prepress services . . . . .	2	20	6	e	D	D	D	D	D	D	D	D
325	Chemical mfg . . . . .	1	35	19	1 397	50 759	797	1 675	23 611	174 421	170 052	345 318	16 710
3255	Paint, coating, & adhesive mfg . . . . .	1	9	5	395	11 728	279	551	7 010	61 370	63 533	124 080	3 300
32552	Adhesive mfg . . . . .	1	4	3	256	7 373	177	342	4 086	40 936	42 094	83 016	D
325520	Adhesive mfg . . . . .	1	4	3	256	7 373	177	342	4 086	40 936	42 094	83 016	D
3256	Soap, cleaning compound, & toilet preparation mfg . . . . .	6	6	3	e	D	D	D	D	D	D	D	D
32561	Soap & cleaning compound mfg . . . . .	9	4	1	311	11 410	226	545	7 468	24 707	18 050	42 069	3 190
325611	Soap & other detergent mfg . . . . .	9	4	1	311	11 410	226	545	7 468	24 707	18 050	42 069	3 190
3259	Other chemical product mfg . . . . .	—	11	7	361	13 078	149	282	4 398	27 769	24 979	53 812	3 873
32599	All other chemical product & preparation mfg . . . . .	—	10	6	e	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	1	92	47	6 213	186 802	4 920	9 595	120 744	348 900	359 518	707 727	40 433
3261	Plastics product mfg . . . . .	1	77	42	4 418	116 016	3 488	6 817	70 592	262 458	284 491	545 980	34 698
32611	Unsupported plastics film, sheet, & bag mfg . . . . .	—	8	5	389	11 678	312	636	7 094	28 445	48 128	76 675	1 057
326111	Unsupported plastics bag mfg . . . . .	—	4	3	257	7 622	208	444	4 477	16 317	27 769	44 225	702
32615	Urethane & other foam product (except polystyrene) mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
326150	Urethane & other foam product (except polystyrene) mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>DAYTON-SPRINGFIELD, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
326	Plastics & rubber products mfg—Con.												
3261	Plastics product mfg—Con.												
32619	Other plastics product mfg .....	2	59	33	3 477	90 579	2 716	5 271	53 990	200 190	193 597	393 714	26 587
326199	All other plastics product mfg .....	2	58	33	h	D	D	D	D	D	D	D	D
3262	Rubber product mfg .....	—	15	5	1 795	70 786	1 432	2 778	50 152	86 442	75 027	161 747	5 735
32629	Other rubber product mfg .....	—	11	4	g	D	D	D	D	D	D	D	D
326291	Rubber product mfg for mechanical use .....	—	8	4	1 721	69 544	1 368	2 662	49 207	83 371	71 567	155 038	5 615
327	Nonmetallic mineral product mfg .....	2	50	27	1 771	55 388	1 337	2 794	34 541	163 421	126 787	291 274	20 533
3273	Cement & concrete product mfg .....	2	28	17	1 089	38 192	789	1 715	23 253	114 831	86 948	203 030	15 844
32732	Ready-mix concrete mfg.	3	15	8	376	12 979	281	628	8 660	34 589	44 159	78 644	2 803
327320	Ready-mix concrete mfg .....	3	15	8	376	12 979	281	628	8 660	34 589	44 159	78 644	2 803
32733	Concrete pipe, brick, & block mfg .....	2	7	5	405	12 427	306	668	7 356	34 253	22 087	56 866	D
327332	Concrete pipe mfg .....	1	3	3	e	D	D	D	D	D	D	D	D
3279	Other nonmetallic mineral product mfg .....	2	14	7	523	12 973	431	883	8 632	38 501	31 330	69 685	3 671
32791	Abrasive product mfg .....	2	7	6	437	11 054	368	770	7 248	34 430	28 058	61 903	3 438
327910	Abrasive product mfg .....	2	7	6	437	11 054	368	770	7 248	34 430	28 058	61 903	3 438
331	Primary metal mfg .....	1	32	20	2 109	76 750	1 665	3 528	53 727	150 607	154 184	300 830	12 150
3312	Steel product mfg from purchased steel .....	—	4	3	f	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel .....	—	2	2	f	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel .....	—	2	2	f	D	D	D	D	D	D	D	D
3315	Foundries .....	2	26	15	1 183	39 098	954	2 028	28 945	83 177	48 287	131 271	7 201
33151	Ferrous metal foundries .....	—	10	7	499	17 754	389	862	13 248	37 379	19 543	57 053	974
331512	Steel investment foundries .....	—	3	2	e	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	4	16	8	684	21 344	565	1 166	15 697	45 798	28 744	74 218	6 227
331521	Aluminum die-casting foundries .....	8	6	3	304	9 193	259	513	6 988	20 959	19 549	40 483	D
331524	Aluminum foundries (except die-casting) .....	—	8	5	e	D	D	D	D	D	D	D	3 902
332	Fabricated metal product mfg .....	1	408	138	11 107	386 918	7 671	15 973	224 327	795 921	472 746	1 271 327	54 878
3321	Forging & stamping .....	—	24	13	1 606	56 057	1 037	2 356	27 964	136 671	126 866	264 324	11 326
33211	Forging & stamping .....	—	24	13	1 606	56 057	1 037	2 356	27 964	136 671	126 866	264 324	11 326
332116	Metal stamping .....	—	18	9	1 148	39 743	706	1 558	18 153	99 078	101 397	201 369	6 224
3322	Cutlery & handtool mfg .....	6	11	10	792	32 072	371	788	12 640	76 351	22 521	101 896	4 171
33221	Cutlery & handtool mfg .....	6	11	10	792	32 072	371	788	12 640	76 351	22 521	101 896	4 171
332212	Hand & edge tool mfg .....	6	11	10	792	32 072	371	788	12 640	76 351	22 521	101 896	4 171
3323	Architectural & structural metals mfg .....	1	51	17	1 031	35 017	733	1 448	21 894	64 697	53 700	117 442	2 835
33231	Plate work & fabricated structural product mfg .....	1	23	7	435	13 890	315	659	8 991	27 076	22 505	49 188	938
332313	Plate work mfg .....	—	13	5	300	9 488	221	467	6 138	18 942	16 711	35 365	787
33232	Ornamental & architectural metal products mfg .....	2	28	10	596	21 127	418	789	12 903	37 621	31 195	68 254	1 897
332322	Sheet metal work mfg .....	2	19	8	407	15 720	294	520	9 191	26 927	18 995	45 390	1 580
3326	Spring & wire product mfg .....	2	12	5	497	15 873	440	956	10 990	34 887	21 159	56 061	3 675
33261	Spring & wire product mfg .....	2	12	5	497	15 873	440	956	10 990	34 887	21 159	56 061	3 675
332612	Spring (light gauge) mfg .....	1	8	3	378	12 820	354	796	9 400	28 340	16 661	44 935	3 382
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	1	211	59	3 981	140 079	3 092	6 402	96 256	257 929	110 295	365 614	25 420
33271	Machine shops .....	1	176	43	3 067	111 062	2 377	4 971	76 307	194 084	82 694	274 770	20 137
332710	Machine shops .....	1	176	43	3 067	111 062	2 377	4 971	76 307	194 084	82 694	274 770	20 137
33272	Turned product & screw, nut, & bolt mfg .....	2	35	16	914	29 017	715	1 431	19 949	63 845	27 601	90 844	5 283
332721	Precision turned product mfg .....	2	30	13	779	25 702	610	1 274	17 753	55 483	23 037	77 934	4 046

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>DAYTON-SPRINGFIELD, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg—Con.												
3328	Coating, engraving, heat treating, & allied activities .	2	54	21	1 269	36 931	965	1 933	24 117	88 645	33 874	122 526	5 185
33281	Coating, engraving, heat treating, & allied activities . . . . .	2	54	21	1 269	36 931	965	1 933	24 117	88 645	33 874	122 526	5 185
332812	Metal coating/engraving (exc jewelry/silverware)/allied services . . . . .	3	17	7	359	10 011	297	664	7 290	22 659	12 910	35 444	1 675
332813	Electroplating, plating, polishing, anodizing, & coloring . . . . .	1	31	10	699	20 118	509	889	12 341	49 651	17 188	66 876	2 478
3329	Other fabricated metal product mfg . . . . .	—	37	10	1 661	61 511	793	1 609	23 319	105 699	34 283	141 738	1 887
33299	All other fabricated metal product mfg . . . . .	—	32	9	1 493	56 398	670	1 351	19 824	90 850	29 266	122 035	1 618
332995	Other ordnance & accessories mfg . . . . .	—	3	2	f	D	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product mfg . . . . .	1	16	4	405	11 553	357	617	7 984	23 064	16 833	40 643	1 015
333	Machinery mfg . . . . .	—	294	122	14 118	559 400	9 270	20 660	337 868	1 330 251	1 112 864	2 447 964	82 573
3332	Industrial machinery mfg ..	1	33	16	2 803	105 744	1 545	3 724	52 971	247 033	233 638	472 177	13 373
33329	Other industrial machinery mfg . . . . .	1	26	14	2 539	95 335	1 425	3 487	49 191	222 790	211 214	425 025	11 279
333293	Printing machinery & equipment mfg . . . . .	—	6	2	f	D	D	D	D	D	D	D	D
333298	All other industrial machinery mfg . . . . .	3	16	9	1 488	62 515	1 030	2 517	36 400	108 642	100 263	203 485	5 520
3333	Commercial & service industry machinery mfg ..	1	17	8	728	26 166	481	974	15 140	122 038	55 079	178 096	4 200
33331	Commercial & service industry machinery mfg . . . . .	1	17	8	728	26 166	481	974	15 140	122 038	55 079	178 096	4 200
333319	Other commercial & service industry machinery mfg . . . . .	—	11	5	552	19 197	396	794	12 033	108 789	43 112	152 715	2 348
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	5	7	2	e	D	D	D	D	D	D	D	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	5	7	2	e	D	D	D	D	D	D	D	D
333412	Industrial & commercial fan & blower mfg . . . . .	5	5	2	474	14 881	300	797	9 746	34 525	21 467	58 310	1 298
3335	Metalworking machinery mfg . . . . .	1	179	63	5 087	217 269	3 825	8 429	153 164	390 502	171 609	571 418	23 940
33351	Metalworking machinery mfg . . . . .	1	179	63	5 087	217 269	3 825	8 429	153 164	390 502	171 609	571 418	23 940
333511	Industrial mold mfg . . . . .	—	44	18	1 127	50 394	892	1 951	35 077	77 293	31 644	111 433	6 456
333513	Machine tool (metal forming types) mfg . . . . .	—	4	2	343	15 493	289	467	12 705	26 365	17 292	46 504	D
333514	Special die & tool, die set, jig, & fixture mfg . . . . .	—	101	29	2 575	105 493	1 992	4 401	77 339	188 254	59 782	247 587	11 715
333515	Cutting tool & machine tool accessory mfg . . . . .	—	20	5	262	9 756	192	412	6 812	19 490	4 094	23 270	1 771
333518	Other metalworking machinery mfg . . . . .	4	6	5	594	27 366	387	1 004	17 820	54 452	25 013	83 457	1 667
3336	Engine, turbine, & power transmission equipment mfg . . . . .	—	11	6	1 134	47 856	843	1 707	31 352	170 175	286 211	462 835	5 767
33361	Engine, turbine, & power transmission equipment mfg . . . . .	—	11	6	1 134	47 856	843	1 707	31 352	170 175	286 211	462 835	5 767
333618	Other engine equipment mfg . . . . .	—	3	3	f	D	D	D	D	D	D	D	5 274
3339	Other general-purpose machinery mfg . . . . .	—	44	26	3 844	146 280	2 238	4 975	74 660	364 052	341 513	699 841	33 947
33391	Pump & compressor mfg . . . . .	—	6	5	1 301	49 988	702	1 595	23 763	104 405	112 608	213 585	6 498
333911	Pump & pumping equipment mfg . . . . .	—	4	4	g	D	D	D	D	D	D	D	D
33392	Material handling equipment mfg . . . . .	—	8	6	544	23 079	325	706	12 238	58 181	69 296	127 262	8 703
33399	All other general-purpose machinery mfg . . . . .	—	30	15	1 999	73 213	1 211	2 674	38 659	201 466	159 609	358 994	18 746
333991	Power-driven handtool mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
333992	Welding & soldering equipment mfg . . . . .	—	6	4	f	D	D	D	D	D	D	D	D
333999	All other miscellaneous general-purpose machinery mfg . . . . .	—	13	5	448	20 892	190	406	6 642	46 762	33 136	78 478	2 106



**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>DAYTON-SPRINGFIELD, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
334	Computer & electronic product mfg . . . . .	-	59	28	4 463	155 532	2 837	5 682	68 388	472 338	409 558	846 874	55 875
3341	Computer & peripheral equipment mfg . . . . .	-	9	1	f	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg . . . . .	-	9	1	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg . . . . .	-	5	1	f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg . . . . .	-	19	14	2 404	70 416	1 652	3 221	36 094	198 602	289 135	458 569	44 552
33441	Semiconductor & other electronic component mfg . . . . .	-	19	14	2 404	70 416	1 652	3 221	36 094	198 602	289 135	458 569	44 552
334411	Electron tube mfg . . . . .	-	3	3	g	D	D	D	D	D	D	D	D
334416	Electronic coil, transformer, & other inductor mfg . . . . .	-	2	2	e	D	D	D	D	D	D	D	D
334419	Other electronic component mfg . . . . .	5	6	5	323	7 477	227	397	3 709	14 661	14 055	29 049	709
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	1	26	11	1 309	46 814	796	1 612	20 552	142 468	63 882	205 826	3 719
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	1	26	11	1 309	46 814	796	1 612	20 552	142 468	63 882	205 826	3 719
334516	Analytical laboratory instrument mfg . . . . .	-	3	1	e	D	D	D	D	D	D	D	D
334519	Other measuring & controlling device mfg . . . . .	-	8	3	712	24 093	427	811	10 259	98 277	40 629	137 024	2 110
335	Electrical equipment, appliance, & component mfg . . . . .	-	19	8	1 652	49 438	1 034	1 917	25 788	110 041	68 067	180 001	10 123
3353	Electrical equipment mfg . . . . .	-	14	7	1 538	46 147	935	1 726	23 209	104 616	61 533	168 007	D
33531	Electrical equipment mfg . . . . .	-	14	7	1 538	46 147	935	1 726	23 209	104 616	61 533	168 007	D
335312	Motor & generator mfg . . . . .	-	6	5	1 437	42 651	886	1 642	22 102	98 126	58 047	158 016	6 982
336	Transportation equipment mfg . . . . .	-	69	51	31 123	1 505 250	25 873	55 481	1 183 243	5 540 293	8 399 127	13 918 743	221 989
3361	Motor vehicle mfg . . . . .	-	4	3	i	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg . . . . .	-	2	1	h	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
33612	Heavy duty truck mfg . . . . .	-	2	2	i	D	D	D	D	D	D	D	D
336120	Heavy duty truck mfg . . . . .	-	2	2	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . . . .	-	51	37	19 292	904 640	16 199	35 225	710 274	1 761 801	2 479 748	4 239 373	165 747
33633	Motor vehicle steering & suspension component (except spring) mfg . . . . .	-	4	4	4 132	224 310	3 292	6 333	152 947	359 128	378 347	737 798	67 059
336330	Motor vehicle steering & suspension component (except spring) mfg . . . . .	-	4	4	4 132	224 310	3 292	6 333	152 947	359 128	378 347	737 798	67 059
33634	Motor vehicle brake system mfg . . . . .	-	5	3	h	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system mfg . . . . .	-	5	3	h	D	D	D	D	D	D	D	D
33636	Motor vehicle seating & interior trim mfg . . . . .	-	2	2	e	D	D	D	D	D	D	D	D
336360	Motor vehicle seating & interior trim mfg . . . . .	-	2	2	e	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping . . . . .	-	13	9	1 489	43 464	1 282	3 066	31 852	92 243	80 604	174 979	7 848
336370	Motor vehicle metal stamping . . . . .	-	13	9	1 489	43 464	1 282	3 066	31 852	92 243	80 604	174 979	7 848
33639	Other motor vehicle parts mfg . . . . .	-	18	15	9 022	387 325	7 984	17 272	325 823	1 020 071	1 210 203	2 221 549	41 444
336391	Motor vehicle air-conditioning mfg . . . . .	-	3	3	i	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg . . . . .	-	15	12	h	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg . . . . .	-	11	8	g	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg . . . . .	-	11	8	g	D	D	D	D	D	D	D	D
336412	Aircraft engine & engine parts mfg . . . . .	2	4	3	f	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg . . . . .	-	7	5	g	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>DAYTON—SPRINGFIELD, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
337	Furniture & related product mfg . . . . .	—	49	10	1 254	29 814	1 018	1 971	18 648	88 763	112 126	198 511	13 421
3371	Household & institutional furniture & kitchen cabinet mfg . . . . .	—	34	4	1 016	22 407	830	1 585	13 915	74 714	102 899	175 232	D
33712	Household & institutional furniture mfg . . . . .	—	10	2	f	D	D	D	D	D	D	D	D
337124	Metal household furniture mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg . . . . .	1	113	18	1 964	47 654	1 531	3 140	32 301	157 751	118 899	273 928	5 174
3391	Medical equipment & supplies mfg . . . . .	2	52	5	474	12 224	372	733	8 347	26 917	20 098	47 658	573
33911	Medical equipment & supplies mfg . . . . .	2	52	5	474	12 224	372	733	8 347	26 917	20 098	47 658	573
339113	Surgical appliance & supplies mfg . . . . .	—	8	3	279	7 840	222	507	5 647	17 293	16 122	33 868	215
3399	Other miscellaneous mfg . . . . .	—	61	13	1 490	35 430	1 159	2 407	23 954	130 834	98 801	226 270	4 601
33993	Doll, toy, & game mfg . . . . .	1	3	2	e	D	D	D	D	D	D	D	D
339932	Game, toy, & children's vehicle mfg . . . . .	1	3	2	e	D	D	D	D	D	D	D	D
33995	Sign mfg . . . . .	—	26	4	526	11 897	390	790	7 121	32 409	31 748	63 929	1 914
339950	Sign mfg . . . . .	—	26	4	526	11 897	390	790	7 121	32 409	31 748	63 929	1 914
33999	All other miscellaneous mfg . . . . .	—	16	6	546	13 926	440	936	11 083	59 777	40 467	99 953	1 645
339994	Broom, brush, & mop mfg . . . . .	—	4	4	e	D	D	D	D	D	D	D	D
	<b>HUNTINGTON—ASHLAND, WV—KY—OH MSA</b>												
<b>31-33</b>	<b>Manufacturing . . . . .</b>	—	<b>262</b>	<b>103</b>	<b>15 112</b>	<b>547 992</b>	<b>11 609</b>	<b>23 857</b>	<b>401 065</b>	<b>2 119 937</b>	<b>3 493 069</b>	<b>5 601 987</b>	<b>236 997</b>
	Huntington—Ashland, WV—KY—OH MSA (KY Part) . . . . .	—	73	32	5 607	235 714	4 529	9 458	183 294	746 147	2 348 730	3 079 435	144 185
	Huntington—Ashland, WV—KY—OH MSA (OH Part) . . . . .	1	44	12	1 969	65 020	1 462	3 100	46 790	530 855	459 192	998 054	33 568
	Huntington—Ashland, WV—KY—OH MSA (WV Part) . . . . .	1	145	59	7 536	247 258	5 618	11 299	170 981	842 935	685 147	1 524 498	59 244
311	Food mfg . . . . .	3	11	5	540	15 440	173	347	3 341	43 235	30 967	74 395	1 790
3118	Bakeries & tortilla mfg . . . . .	—	5	1	e	D	D	D	D	D	D	D	D
31181	Bread & bakery product mfg . . . . .	—	5	1	e	D	D	D	D	D	D	D	D
311812	Commercial bakeries . . . . .	—	3	1	e	D	D	D	D	D	D	D	D
315	Apparel mfg . . . . .	—	5	4	g	D	D	D	D	D	D	D	D
3152	Cut & sew apparel mfg . . . . .	—	4	4	g	D	D	D	D	D	D	D	D
31521	Cut & sew apparel contractors . . . . .	1	2	2	e	D	D	D	D	D	D	D	D
315211	Men's & boys' cut & sew apparel contractors . . . . .	1	2	2	e	D	D	D	D	D	D	D	D
31522	Men's & boys' cut & sew apparel mfg . . . . .	—	2	2	f	D	D	D	D	D	D	D	D
315222	Men's & boys' cut & sew suit, coat, & overcoat mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
315224	Men's & boys' cut & sew trouser, slack, & jean mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
321	Wood product mfg . . . . .	2	26	6	320	5 443	294	511	4 531	12 102	19 912	31 246	1 282
323	Printing & related support activities . . . . .	—	19	3	358	8 216	273	390	5 032	12 301	10 578	22 620	D
3231	Printing & related support activities . . . . .	—	19	3	358	8 216	273	390	5 032	12 301	10 578	22 620	D
32311	Printing . . . . .	1	18	2	e	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing . . . . .	—	12	2	285	7 325	208	324	4 296	10 947	9 960	20 648	D
324	Petroleum & coal products mfg . . . . .	—	7	2	f	D	D	D	D	D	D	D	D
3241	Petroleum & coal products mfg . . . . .	—	7	2	f	D	D	D	D	D	D	D	D
32411	Petroleum refineries . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
324110	Petroleum refineries . . . . .	—	1	1	f	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>HUNTINGTON-ASHLAND, WV-KY-OH MSA—Con. Manufacturing—Con.</b>												
325	Chemical mfg . . . . .	1	20	13	1 677	74 499	1 121	2 489	50 478	364 321	553 175	922 853	47 626
3251	Basic chemical mfg . . . . .	—	12	6	786	36 347	496	1 130	21 527	187 437	298 852	491 470	30 781
32513	Dye & pigment mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
325132	Synthetic organic dye & pigment mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
32519	Other basic organic chemical mfg . . . . .	—	5	3	e	D	D	D	D	D	D	D	D
325192	Cyclic crude & intermediate mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg . . . . .	5	2	2	e	D	D	D	D	D	D	D	D
32521	Resin & synthetic rubber mfg . . . . .	5	2	2	e	D	D	D	D	D	D	D	D
325211	Plastics material & resin mfg . . . . .	5	2	2	e	D	D	D	D	D	D	D	D
3259	Other chemical product mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
32599	All other chemical product & preparation mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
325998	All other miscellaneous chemical product & preparation mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	—	12	5	533	15 550	398	873	9 862	33 733	32 846	66 229	D
3261	Plastics product mfg . . . . .	—	8	3	e	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	1	20	8	731	22 103	566	1 176	16 044	39 769	51 262	90 987	2 485
3271	Clay product & refractory mfg . . . . .	—	5	4	e	D	D	D	D	D	D	D	D
32712	Clay building material & refractories mfg . . . . .	—	5	4	e	D	D	D	D	D	D	D	D
327125	Nonclay refractory mfg . . . . .	—	2	1	e	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	—	9	7	4 724	219 486	3 933	8 483	177 997	518 960	753 004	1 263 140	108 009
3311	Iron & steel mills & ferroalloy mfg . . . . .	—	3	3	h	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg . . . . .	—	3	3	h	D	D	D	D	D	D	D	D
331111	Iron & steel mills . . . . .	—	3	3	h	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing . . . . .	—	3	3	g	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying . . . . .	—	1	1	g	D	D	D	D	D	D	D	D
331491	Other nonferrous metal rolling, drawing, & extruding . . . . .	—	1	1	g	D	D	D	D	D	D	D	D
3315	Foundries . . . . .	—	3	1	f	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries . . . . .	—	3	1	f	D	D	D	D	D	D	D	D
331511	Iron foundries . . . . .	—	2	1	e	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	2	59	23	1 312	37 028	981	1 836	24 455	74 776	60 021	135 271	4 623
3323	Architectural & structural metals mfg . . . . .	2	13	7	e	D	D	D	D	D	D	D	689
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	2	34	12	765	21 628	590	1 009	14 714	41 507	29 149	70 437	3 143
33271	Machine shops . . . . .	4	29	8	e	D	D	D	D	D	D	D	2 860
332710	Machine shops . . . . .	4	29	8	e	D	D	D	D	D	D	D	2 860
33272	Turned product & screw, nut, & bolt mfg . . . . .	—	5	4	e	D	D	D	D	D	D	D	283
333	Machinery mfg . . . . .	7	17	8	654	23 372	474	943	14 841	53 345	50 628	103 614	D
3331	Agriculture, construction, & mining machinery mfg . . . . .	9	6	4	410	14 871	316	634	10 072	40 048	42 032	81 778	D
33313	Mining & oil & gas field machinery mfg . . . . .	9	6	4	410	14 871	316	634	10 072	40 048	42 032	81 778	D
333131	Mining machinery & equipment mfg . . . . .	9	6	4	410	14 871	316	634	10 072	40 048	42 032	81 778	D
334	Computer & electronic product mfg . . . . .	—	3	2	e	D	D	D	D	D	D	D	D
3342	Communications equipment mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
33421	Telephone apparatus mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
334210	Telephone apparatus mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>HUNTINGTON—ASHLAND, WV—KY—OH MSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
336	Transportation equipment mfg.....	-	7	4	541	19 604	436	920	15 068	40 798	58 098	99 757	1 634
3365	Railroad rolling stock mfg... ..	-	2	1	e	D	D	D	D	D	D	D	D
33651	Railroad rolling stock mfg.....	-	2	1	e	D	D	D	D	D	D	D	D
336510	Railroad rolling stock mfg.....	-	2	1	e	D	D	D	D	D	D	D	D
339	Miscellaneous mfg.....	-	23	2	f	D	D	D	D	D	D	D	1 237
3391	Medical equipment & supplies mfg.....	-	13	1	e	D	D	D	D	D	D	D	561
33911	Medical equipment & supplies mfg.....	-	13	1	e	D	D	D	D	D	D	D	561
339113	Surgical appliance & supplies mfg.....	-	2	1	e	D	D	D	D	D	D	D	D
	<b>LIMA, OH MSA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>225</b>	<b>88</b>	<b>17 765</b>	<b>696 479</b>	<b>13 511</b>	<b>28 859</b>	<b>487 545</b>	<b>3 583 510</b>	<b>4 797 919</b>	<b>8 369 316</b>	<b>310 245</b>
311	Food mfg.....	6	20	8	1 352	37 577	992	2 042	25 872	333 870	317 959	655 106	12 530
3115	Dairy product mfg.....	7	4	3	661	18 451	478	986	13 992	241 591	239 444	480 572	6 850
31151	Dairy product (except frozen) mfg.....	7	4	3	661	18 451	478	986	13 992	241 591	239 444	480 572	6 850
311511	Fluid milk mfg.....	9	2	1	e	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg.....	-	3	1	e	D	D	D	D	D	D	D	D
31181	Bread & bakery product mfg.....	-	3	1	e	D	D	D	D	D	D	D	D
311812	Commercial bakeries ..	-	1	1	e	D	D	D	D	D	D	D	D
321	Wood product mfg.....	8	14	4	283	5 676	199	411	3 140	14 809	16 504	27 468	1 003
323	Printing & related support activities.....	-	21	4	275	6 933	209	398	4 188	14 477	6 208	20 641	1 610
3231	Printing & related support activities.....	-	21	4	275	6 933	209	398	4 188	14 477	6 208	20 641	1 610
32311	Printing .....	-	20	4	e	D	D	D	D	D	D	D	D
324	Petroleum & coal products mfg.....	-	2	1	e	D	D	D	D	D	D	D	D
3241	Petroleum & coal products mfg.....	-	2	1	e	D	D	D	D	D	D	D	D
32411	Petroleum refineries ....	-	1	1	e	D	D	D	D	D	D	D	D
324110	Petroleum refineries ..	-	1	1	e	D	D	D	D	D	D	D	D
325	Chemical mfg.....	-	7	5	f	D	D	D	D	D	D	D	60 865
3251	Basic chemical mfg.....	-	3	2	e	D	D	D	D	D	D	D	D
32519	Other basic organic chemical mfg.....	-	2	2	e	D	D	D	D	D	D	D	D
325199	All other basic organic chemical mfg.....	-	2	2	e	D	D	D	D	D	D	D	D
3256	Soap, cleaning compound, & toilet preparation mfg ..	-	1	1	e	D	D	D	D	D	D	D	D
32561	Soap & cleaning compound mfg.....	-	1	1	e	D	D	D	D	D	D	D	D
325611	Soap & other detergent mfg.....	-	1	1	e	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg.....	-	13	9	1 893	66 369	1 486	3 263	48 889	170 642	223 727	391 680	17 391
3261	Plastics product mfg.....	-	6	3	305	6 875	269	534	5 422	16 556	29 042	45 326	824
3262	Rubber product mfg.....	-	7	6	1 588	59 494	1 217	2 729	43 467	154 086	194 685	346 354	16 567
32629	Other rubber product mfg.....	-	7	6	1 588	59 494	1 217	2 729	43 467	154 086	194 685	346 354	16 567
326291	Rubber product mfg for mechanical use .....	-	2	2	g	D	D	D	D	D	D	D	D
326299	All other rubber product mfg.....	-	5	4	f	D	D	D	D	D	D	D	D
331	Primary metal mfg.....	-	7	5	770	19 250	648	1 359	15 660	52 107	47 761	100 756	3 865
3315	Foundries .....	-	7	5	770	19 250	648	1 359	15 660	52 107	47 761	100 756	3 865
33151	Ferrous metal foundries ..	-	4	2	340	11 231	283	659	9 159	31 723	18 171	50 199	D
331511	Iron foundries .....	-	3	2	e	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	-	3	3	430	8 019	365	700	6 501	20 384	29 590	50 557	D
331522	Nonferrous (except aluminum) die-casting foundries .....	-	2	2	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>LIMA, OH MSA—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg .....	1	48	17	2 465	71 233	1 968	4 090	49 905	213 281	107 577	318 322	16 040
3321	Forging & stamping .....	-	6	5	1 003	29 131	826	1 704	21 578	101 089	48 786	149 729	12 553
33211	Forging & stamping .....	-	6	5	1 003	29 131	826	1 704	21 578	101 089	48 786	149 729	12 553
332112	Nonferrous forging .....	-	1	1	e	D	D	D	D	D	D	D	D
332116	Metal stamping .....	-	4	3	f	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg .....	-	9	5	470	14 228	415	854	9 626	48 352	35 456	82 282	1 307
33232	Ornamental & architectural metal products mfg .....	-	7	5	e	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, & allied activities .....	3	7	3	f	D	D	D	D	D	D	D	1 310
33281	Coating, engraving, heat treating, & allied activities .....	3	7	3	f	D	D	D	D	D	D	D	1 310
332812	Metal coating/engraving (exc jewelry/silverware)/allied services .....	-	2	2	e	D	D	D	D	D	D	D	D
332813	Electroplating, plating, polishing, anodizing, & coloring .....	9	4	1	e	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	29	15	4 347	167 359	3 058	6 315	101 917	320 470	320 759	647 080	18 075
3335	Metalworking machinery mfg .....	-	19	8	1 385	62 100	838	1 903	34 929	124 686	102 629	226 821	2 871
33351	Metalworking machinery mfg .....	-	19	8	1 385	62 100	838	1 903	34 929	124 686	102 629	226 821	2 871
333513	Machine tool (metal forming types) mfg ...	-	4	3	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg .....	-	6	4	h	D	D	D	D	D	D	D	14 891
33392	Material handling equipment mfg .....	-	3	3	h	D	D	D	D	D	D	D	D
333924	Industrial truck, tractor, trailer, & stacker machinery mfg .....	-	2	2	h	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	7	2	328	7 500	224	560	3 800	23 335	26 955	50 807	743
3353	Electrical equipment mfg ..	-	2	1	e	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg ..	-	2	1	e	D	D	D	D	D	D	D	D
335312	Motor & generator mfg .....	-	2	1	e	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	14	10	4 091	223 036	3 304	7 420	176 678	560 226	1 208 856	1 792 248	D
3362	Motor vehicle body & trailer mfg .....	-	4	2	e	D	D	D	D	D	D	D	D
33621	Motor vehicle body & trailer mfg .....	-	4	2	e	D	D	D	D	D	D	D	D
336211	Motor vehicle body mfg .....	-	3	2	e	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	8	7	3 300	191 104	2 755	6 263	156 174	469 271	1 028 288	1 512 287	D
33631	Motor vehicle gasoline engine & engine parts mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336312	Gasoline engine & engine parts mfg ....	-	1	1	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	1	4	3	449	9 194	391	716	7 193	19 746	10 035	29 717	1 056
336370	Motor vehicle metal stamping .....	1	4	3	449	9 194	391	716	7 193	19 746	10 035	29 717	1 056
3369	Other transportation equipment mfg .....	-	2	1	e	D	D	D	D	D	D	D	D
33699	Other transportation equipment mfg .....	-	2	1	e	D	D	D	D	D	D	D	D
336992	Military armored vehicle, tank, & tank component mfg .....	-	1	1	e	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>MANSFIELD, OH MSA</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	—	<b>310</b>	<b>139</b>	<b>21 787</b>	<b>778 648</b>	<b>17 022</b>	<b>34 796</b>	<b>569 329</b>	<b>1 874 066</b>	<b>1 782 726</b>	<b>3 639 315</b>	<b>165 306</b>
322	Paper mfg . . . . .	2	11	5	508	15 744	394	718	9 826	32 269	35 270	67 203	1 413
3222	Converted paper product mfg . . . . .	2	11	5	508	15 744	394	718	9 826	32 269	35 270	67 203	1 413
32221	Paperboard container mfg . . . . .	1	8	4	468	14 721	363	660	9 086	28 315	32 116	60 044	1 235
322211	Corrugated & solid fiber box mfg . . . . .	1	7	3	e	D	D	D	D	D	D	D	D
323	Printing & related support activities . . . . .	5	26	5	612	16 308	408	808	10 570	34 406	23 508	58 631	1 615
3231	Printing & related support activities . . . . .	5	26	5	612	16 308	408	808	10 570	34 406	23 508	58 631	1 615
32311	Printing . . . . .	5	23	4	f	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing . . . . .	—	9	3	251	8 012	177	372	5 335	14 141	8 818	23 039	370
326	Plastics & rubber products mfg . . . . .	—	20	13	1 570	46 229	1 253	2 689	33 857	111 129	137 589	248 209	13 746
3261	Plastics product mfg . . . . .	—	16	11	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg . . . . .	—	10	6	659	18 683	527	1 173	12 815	52 628	50 136	104 152	7 391
326199	All other plastics product mfg . . . . .	—	8	4	f	D	D	D	D	D	D	D	7 391
3262	Rubber product mfg . . . . .	—	4	2	f	D	D	D	D	D	D	D	D
32622	Rubber & plastics hoses & belting mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
326220	Rubber & plastics hoses & belting mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	—	9	4	893	35 376	749	1 458	27 800	101 251	37 690	138 966	4 115
3271	Clay product & refractory mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
32711	Pottery, ceramics, & plumbing fixture mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
327111	Vitreous china plumbing fixture & bathroom accessories mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
3272	Glass & glass product mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
327215	Glass product mfg made of purchased glass . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	—	8	6	2 018	93 288	1 612	3 891	70 618	255 770	272 821	525 543	9 299
3311	Iron & steel mills & ferroalloy mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
331111	Iron & steel mills . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
3315	Foundries . . . . .	—	6	4	f	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
331511	Iron foundries . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries . . . . .	—	5	3	315	8 382	249	494	6 196	20 683	15 031	33 799	406
332	Fabricated metal product mfg . . . . .	—	75	29	2 935	97 679	2 402	4 944	73 445	302 904	197 532	498 870	16 793
3321	Forging & stamping . . . . .	—	10	7	521	13 315	398	806	6 894	27 836	29 464	56 156	1 373
33211	Forging & stamping . . . . .	—	10	7	521	13 315	398	806	6 894	27 836	29 464	56 156	1 373
332116	Metal stamping . . . . .	—	6	4	342	8 746	274	565	4 264	14 689	12 924	27 696	D
3323	Architectural & structural metals mfg . . . . .	3	8	4	277	6 858	214	376	4 480	16 027	10 172	26 205	420
3326	Spring & wire product mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
33261	Spring & wire product mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
332612	Spring (light gauge) mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	1	34	10	714	21 735	551	993	14 838	37 434	18 483	55 511	2 012
33271	Machine shops . . . . .	—	24	5	462	14 584	344	580	10 157	24 081	13 355	37 033	1 418
332710	Machine shops . . . . .	—	24	5	462	14 584	344	580	10 157	24 081	13 355	37 033	1 418
33272	Turned product & screw, nut, & bolt mfg . . . . .	2	10	5	252	7 151	207	413	4 681	13 353	5 128	18 478	594
332721	Precision turned product mfg . . . . .	2	10	5	252	7 151	207	413	4 681	13 353	5 128	18 478	594

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>MANSFIELD, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg—Con.												
3329	Other fabricated metal product mfg.....	-	8	3	f	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg.....	-	8	3	f	D	D	D	D	D	D	D	D
332991	Ball & roller bearing mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg.....	-	43	22	2 576	85 544	1 716	3 114	47 270	229 544	224 898	445 788	12 104
3331	Agriculture, construction, & mining machinery mfg....	-	13	8	f	D	D	D	D	D	D	D	D
33312	Construction machinery mfg.....	-	11	7	896	31 121	616	1 160	17 517	73 601	108 404	176 540	3 595
333120	Construction machinery mfg.....	-	11	7	896	31 121	616	1 160	17 517	73 601	108 404	176 540	3 595
3335	Metalworking machinery mfg.....	1	7	5	277	8 342	224	390	5 993	14 424	7 128	21 000	944
33351	Metalworking machinery mfg.....	1	7	5	277	8 342	224	390	5 993	14 424	7 128	21 000	944
3339	Other general-purpose machinery mfg.....	-	12	7	1 169	40 211	718	1 285	20 571	110 998	86 639	195 121	7 114
33391	Pump & compressor mfg.....	-	4	3	f	D	D	D	D	D	D	D	D
333911	Pump & pumping equipment mfg.....	-	3	2	f	D	D	D	D	D	D	D	D
33392	Material handling equipment mfg.....	-	5	3	253	6 706	203	369	4 679	11 178	13 472	24 114	443
334	Computer & electronic product mfg.....	-	12	6	2 722	67 707	1 986	3 466	36 951	140 283	85 795	224 260	11 385
3344	Semiconductor & other electronic component mfg.....	-	3	2	e	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg.....	-	3	2	e	D	D	D	D	D	D	D	D
334419	Other electronic component mfg.....	-	2	2	e	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg.....	-	7	3	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg.....	-	7	3	g	D	D	D	D	D	D	D	D
334512	Automatic environmental control mfg.....	-	5	3	2 326	59 859	1 722	3 013	33 689	111 798	59 575	170 946	D
335	Electrical equipment, appliance, & component mfg.....	-	12	7	1 576	49 137	1 298	2 472	35 550	183 372	98 926	282 940	12 201
3351	Electric lighting equipment mfg.....	-	3	1	e	D	D	D	D	D	D	D	D
33511	Electric lamp bulb & part mfg.....	-	1	1	e	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg.....	-	1	1	e	D	D	D	D	D	D	D	D
3352	Household appliance mfg..	-	1	1	e	D	D	D	D	D	D	D	D
33522	Major appliance mfg....	-	1	1	e	D	D	D	D	D	D	D	D
335221	Household cooking appliance mfg.....	-	1	1	e	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg..	-	4	2	e	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg.....	-	4	2	e	D	D	D	D	D	D	D	D
335312	Motor & generator mfg.....	-	2	1	e	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg.....	-	4	3	378	7 136	334	429	5 444	26 130	10 980	36 348	624
33593	Wiring device mfg.....	-	3	3	e	D	D	D	D	D	D	D	D
336	Transportation equipment mfg.....	-	27	22	5 208	243 547	4 426	9 679	208 287	424 938	565 786	988 422	76 313
3362	Motor vehicle body & trailer mfg.....	2	7	5	337	9 403	227	471	6 325	21 806	22 344	43 875	D
33621	Motor vehicle body & trailer mfg.....	2	7	5	337	9 403	227	471	6 325	21 806	22 344	43 875	D
3363	Motor vehicle parts mfg....	-	15	12	4 252	222 868	3 671	8 151	193 197	365 640	485 529	849 671	72 617
33637	Motor vehicle metal stamping.....	-	7	7	3 417	194 351	2 968	6 600	171 179	252 807	366 105	619 088	D
336370	Motor vehicle metal stamping.....	-	7	7	3 417	194 351	2 968	6 600	171 179	252 807	366 105	619 088	D
33639	Other motor vehicle parts mfg.....	-	2	2	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg.....	-	2	2	f	D	D	D	D	D	D	D	D

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[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>MANSFIELD, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
336	Transportation equipment mfg—Con.												
3366	Ship & boat building .....	—	2	2	e	D	D	D	D	D	D	D	D
33661	Ship & boat building .....	—	2	2	e	D	D	D	D	D	D	D	D
336612	Boat building .....	—	2	2	e	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	—	21	5	319	7 388	253	527	4 573	15 171	28 408	43 407	687
3399	Other miscellaneous mfg ..	—	14	5	300	7 004	239	509	4 373	14 217	27 900	41 935	598
	<b>PARKERSBURG—MARIETTA, WV—OH MSA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>182</b>	<b>70</b>	<b>12 252</b>	<b>481 108</b>	<b>8 728</b>	<b>18 316</b>	<b>309 094</b>	<b>2 418 397</b>	<b>1 778 482</b>	<b>4 202 789</b>	<b>309 623</b>
	Parkersburg—Marietta, WV—OH MSA (OH Part) .....	—	104	43	5 242	187 834	3 591	7 496	113 645	932 472	962 418	1 900 923	106 014
	Parkersburg—Marietta, WV—OH MSA (WV Part) .....	—	78	27	7 010	293 274	5 137	10 820	195 449	1 485 925	816 064	2 301 866	203 609
311	Food mfg .....	1	14	6	e	D	D	D	D	D	D	D	D
321	Wood product mfg .....	4	22	6	f	D	D	D	D	D	D	D	1 355
3219	Other wood product mfg ...	1	11	2	e	D	D	D	D	D	D	D	185
32192	Wood container & pallet mfg .....	—	8	2	e	D	D	D	D	D	D	D	D
321920	Wood container & pallet mfg .....	—	8	2	e	D	D	D	D	D	D	D	D
322	Paper mfg .....	—	2	1	e	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	—	2	1	e	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
322222	Coated & laminated paper mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
325	Chemical mfg .....	—	14	11	4 241	230 649	2 776	6 188	143 922	1 665 480	1 130 072	2 804 512	250 879
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg .....	—	7	6	4 011	221 256	2 665	5 955	139 862	1 634 789	1 108 753	2 752 151	D
32521	Resin & synthetic rubber mfg .....	—	7	6	4 011	221 256	2 665	5 955	139 862	1 634 789	1 108 753	2 752 151	D
325211	Plastics material & resin mfg .....	—	5	5	h	D	D	D	D	D	D	D	D
325212	Synthetic rubber mfg ..	—	2	1	e	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	1	20	9	1 297	36 510	1 038	2 057	25 784	91 996	45 803	135 273	D
3272	Glass & glass product mfg .	—	7	4	930	26 152	745	1 495	18 392	63 851	19 000	80 269	D
32721	Glass & glass product mfg .....	—	7	4	930	26 152	745	1 495	18 392	63 851	19 000	80 269	D
327212	Other pressed & blown glass & glassware mfg .....	—	5	3	f	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	—	5	5	876	35 680	677	1 626	25 789	136 844	184 069	313 097	D
3311	Iron & steel mills & ferroalloy mfg .....	—	3	3	f	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg .....	—	3	3	f	D	D	D	D	D	D	D	D
331112	Electrometallurgical ferroalloy product mfg .....	—	3	3	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	—	39	14	1 750	58 900	1 268	2 636	39 003	220 495	109 429	329 677	6 031
3322	Cutlery & handtool mfg ....	—	1	1	f	D	D	D	D	D	D	D	D
33221	Cutlery & handtool mfg ..	—	1	1	f	D	D	D	D	D	D	D	D
332212	Hand & edge tool mfg .	—	1	1	f	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg .....	1	15	8	480	13 083	329	666	9 080	37 294	20 842	57 316	1 167
33232	Ornamental & architectural metal products mfg .....	3	6	4	298	8 572	188	387	6 141	15 463	7 654	22 918	D
332322	Sheet metal work mfg .	2	4	3	e	D	D	D	D	D	D	D	D
333	Machinery mfg .....	2	13	4	419	16 107	328	635	12 109	40 806	22 912	64 276	982
335	Electrical equipment, appliance, & component mfg .....	—	2	1	e	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
33593	Wiring device mfg .....	—	1	1	e	D	D	D	D	D	D	D	D
335932	Noncurrent-carrying wiring device mfg .....	—	1	1	e	D	D	D	D	D	D	D	D



**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>PARKERSBURG—MARIETTA, WV—OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
337	Furniture & related product mfg .....	-	7	2	e	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	-	14	5	846	28 268	522	1 063	14 039	73 920	55 008	128 259	4 914
3391	Medical equipment & supplies mfg .....	-	4	1	e	D	D	D	D	D	D	D	D
33911	Medical equipment & supplies mfg .....	-	4	1	e	D	D	D	D	D	D	D	D
339111	Laboratory apparatus & furniture mfg .....	-	2	1	e	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg ..	-	10	4	e	D	D	D	D	D	D	D	D
<b>31-33</b>	<b>STEUBENVILLE—WEIRTON, OH—WV MSA</b>												
	<b>Manufacturing .....</b>	-	<b>104</b>	<b>47</b>	<b>11 530</b>	<b>458 573</b>	<b>8 589</b>	<b>18 744</b>	<b>324 587</b>	<b>1 219 112</b>	<b>2 001 511</b>	<b>3 206 200</b>	<b>156 324</b>
	Steubenville—Weirton, OH—WV MSA (OH Part) .....	-	45	12	2 244	78 694	1 579	3 301	49 589	187 550	301 370	463 283	18 024
	Steubenville—Weirton, OH—WV MSA (WV Part) .....	-	59	35	9 286	379 879	7 010	15 443	274 998	1 031 562	1 700 141	2 742 917	138 300
322	Paper mfg .....	-	5	5	e	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	-	3	3	e	D	D	D	D	D	D	D	D
324	Petroleum & coal products mfg .....	-	5	2	e	D	D	D	D	D	D	D	D
3241	Petroleum & coal products mfg .....	-	5	2	e	D	D	D	D	D	D	D	D
325	Chemical mfg .....	-	10	4	e	D	D	D	D	D	D	D	17 397
3251	Basic chemical mfg .....	-	6	4	e	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	1	17	11	g	D	D	D	D	D	D	D	D
3271	Clay product & refractory mfg .....	-	6	4	1 233	31 279	1 068	2 038	24 424	67 855	29 524	96 210	2 622
32711	Pottery, ceramics, & plumbing fixture mfg ...	-	4	3	g	D	D	D	D	D	D	D	D
327112	Vitreous china, fine earthenware, & other pottery product mfg ..	-	2	1	g	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	6	5	6 628	307 894	4 817	10 923	218 002	787 135	1 004 455	1 756 039	D
3311	Iron & steel mills & ferroalloy mfg .....	-	4	4	i	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg .....	-	4	4	i	D	D	D	D	D	D	D	D
331111	Iron & steel mills .....	-	4	4	i	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing .....	-	1	1	f	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying ...	-	1	1	f	D	D	D	D	D	D	D	D
331491	Other nonferrous metal rolling, drawing, & extruding .....	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	19	12	1 649	53 028	1 255	2 872	36 332	184 302	561 859	742 732	10 279
3321	Forging & stamping .....	-	3	2	e	D	D	D	D	D	D	D	D
33211	Forging & stamping .....	-	3	2	e	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, & allied activities.	-	5	5	e	D	D	D	D	D	D	D	D
33281	Coating, engraving, heat treating, & allied activities .....	-	5	5	e	D	D	D	D	D	D	D	D
332812	Metal coating/engraving (exc jewelry/silverware)/allied services .....	-	2	2	e	D	D	D	D	D	D	D	D
3329	Other fabricated metal product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
33291	Metal valve mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
332911	Industrial valve mfg ...	-	1	1	f	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>TOLEDO, OH MSA</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>954</b>	<b>392</b>	<b>55 581</b>	<b>2 194 037</b>	<b>43 895</b>	<b>91 593</b>	<b>1 573 999</b>	<b>5 732 487</b>	<b>10 588 592</b>	<b>16 346 667</b>	<b>472 439</b>
311	Food mfg . . . . .	-	46	16	2 860	107 646	2 267	4 845	80 688	718 290	802 156	1 526 419	48 905
3112	Grain & oilseed milling . . . .	-	3	2	f	D	D	D	D	D	D	D	D
31123	Breakfast cereal mfg . . . .	-	1	1	f	D	D	D	D	D	D	D	D
311230	Breakfast cereal mfg . .	-	1	1	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg . . . . .	-	8	6	692	23 626	593	1 211	17 246	141 663	135 016	277 255	13 712
31142	Fruit & vegetable canning, pickling, & drying . . . . .	-	7	5	f	D	D	D	D	D	D	D	D
311422	Specialty canning . . . . .	-	2	2	e	D	D	D	D	D	D	D	D
3116	Meat product mfg . . . . .	-	6	2	e	D	D	D	D	D	D	D	1 370
31161	Animal slaughtering & processing . . . . .	-	6	2	e	D	D	D	D	D	D	D	1 370
311612	Meat processed from carcasses . . . . .	-	2	2	e	D	D	D	D	D	D	D	D
3119	Other food mfg . . . . .	2	5	2	f	D	D	D	D	D	D	D	D
31199	All other food mfg . . . . .	-	2	1	f	D	D	D	D	D	D	D	D
311999	All other miscellaneous food mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
313	Textile mills . . . . .	1	5	3	924	27 407	732	1 440	20 081	40 211	73 086	114 101	9 177
3133	Textile & fabric finishing & fabric coating mills . . . . .	-	3	2	f	D	D	D	D	D	D	D	D
31332	Fabric coating mills . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
313320	Fabric coating mills . . .	-	2	2	f	D	D	D	D	D	D	D	D
321	Wood product mfg . . . . .	2	17	6	509	11 512	452	856	9 373	37 598	53 111	89 788	1 499
3219	Other wood product mfg . . .	6	13	4	e	D	D	D	D	D	D	D	800
322	Paper mfg . . . . .	-	18	11	911	30 749	659	1 441	18 832	80 439	115 579	195 316	4 929
3222	Converted paper product mfg . . . . .	-	18	11	911	30 749	659	1 441	18 832	80 439	115 579	195 316	4 929
32221	Paperboard container mfg . . . . .	-	12	7	655	24 611	477	1 027	14 533	64 747	96 334	160 940	3 886
322211	Corrugated & solid fiber box mfg . . . . .	-	8	5	467	18 334	332	717	10 499	46 336	67 245	113 393	2 786
323	Printing & related support activities . . . . .	1	121	23	1 930	59 289	1 223	2 456	35 017	121 587	82 235	203 385	10 673
3231	Printing & related support activities . . . . .	1	121	23	1 930	59 289	1 223	2 456	35 017	121 587	82 235	203 385	10 673
32311	Printing . . . . .	2	110	19	1 765	53 393	1 129	2 260	31 760	110 105	79 210	188 918	9 849
323110	Commercial lithographic printing . . .	1	52	12	888	29 159	625	1 305	18 965	58 859	46 134	104 819	4 388
324	Petroleum & coal products mfg . . . . .	-	13	4	1 281	69 441	743	1 770	31 954	261 189	2 153 106	2 418 171	39 808
3241	Petroleum & coal products mfg . . . . .	-	13	4	1 281	69 441	743	1 770	31 954	261 189	2 153 106	2 418 171	39 808
32411	Petroleum refineries . . . .	-	2	2	g	D	D	D	D	D	D	D	D
324110	Petroleum refineries . .	-	2	2	g	D	D	D	D	D	D	D	D
325	Chemical mfg . . . . .	1	42	21	1 441	59 925	893	1 907	30 750	298 398	327 387	624 752	23 508
3251	Basic chemical mfg . . . . .	1	9	5	279	14 283	179	413	8 521	86 035	69 403	155 839	13 707
3256	Soap, cleaning compound, & toilet preparation mfg . .	1	12	6	573	21 940	367	751	9 955	105 586	62 857	167 904	3 805
32561	Soap & cleaning compound mfg . . . . .	1	12	6	573	21 940	367	751	9 955	105 586	62 857	167 904	3 805
325612	Polish & other sanitation good mfg . .	-	6	4	498	19 567	331	675	8 720	94 928	50 382	144 708	3 101
3259	Other chemical product mfg . . . . .	4	10	5	306	12 634	165	392	6 084	63 454	61 516	124 248	3 459
326	Plastics & rubber products mfg . . . . .	-	58	39	4 750	137 309	3 676	7 073	92 846	361 237	266 303	618 438	28 599
3261	Plastics product mfg . . . . .	1	44	27	2 792	72 648	2 214	4 222	49 682	164 547	161 463	326 103	15 112
32619	Other plastics product mfg . . . . .	1	36	23	2 579	67 136	2 049	3 901	45 924	150 030	143 562	293 771	13 675
326199	All other plastics product mfg . . . . .	1	34	23	h	D	D	D	D	D	D	D	D
3262	Rubber product mfg . . . . .	-	14	12	1 958	64 661	1 462	2 851	43 164	196 690	104 840	292 335	13 487
32629	Other rubber product mfg . . . . .	-	13	12	g	D	D	D	D	D	D	D	13 487
326291	Rubber product mfg for mechanical use . . . . .	-	7	7	1 663	54 532	1 239	2 336	36 709	166 712	77 675	236 173	12 521
326299	All other rubber product mfg . . . . .	-	6	5	e	D	D	D	D	D	D	D	966

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>TOLEDO, OH MSA— Con. Manufacturing— Con.</b>												
327	Nonmetallic mineral product mfg . . . . .	—	40	17	3 261	120 191	2 715	5 730	94 248	463 162	280 990	734 182	24 672
3272	Glass & glass product mfg . . . . .	—	13	8	2 768	103 891	2 326	4 950	82 727	416 668	234 696	641 940	17 753
32721	Glass & glass product mfg . . . . .	—	13	8	2 768	103 891	2 326	4 950	82 727	416 668	234 696	641 940	17 753
327211	Flat glass mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
327212	Other pressed & blown glass & glassware mfg . . . . .	—	5	4	1 852	68 601	1 622	3 346	57 001	262 631	123 533	381 977	14 832
327215	Glass product mfg made of purchased glass . . . . .	—	7	3	e	D	D	D	D	D	D	D	D
3273	Cement & concrete product mfg . . . . .	2	19	7	399	12 887	315	641	8 934	34 218	33 173	67 168	6 423
331	Primary metal mfg . . . . .	—	25	16	2 576	89 135	2 121	4 400	67 503	205 651	349 741	552 114	21 813
3312	Steel product mfg from purchased steel . . . . .	—	6	6	g	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel . . . . .	—	4	4	1 095	31 592	924	1 845	23 263	70 962	140 269	210 398	7 303
331210	Iron & steel pipes & tubes mfg from purchased steel . . . . .	—	4	4	1 095	31 592	924	1 845	23 263	70 962	140 269	210 398	7 303
3315	Foundries . . . . .	—	16	8	1 173	44 867	978	2 070	35 899	98 727	107 356	204 088	12 349
33152	Nonferrous metal foundries . . . . .	—	10	4	973	39 753	802	1 745	31 651	86 121	92 351	176 440	D
331521	Aluminum die-casting foundries . . . . .	—	3	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	—	214	85	7 429	249 201	5 754	12 043	168 347	667 775	670 007	1 352 488	63 415
3321	Forging & stamping . . . . .	—	15	12	941	35 100	704	1 447	22 586	73 460	93 071	163 441	2 037
33211	Forging & stamping . . . . .	—	15	12	941	35 100	704	1 447	22 586	73 460	93 071	163 441	2 037
332114	Custom roll forming . . . . .	—	3	3	e	D	D	D	D	D	D	D	D
332116	Metal stamping . . . . .	1	11	9	f	D	D	D	D	D	D	D	1 708
3322	Cutlery & handtool mfg . . . . .	—	11	4	754	25 676	474	1 076	14 907	109 073	68 737	175 789	4 222
33221	Cutlery & handtool mfg . . . . .	—	11	4	754	25 676	474	1 076	14 907	109 073	68 737	175 789	4 222
332212	Hand & edge tool mfg . . . . .	—	8	3	e	D	D	D	D	D	D	D	D
332214	Kitchen utensil, pot, & pan mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg . . . . .	1	31	12	1 021	34 139	776	1 549	20 704	68 699	82 458	150 602	3 644
33231	Plate work & fabricated structural product mfg . . . . .	—	17	7	385	14 294	275	585	8 104	25 507	33 705	59 005	1 420
332312	Fabricated structural metal mfg . . . . .	—	10	4	264	10 504	177	377	5 451	18 221	28 400	46 563	1 236
33232	Ornamental & architectural metal products mfg . . . . .	1	14	5	636	19 845	501	964	12 600	43 192	48 753	91 597	2 224
332323	Ornamental & architectural metal work mfg . . . . .	—	3	2	e	D	D	D	D	D	D	D	D
3324	Boiler, tank, & shipping container mfg . . . . .	—	9	6	486	18 469	407	854	15 277	65 521	114 599	184 003	2 339
33243	Metal can, box, & other metal container (light gauge) mfg . . . . .	—	6	3	e	D	D	D	D	D	D	D	D
332431	Metal can mfg . . . . .	—	3	2	e	D	D	D	D	D	D	D	D
3325	Hardware mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
33251	Hardware mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
332510	Hardware mfg . . . . .	—	2	2	e	D	D	D	D	D	D	D	D
3326	Spring & wire product mfg . . . . .	—	8	4	330	11 202	264	586	6 556	25 004	29 827	54 564	D
33261	Spring & wire product mfg . . . . .	—	8	4	330	11 202	264	586	6 556	25 004	29 827	54 564	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	—	81	23	1 635	54 902	1 341	2 715	39 872	93 233	49 294	143 867	5 825
33271	Machine shops . . . . .	—	72	18	1 433	47 706	1 183	2 393	35 204	79 716	43 430	124 316	4 564
332710	Machine shops . . . . .	—	72	18	1 433	47 706	1 183	2 393	35 204	79 716	43 430	124 316	4 564
3328	Coating, engraving, heat treating, & allied activities . . . . .	—	34	17	1 357	45 572	1 076	2 266	32 051	103 840	184 773	304 822	41 415
33281	Coating, engraving, heat treating, & allied activities . . . . .	—	34	17	1 357	45 572	1 076	2 266	32 051	103 840	184 773	304 822	41 415
332811	Metal heat treating . . . . .	—	6	5	444	14 968	366	814	9 774	21 748	112 573	141 706	D
332812	Metal coating/engraving (exc jewelry/silverware)/allied services . . . . .	—	7	5	380	16 552	296	678	12 868	48 517	58 612	115 778	D
332813	Electroplating, plating, polishing, anodizing, & coloring . . . . .	—	21	7	533	14 052	414	774	9 409	33 575	13 588	47 338	1 050

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
<b>31-33</b>	<b>TOLEDO, OH MSA— Con. Manufacturing— Con.</b>													
332	Fabricated metal product mfg—Con.													
3329	Other fabricated metal product mfg . . . . .	2	23	5	e	D	D	D	D	D	D	D	1 923	
33299	All other fabricated metal product mfg . . . . .	1	19	5	e	D	D	D	D	D	D	D	1 739	
333	Machinery mfg . . . . .	1	114	50		3 756	153 131	2 412	5 089	80 481	289 267	263 980	561 822	17 162
3333	Commercial & service industry machinery mfg ..	—	6	3		458	15 970	277	572	7 863	33 963	41 821	73 368	745
33331	Commercial & service industry machinery mfg . . . . .	—	6	3		458	15 970	277	572	7 863	33 963	41 821	73 368	745
333319	Other commercial & service industry machinery mfg . . . . .	—	5	2	e	D	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg . . . . .	1	62	25		1 603	70 093	1 247	2 715	47 467	110 079	52 388	170 842	9 517
33351	Metalworking machinery mfg . . . . .	1	62	25		1 603	70 093	1 247	2 715	47 467	110 079	52 388	170 842	9 517
333511	Industrial mold mfg . . .	—	18	7		552	25 083	464	1 008	19 851	24 401	9 198	41 849	5 613
333514	Special die & tool, die set, jig, & fixture mfg .	2	27	9		467	18 710	382	768	14 099	34 611	11 210	46 303	2 342
333515	Cutting tool & machine tool accessory mfg ..	—	9	3		284	13 907	227	504	7 388	25 699	13 973	39 956	818
3339	Other general-purpose machinery mfg . . . . .	—	27	16		1 357	56 722	676	1 374	19 673	118 983	131 379	253 080	5 712
33399	All other general-purpose machinery mfg . . . . .	—	21	13		1 229	52 496	609	1 241	17 966	108 499	124 154	235 416	5 370
333994	Industrial process furnace & oven mfg . .	1	5	4		465	24 421	186	390	6 449	37 565	65 401	103 781	1 633
333999	All other miscellaneous general-purpose machinery mfg . . . . .	—	8	4		352	13 167	170	326	4 346	37 411	36 638	73 756	D
334	Computer & electronic product mfg . . . . .	3	32	15		958	29 486	644	1 277	14 852	127 397	37 709	155 867	3 413
3344	Semiconductor & other electronic component mfg . . . . .	4	11	6	e	D	D	D	D	D	D	D	D	1 566
33441	Semiconductor & other electronic component mfg . . . . .	4	11	6	e	D	D	D	D	D	D	D	D	1 566
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	3	11	6		277	8 094	160	301	3 784	13 516	15 734	30 040	D
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	3	11	6		277	8 094	160	301	3 784	13 516	15 734	30 040	D
335	Electrical equipment, appliance, & component mfg . . . . .	—	17	8		1 165	38 819	901	1 996	26 935	79 024	106 177	183 411	3 937
3353	Electrical equipment mfg ..	—	7	3	e	D	D	D	D	D	D	D	D	814
33531	Electrical equipment mfg . . . . .	—	7	3	e	D	D	D	D	D	D	D	D	814
3359	Other electrical equipment & component mfg . . . . .	—	6	4		684	23 795	578	1 289	18 825	51 129	84 654	135 705	D
33591	Battery mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D	D
335911	Storage battery mfg . . .	—	1	1	e	D	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	—	53	40		16 505	854 370	14 710	31 585	728 232	1 517 809	4 590 670	6 138 523	140 048
3361	Motor vehicle mfg . . . . .	—	1	1	i	D	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg . . . . .	—	1	1	i	D	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg . . . . .	—	1	1	i	D	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . .	—	45	35	j	D	D	D	D	D	D	D	D	D
33633	Motor vehicle steering & suspension component (except spring) mfg . . . . .	—	1	1	g	D	D	D	D	D	D	D	D	D
336330	Motor vehicle steering & suspension component (except spring) mfg . . . . .	—	1	1	g	D	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg . . . . .	—	1	1	h	D	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg . . . . .	—	1	1	h	D	D	D	D	D	D	D	D	D
33636	Motor vehicle seating & interior trim mfg . . . . .	—	3	1	e	D	D	D	D	D	D	D	D	D
336360	Motor vehicle seating & interior trim mfg . . . . .	—	3	1	e	D	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>TOLEDO, OH MSA— Con.</b>												
	<b>Manufacturing— Con.</b>												
336	Transportation equipment mfg—Con.												
3363	Motor vehicle parts mfg— Con.												
33637	Motor vehicle metal stamping .....	-	20	15	2 282	111 662	1 811	3 968	83 787	244 212	231 412	472 880	41 351
336370	Motor vehicle metal stamping .....	-	20	15	2 282	111 662	1 811	3 968	83 787	244 212	231 412	472 880	41 351
33639	Other motor vehicle parts mfg .....	2	16	14	1 738	53 601	1 437	2 855	39 357	114 659	160 018	278 397	20 091
336399	All other motor vehicle parts mfg .....	2	16	14	1 738	53 601	1 437	2 855	39 357	114 659	160 018	278 397	20 091
337	Furniture & related product mfg .....	-	46	15	3 650	112 815	2 909	5 852	52 530	327 996	323 055	650 485	D
3371	Household & institutional furniture & kitchen cabinet mfg .....	-	30	7	3 207	102 990	2 596	5 312	46 588	309 683	292 322	601 108	D
33712	Household & institutional furniture mfg .....	-	10	6	h	D	D	D	D	D	D	D	D
337122	Nonupholstered wood household furniture mfg .....	-	6	4	h	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) mfg .....	6	14	7	e	D	D	D	D	D	D	D	1 017
33721	Office furniture (including fixtures) mfg .....	6	14	7	e	D	D	D	D	D	D	D	1 017
337215	Showcase, partition, shelving, & locker mfg .....	6	13	7	393	8 550	292	485	5 308	14 472	28 121	42 894	D
339	Miscellaneous mfg .....	3	68	18	1 409	38 634	907	1 529	17 673	98 346	56 350	154 482	3 225
3391	Medical equipment & supplies mfg .....	3	28	8	817	21 719	507	762	9 546	56 839	24 158	81 372	2 011
33911	Medical equipment & supplies mfg .....	3	28	8	817	21 719	507	762	9 546	56 839	24 158	81 372	2 011
339113	Surgical appliance & supplies mfg .....	2	6	5	497	12 709	305	390	5 221	34 181	14 975	49 617	961
3399	Other miscellaneous mfg ..	2	40	10	592	16 915	400	767	8 127	41 507	32 192	73 110	1 214
	<b>WHEELING, WV—OH MSA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>137</b>	<b>42</b>	<b>3 511</b>	<b>90 020</b>	<b>2 737</b>	<b>5 094</b>	<b>62 990</b>	<b>314 948</b>	<b>335 739</b>	<b>648 600</b>	<b>31 996</b>
	Wheeling, WV—OH MSA (OH Part) .....	-	55	13	1 523	36 909	1 190	2 221	26 412	111 446	162 993	272 475	19 800
	Wheeling, WV—OH MSA (WV Part) .....	-	82	29	1 988	53 111	1 547	2 873	36 578	203 502	172 746	376 125	12 196
311	Food mfg .....	-	12	3	e	D	D	D	D	D	D	D	1 632
332	Fabricated metal product mfg .....	1	32	11	713	18 773	579	1 135	13 670	47 234	87 645	130 678	4 734
3329	Other fabricated metal product mfg .....	-	3	3	e	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg .....	-	3	3	e	D	D	D	D	D	D	D	D
	<b>YOUNGSTOWN— WARREN, OH MSA</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>896</b>	<b>345</b>	<b>55 718</b>	<b>2 267 067</b>	<b>44 898</b>	<b>92 144</b>	<b>1 690 527</b>	<b>5 200 433</b>	<b>9 224 530</b>	<b>14 454 875</b>	<b>270 887</b>
311	Food mfg .....	1	47	8	1 038	24 256	891	1 516	17 579	74 877	176 274	252 135	6 254
3116	Meat product mfg .....	-	7	2	f	D	D	D	D	D	D	D	D
31161	Animal slaughtering & processing .....	-	7	2	f	D	D	D	D	D	D	D	D
311612	Meat processed from carcasses .....	-	3	1	e	D	D	D	D	D	D	D	D
314	Textile product mills .....	2	12	3	e	D	D	D	D	D	D	D	D
3141	Textile furnishings mills .....	-	4	1	e	D	D	D	D	D	D	D	D
31412	Curtain & linen mills .....	-	4	1	e	D	D	D	D	D	D	D	D
314129	Other household textile product mills .....	-	2	1	e	D	D	D	D	D	D	D	D
321	Wood product mfg .....	-	38	14	f	D	D	D	D	D	D	D	2 121
3219	Other wood product mfg ..	1	30	9	514	10 306	414	742	7 293	21 761	39 012	59 767	1 264
322	Paper mfg .....	5	7	6	e	D	D	D	D	D	D	D	1 355
3222	Converted paper product mfg .....	5	7	6	e	D	D	D	D	D	D	D	1 355
32223	Stationery product mfg ..	6	4	4	e	D	D	D	D	D	D	D	1 235
322232	Envelope mfg .....	6	4	4	e	D	D	D	D	D	D	D	1 235

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[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>YOUNGSTOWN-WARREN, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
323	Printing & related support activities.....	3	65	15	1 208	33 196	851	1 720	20 452	78 700	48 666	126 445	6 371
3231	Printing & related support activities.....	3	65	15	1 208	33 196	851	1 720	20 452	78 700	48 666	126 445	6 371
32311	Printing .....	3	60	15	1 179	32 184	831	1 684	19 798	76 363	47 983	123 448	D
323110	Commercial lithographic printing ..	—	33	8	561	15 907	411	800	10 037	35 815	18 075	53 880	4 061
323113	Commercial screen printing.....	7	4	3	367	10 214	235	530	5 716	28 863	17 750	45 777	D
325	Chemical mfg .....	2	19	6	e	D	D	D	D	D	D	D	4 045
326	Plastics & rubber products mfg .....	3	55	23	3 389	84 805	2 864	5 691	59 262	211 935	188 991	406 641	14 771
3261	Plastics product mfg .....	4	41	18	2 683	60 225	2 306	4 532	43 325	156 741	154 116	309 951	13 616
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	1	12	5	455	11 369	389	774	7 933	29 680	34 556	64 558	1 875
326121	Unsupported plastics profile shape mfg .....	—	9	5	416	10 711	358	736	7 476	27 664	30 364	58 316	1 671
32619	Other plastics product mfg .....	5	24	13	2 182	47 835	1 879	3 692	34 655	124 543	115 991	239 293	11 442
326199	All other plastics product mfg .....	5	22	13	g	D	D	D	D	D	D	D	D
3262	Rubber product mfg .....	—	14	5	706	24 580	558	1 159	15 937	55 194	34 875	96 690	1 155
32621	Tire mfg .....	—	5	1	e	D	D	D	D	D	D	D	D
326211	Tire mfg (except retreading) .....	—	1	1	e	D	D	D	D	D	D	D	D
32629	Other rubber product mfg .....	1	8	3	e	D	D	D	D	D	D	D	D
326291	Rubber product mfg for mechanical use .....	—	4	2	e	D	D	D	D	D	D	D	446
327	Nonmetallic mineral product mfg .....	1	67	29	2 730	72 940	2 250	4 419	54 525	183 262	113 667	296 312	12 273
3271	Clay product & refractory mfg .....	—	27	17	1 905	47 111	1 604	3 054	34 024	111 350	69 032	179 372	7 207
32711	Pottery, ceramics, & plumbing fixture mfg ...	—	13	8	1 189	22 249	1 054	1 966	17 068	51 662	13 768	65 478	3 519
327112	Vitreous china, fine earthenware, & other pottery product mfg ..	—	13	8	1 189	22 249	1 054	1 966	17 068	51 662	13 768	65 478	3 519
32712	Clay building material & refractories mfg .....	—	14	9	716	24 862	550	1 088	16 956	59 688	55 264	113 894	3 688
327124	Clay refractory mfg ...	—	5	4	258	9 016	195	372	6 563	20 184	16 283	36 627	1 600
327125	Nonclay refractory mfg .....	—	9	5	458	15 846	355	716	10 393	39 504	38 981	77 267	2 088
3272	Glass & glass product mfg ..	—	9	5	382	14 187	331	693	12 316	40 393	17 069	57 407	2 635
32721	Glass & glass product mfg .....	—	9	5	382	14 187	331	693	12 316	40 393	17 069	57 407	2 635
3273	Cement & concrete product mfg .....	3	20	4	251	6 755	167	386	4 807	14 800	19 733	34 508	1 430
331	Primary metal mfg .....	—	55	40	9 149	406 352	7 065	15 452	285 075	1 105 979	1 653 721	2 742 915	82 406
3311	Iron & steel mills & ferroalloy mfg .....	—	7	7	4 281	219 030	3 310	7 309	159 572	596 234	848 810	1 436 793	52 054
33111	Iron & steel mills & ferroalloy mfg .....	—	7	7	4 281	219 030	3 310	7 309	159 572	596 234	848 810	1 436 793	52 054
331111	Iron & steel mills .....	—	7	7	4 281	219 030	3 310	7 309	159 572	596 234	848 810	1 436 793	52 054
3312	Steel product mfg from purchased steel .....	—	11	9	1 314	59 007	945	1 932	36 481	142 575	201 212	338 082	13 712
33121	Iron & steel pipes & tubes mfg from purchased steel .....	—	7	6	e	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel .....	—	7	6	e	D	D	D	D	D	D	D	D
33122	Rolling & drawing of purchased steel .....	—	4	3	f	D	D	D	D	D	D	D	D
331221	Cold-rolled steel shape mfg .....	—	4	3	f	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing ..	—	11	11	1 937	55 501	1 621	3 310	38 233	171 062	434 268	592 071	8 423
33131	Alumina & aluminum production & processing.....	—	11	11	1 937	55 501	1 621	3 310	38 233	171 062	434 268	592 071	8 423
331316	Aluminum extruded product mfg .....	—	9	9	g	D	D	D	D	D	D	D	D

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[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>YOUNGSTOWN-WARREN, OH MSA—Con.</b>												
	<b>Manufacturing—Con.</b>												
331	Primary metal mfg—Con.												
3314	Nonferrous metal (except aluminum) production & processing.....	—	4	2	f	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying ...	—	3	1	f	D	D	D	D	D	D	D	D
331491	Other nonferrous metal rolling, drawing, & extruding.....	—	2	1	f	D	D	D	D	D	D	D	D
3315	Foundries.....	—	22	11	f	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries..	—	15	7	677	22 125	539	1 203	14 775	40 644	37 176	79 048	2 622
331511	Iron foundries.....	—	9	5	558	18 790	457	1 051	12 862	34 274	32 586	68 088	2 584
332	Fabricated metal product mfg.....	1	237	98	7 614	238 495	5 954	11 883	161 840	567 736	565 279	1 128 537	30 320
3321	Forging & stamping.....	1	14	11	911	33 291	702	1 438	22 523	81 030	109 395	188 721	4 170
33211	Forging & stamping.....	1	14	11	911	33 291	702	1 438	22 523	81 030	109 395	188 721	4 170
332111	Iron & steel forging ...	3	4	4	295	11 496	221	503	8 407	30 216	30 163	61 829	1 662
332114	Custom roll forming....	—	3	3	362	11 949	278	561	7 958	22 216	37 484	55 567	D
332116	Metal stamping.....	—	7	4	254	9 846	203	374	6 158	28 598	41 748	71 325	D
3323	Architectural & structural metals mfg.....	—	65	33	2 219	72 155	1 632	3 236	44 500	173 189	219 320	390 402	7 607
33231	Plate work & fabricated structural product mfg..	—	35	19	1 305	45 499	997	2 000	28 949	103 887	110 882	212 702	5 122
332312	Fabricated structural metal mfg.....	1	22	13	827	28 571	644	1 323	18 560	88 002	70 092	156 255	3 367
332313	Plate work mfg.....	—	12	5	e	D	D	D	D	D	D	D	D
33232	Ornamental & architectural metal products mfg.....	—	30	14	914	26 656	635	1 236	15 551	69 302	108 438	177 700	2 485
332321	Metal window & door mfg.....	1	14	7	453	10 684	307	537	6 136	42 586	25 583	68 978	532
332323	Ornamental & architectural metal work mfg.....	—	9	5	332	10 065	230	494	6 502	18 841	72 528	90 623	1 287
3324	Boiler, tank, & shipping container mfg.....	—	11	8	812	24 782	663	1 413	17 341	54 009	79 994	135 407	D
33242	Metal tank (heavy gauge) mfg.....	—	4	3	e	D	D	D	D	D	D	D	D
332420	Metal tank (heavy gauge) mfg.....	—	4	3	e	D	D	D	D	D	D	D	D
33243	Metal can, box, & other metal container (light gauge) mfg.....	—	6	5	535	17 973	440	996	13 788	35 515	67 332	104 547	3 169
332431	Metal can mfg.....	—	2	2	e	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg.....	1	85	20	1 354	40 160	1 085	2 031	27 137	84 510	44 319	127 954	3 678
33271	Machine shops.....	1	78	17	1 204	36 542	974	1 840	24 857	74 500	37 088	110 336	2 666
332710	Machine shops.....	1	78	17	1 204	36 542	974	1 840	24 857	74 500	37 088	110 336	2 666
3328	Coating, engraving, heat treating, & allied activities.	1	22	10	432	11 738	336	662	8 065	26 549	12 012	38 560	2 030
33281	Coating, engraving, heat treating, & allied activities.....	1	22	10	432	11 738	336	662	8 065	26 549	12 012	38 560	2 030
3329	Other fabricated metal product mfg.....	1	36	15	1 837	55 337	1 498	3 032	41 534	144 297	99 489	242 197	6 839
33291	Metal valve mfg.....	3	5	3	439	15 426	321	758	9 779	39 551	29 730	68 950	D
332919	Other metal valve & pipe fitting mfg.....	5	3	2	e	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg.....	1	31	12	1 398	39 911	1 177	2 274	31 755	104 746	69 759	173 247	D
332998	Enameled iron & metal sanitary ware mfg ...	—	2	2	f	D	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product mfg.....	4	16	8	e	D	D	D	D	D	D	D	1 206
333	Machinery mfg.....	1	125	57	4 637	170 911	3 306	6 781	103 327	359 752	251 140	609 273	25 440
3332	Industrial machinery mfg ..	5	10	4	257	9 149	195	439	6 350	22 012	13 767	34 823	1 290
3335	Metalworking machinery mfg.....	1	70	29	1 740	65 021	1 343	2 749	42 163	121 839	65 847	185 482	11 304
33351	Metalworking machinery mfg.....	1	70	29	1 740	65 021	1 343	2 749	42 163	121 839	65 847	185 482	11 304
333514	Special die & tool, die set, jig, & fixture mfg ..	—	42	15	1 047	42 500	870	1 856	29 303	72 857	34 789	104 002	7 318
3339	Other general-purpose machinery mfg.....	—	32	17	2 253	88 013	1 461	3 034	49 609	194 739	153 080	349 523	12 104
33399	All other general-purpose machinery mfg.....	—	25	13	1 964	78 506	1 256	2 593	43 370	170 353	126 629	298 975	11 610
333994	Industrial process furnace & oven mfg..	2	7	5	433	17 109	239	520	6 924	38 918	45 010	86 394	1 286
333996	Fluid power pump & motor mfg.....	—	2	1	g	D	D	D	D	D	D	D	D

**Table 2. Industry Statistics for Metropolitan Areas: 1997—Con.**

[Includes data for industry groups and industries with 250 employees or more. For definitions of CMSAs, MSAs, and PMSAs, information on geographic areas followed by \*, and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
<b>31-33</b>	<b>YOUNGSTOWN-WARREN, OH MSA—Con.</b>													
	<b>Manufacturing—Con.</b>													
334	Computer & electronic product mfg . . . . .	1	11	3	e	D	D	D	D	D	D	D	1 280	
335	Electrical equipment, appliance, & component mfg . . . . .	—	12	6		1 428	52 851	1 086	2 488	41 078	227 833	131 086	359 894	10 898
3351	Electric lighting equipment mfg . . . . .	—	2	2	f	D	D	D	D	D	D	D	D	D
33511	Electric lamp bulb & part mfg . . . . .	—	2	2	f	D	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg . . . . .	—	2	2	f	D	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg . . . . .	—	3	1	e	D	D	D	D	D	D	D	D	D
33599	All other electrical equipment & component mfg . . . . .	—	2	1	e	D	D	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment & component mfg . . . . .	—	1	1	e	D	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	—	35	19	j	D	D	D	D	D	D	D	D	68 180
3361	Motor vehicle mfg . . . . .	—	3	1	i	D	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg . . . . .	—	2	1	i	D	D	D	D	D	D	D	D	D
336111	Automobile mfg . . . . .	—	2	1	i	D	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . . . .	—	20	14		14 023	746 638	11 396	23 437	576 825	1 139 836	2 209 507	3 401 979	D
33632	Motor vehicle electrical & electronic equipment mfg . . . . .	—	5	4	i	D	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical & electronic equipment mfg . . . . .	—	5	4	i	D	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping . . . . .	—	6	5	h	D	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping . . . . .	—	6	5	h	D	D	D	D	D	D	D	D	D
3365	Railroad rolling stock mfg . . . . .	—	5	3	e	D	D	D	D	D	D	D	D	D
33651	Railroad rolling stock mfg . . . . .	—	5	3	e	D	D	D	D	D	D	D	D	D
336510	Railroad rolling stock mfg . . . . .	—	5	3	e	D	D	D	D	D	D	D	D	D
337	Furniture & related product mfg . . . . .	1	41	7		770	28 480	659	1 472	24 134	88 142	52 895	141 128	1 779
3371	Household & institutional furniture & kitchen cabinet mfg . . . . .	2	27	2	e	D	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) mfg . . . . .	—	11	4		461	22 799	412	1 065	20 290	77 906	40 263	118 170	1 111
33721	Office furniture (including fixtures) mfg . . . . .	—	11	4		461	22 799	412	1 065	20 290	77 906	40 263	118 170	1 111
337215	Showcase, partition, shelving, & locker mfg . . . . .	—	8	2	e	D	D	D	D	D	D	D	D	884
339	Miscellaneous mfg . . . . .	5	50	5	e	D	D	D	D	D	D	D	D	1 727
3399	Other miscellaneous mfg . . . . .	7	28	3	e	D	D	D	D	D	D	D	D	1 321

<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>Industries with 250 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 250 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: 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.



**Table 3. Industry Statistics for Counties: 1997**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>ADAMS COUNTY, OH</b>													
31-33	Manufacturing . . . .	2	31	6	f	D	D	D	D	D	D	D	D
<b>ALLEN COUNTY, OH</b>													
31-33	Manufacturing . . . .	-	132	50	9 529	407 819	7 458	16 428	299 735	2 753 764	3 894 247	6 631 706	251 048
325	Chemical mfg . . . . .	-	6	4	f	D	D	D	D	D	D	D	60 865
326	Plastics & rubber products mfg . . . . .	-	8	6	922	27 497	730	1 727	20 802	92 178	99 297	189 577	D
3262	Rubber product mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
32629	Other rubber product mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	2	25	11	1 434	41 589	1 118	2 410	28 033	118 006	68 019	183 148	D
3328	Coating, engraving, heat treating, & allied activities .	3	7	3	f	D	D	D	D	D	D	D	1 310
33281	Coating, engraving, heat treating, & allied activities . . . . .	3	7	3	f	D	D	D	D	D	D	D	1 310
336	Transportation equipment mfg . . . . .	-	8	8	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . .	-	5	5	h	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine & engine parts mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
336312	Gasoline engine & engine parts mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
<b>ASHLAND COUNTY, OH</b>													
31-33	Manufacturing . . . .	-	98	44	7 135	215 730	5 681	11 218	145 301	580 043	574 218	1 157 517	42 584
322	Paper mfg . . . . .	-	6	4	591	20 269	440	992	12 205	42 261	54 449	96 007	7 732
3222	Converted paper product mfg . . . . .	-	6	4	591	20 269	440	992	12 205	42 261	54 449	96 007	7 732
32221	Paperboard container mfg . . . . .	-	4	3	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	-	8	7	860	18 595	751	1 585	14 492	56 505	47 697	102 054	2 370
327	Nonmetallic mineral product mfg . . . . .	-	3	2	f	D	D	D	D	D	D	D	D
3271	Clay product & refractory mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
32711	Pottery, ceramics, & plumbing fixture mfg . . .	-	1	1	f	D	D	D	D	D	D	D	D
327111	Vitreous china plumbing fixture & bathroom accessories mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg . . . . .	-	13	6	1 225	40 663	917	1 766	27 183	72 372	116 521	190 482	5 835
3339	Other general-purpose machinery mfg . . . . .	-	4	4	1 015	32 696	761	1 487	22 010	61 427	109 091	171 923	4 484
33391	Pump & compressor mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
333911	Pump & pumping equipment mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
337	Furniture & related product mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3371	Household & institutional furniture & kitchen cabinet mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33711	Wood kitchen cabinet & counter top mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
337110	Wood kitchen cabinet & counter top mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg . . . . .	1	6	3	1 010	34 673	829	1 309	21 907	68 761	50 400	121 196	7 728
3399	Other miscellaneous mfg . .	1	6	3	1 010	34 673	829	1 309	21 907	68 761	50 400	121 196	7 728
33999	All other miscellaneous mfg . . . . .	1	2	2	f	D	D	D	D	D	D	D	D
339991	Gasket, packing, & sealing device mfg . . .	1	2	2	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>ASHTABULA COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing</b> . . . .	-	<b>175</b>	<b>73</b>	<b>9 984</b>	<b>302 559</b>	<b>7 607</b>	<b>15 617</b>	<b>206 384</b>	<b>921 192</b>	<b>883 673</b>	<b>1 794 321</b>	<b>73 778</b>
325	Chemical mfg . . . . .	-	15	11	1 830	77 511	1 146	2 525	45 830	278 308	349 008	620 021	26 573
3251	Basic chemical mfg . . . . .	-	8	6	1 034	49 633	614	1 378	30 207	210 083	265 140	467 802	20 300
32513	Dye & pigment mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
325131	Inorganic dye & pigment mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
3259	Other chemical product mfg . . . . .	1	6	4	f	D	D	D	D	D	D	D	D
32599	All other chemical product & preparation mfg . . . . .	1	6	4	f	D	D	D	D	D	D	D	D
325991	Custom compounding of purchased resin . . . . .	-	4	3	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	-	29	22	3 546	88 205	2 938	5 851	66 364	221 048	205 587	424 387	16 228
3261	Plastics product mfg . . . . .	-	23	18	3 049	71 574	2 533	4 955	53 905	188 789	181 791	368 784	13 260
32619	Other plastics product mfg . . . . .	-	14	12	2 558	55 564	2 149	4 129	43 731	133 665	133 311	265 291	11 115
326199	All other plastics product mfg . . . . .	-	14	12	2 558	55 564	2 149	4 129	43 731	133 665	133 311	265 291	11 115
332	Fabricated metal product mfg . . . . .	1	41	9	914	26 473	778	1 470	20 061	64 096	75 665	139 702	7 012
333	Machinery mfg . . . . .	-	27	7	898	32 704	680	1 510	22 635	177 480	44 701	221 986	3 916
3335	Metalworking machinery mfg . . . . .	-	14	5	595	21 060	492	1 045	15 928	155 887	21 014	176 627	2 605
33351	Metalworking machinery mfg . . . . .	-	14	5	595	21 060	492	1 045	15 928	155 887	21 014	176 627	2 605
336	Transportation equipment mfg . . . . .	1	7	4	f	D	D	D	D	D	D	D	D
<b>ATHENS COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing</b> . . . .	-	<b>43</b>	<b>7</b>	<b>1 351</b>	<b>32 501</b>	<b>983</b>	<b>1 931</b>	<b>22 273</b>	<b>123 097</b>	<b>102 399</b>	<b>222 066</b>	<b>3 200</b>
<b>AUGLAIZE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing</b> . . . .	<b>2</b>	<b>93</b>	<b>38</b>	<b>8 236</b>	<b>288 660</b>	<b>6 053</b>	<b>12 431</b>	<b>187 810</b>	<b>829 746</b>	<b>903 672</b>	<b>1 737 610</b>	<b>59 197</b>
311	Food mfg . . . . .	7	12	6	f	D	D	D	D	D	D	D	D
3115	Dairy product mfg . . . . .	7	3	3	f	D	D	D	D	D	D	D	D
31151	Dairy product (except frozen) mfg . . . . .	7	3	3	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	-	5	3	971	38 872	756	1 536	28 087	78 464	124 430	202 103	D
3262	Rubber product mfg . . . . .	-	4	3	f	D	D	D	D	D	D	D	D
32629	Other rubber product mfg . . . . .	-	4	3	f	D	D	D	D	D	D	D	D
326291	Rubber product mfg for mechanical use . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	-	23	6	1 031	29 644	850	1 680	21 872	95 275	39 558	135 174	D
3321	Forging & stamping . . . . .	-	5	4	f	D	D	D	D	D	D	D	D
33211	Forging & stamping . . . . .	-	5	4	f	D	D	D	D	D	D	D	D
332116	Metal stamping . . . . .	-	4	3	f	D	D	D	D	D	D	D	D
333	Machinery mfg . . . . .	-	18	12	h	D	D	D	D	D	D	D	17 587
3335	Metalworking machinery mfg . . . . .	-	14	8	g	D	D	D	D	D	D	D	D
33351	Metalworking machinery mfg . . . . .	-	14	8	g	D	D	D	D	D	D	D	D
333513	Machine tool (metal forming types) mfg . . . . .	-	4	3	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg . . . . .	-	3	3	h	D	D	D	D	D	D	D	D
33392	Material handling equipment mfg . . . . .	-	2	2	h	D	D	D	D	D	D	D	D
333924	Industrial truck, tractor, trailer, & stacker machinery mfg . . . . .	-	2	2	h	D	D	D	D	D	D	D	D
<b>BELMONT COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing</b> . . . .	-	<b>55</b>	<b>13</b>	<b>1 523</b>	<b>36 909</b>	<b>1 190</b>	<b>2 221</b>	<b>26 412</b>	<b>111 446</b>	<b>162 993</b>	<b>272 475</b>	<b>19 800</b>
<b>BROWN COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing</b> . . . .	-	<b>25</b>	<b>7</b>	<b>1 110</b>	<b>33 406</b>	<b>872</b>	<b>1 604</b>	<b>24 791</b>	<b>85 887</b>	<b>195 085</b>	<b>280 824</b>	<b>7 451</b>

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>BUTLER COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	—	<b>396</b>	<b>155</b>	<b>20 391</b>	<b>819 216</b>	<b>14 957</b>	<b>32 198</b>	<b>562 250</b>	<b>4 325 436</b>	<b>2 265 948</b>	<b>6 567 771</b>	<b>196 061</b>
312	Beverage & tobacco product mfg . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
3121	Beverage mfg . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
31212	Breweries . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
312120	Breweries . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
321	Wood product mfg . . . . .	—	15	5	532	14 245	421	1 003	10 408	33 826	75 176	110 155	2 103
322	Paper mfg . . . . .	—	30	20	3 595	148 701	2 551	5 580	102 838	441 906	425 577	865 949	41 251
3221	Pulp, paper, & paperboard mills . . . . .	—	7	7	g	D	D	D	D	D	D	D	D
32212	Paper mills . . . . .	—	5	5	1 919	92 399	1 451	3 155	67 701	276 716	232 058	508 284	27 536
322121	Paper (except newsprint) mills . . . . .	—	5	5	1 919	92 399	1 451	3 155	67 701	276 716	232 058	508 284	27 536
3222	Converted paper product mfg . . . . .	—	23	13	g	D	D	D	D	D	D	D	D
32221	Paperboard container mfg . . . . .	—	14	10	1 041	33 387	713	1 567	22 052	80 037	121 029	200 930	8 724
322211	Corrugated & solid fiber box mfg . . . . .	—	10	8	755	22 848	479	1 010	14 059	54 876	90 973	146 144	D
323	Printing & related support activities . . . . .	1	43	14	714	22 857	534	1 024	15 125	66 608	38 912	104 832	2 994
3231	Printing & related support activities . . . . .	1	43	14	714	22 857	534	1 024	15 125	66 608	38 912	104 832	2 994
32311	Printing . . . . .	1	41	12	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	1	27	16	1 818	53 427	1 363	2 728	32 279	118 610	98 971	213 009	11 186
3261	Plastics product mfg . . . . .	1	25	15	g	D	D	D	D	D	D	D	D
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg . . . . .	—	4	4	564	19 176	389	824	11 477	34 151	34 441	66 978	4 961
32619	Other plastics product mfg . . . . .	—	12	6	631	17 748	452	921	9 859	45 188	25 367	68 186	1 960
326199	All other plastics product mfg . . . . .	—	10	6	f	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	—	8	7	h	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg . . . . .	—	1	1	h	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg . . . . .	—	1	1	h	D	D	D	D	D	D	D	D
331111	Iron & steel mills . . . . .	—	1	1	h	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	1	89	27	2 293	84 174	1 680	3 821	54 576	214 499	210 150	424 764	25 238
3323	Architectural & structural metals mfg . . . . .	—	16	4	542	18 136	331	803	9 941	46 083	41 834	90 312	3 116
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	2	40	5	f	D	D	D	D	D	D	D	D
33271	Machine shops . . . . .	2	38	5	516	19 387	416	932	13 706	42 581	23 374	65 704	4 261
332710	Machine shops . . . . .	2	38	5	516	19 387	416	932	13 706	42 581	23 374	65 704	4 261
333	Machinery mfg . . . . .	—	43	21	1 848	72 866	973	1 908	34 295	127 207	180 409	311 182	9 538
3332	Industrial machinery mfg . . . . .	—	15	9	925	40 139	437	809	18 354	68 629	105 899	179 628	4 345
33329	Other industrial machinery mfg . . . . .	—	14	9	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg . . . . .	—	12	7	1 474	50 772	1 083	2 280	33 421	146 430	113 149	259 130	5 758
3353	Electrical equipment mfg . . . . .	—	8	4	g	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg . . . . .	—	8	4	g	D	D	D	D	D	D	D	D
335313	Switchgear & switchboard apparatus mfg . . . . .	—	3	3	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	3	9	4	556	21 216	334	656	12 125	43 679	69 158	114 057	D
337	Furniture & related product mfg . . . . .	—	14	6	637	16 520	456	794	9 370	35 730	28 792	65 562	1 051
3372	Office furniture (including fixtures) mfg . . . . .	—	6	4	533	14 005	393	672	8 195	29 224	25 112	55 449	858
33721	Office furniture (including fixtures) mfg . . . . .	—	6	4	533	14 005	393	672	8 195	29 224	25 112	55 449	858
339	Miscellaneous mfg . . . . .	—	24	7	577	14 545	423	890	7 862	58 886	31 913	83 887	1 092
3399	Other miscellaneous mfg . . . . .	—	19	7	552	13 616	407	858	7 437	55 916	30 468	79 434	906

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>CARROLL COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>1</b>	<b>40</b>	<b>15</b>	<b>1 782</b>	<b>56 715</b>	<b>1 267</b>	<b>2 585</b>	<b>42 955</b>	<b>138 786</b>	<b>163 738</b>	<b>302 269</b>	<b>14 082</b>
332	Fabricated metal product mfg . . . . .	-	9	3	f	D	D	D	D	D	D	D	D
3321	Forging & stamping . . . . .	-	3	2	f	D	D	D	D	D	D	D	D
33211	Forging & stamping . . . . .	-	3	2	f	D	D	D	D	D	D	D	D
332111	Iron & steel forging . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
<b>CHAMPAIGN COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>2</b>	<b>55</b>	<b>22</b>	<b>3 452</b>	<b>101 264</b>	<b>2 853</b>	<b>5 727</b>	<b>71 873</b>	<b>493 422</b>	<b>456 572</b>	<b>946 810</b>	<b>76 749</b>
336	Transportation equipment mfg . . . . .	-	5	5	1 176	40 049	1 010	2 125	28 211	165 153	272 508	436 495	D
3363	Motor vehicle parts mfg . . . . .	-	5	5	1 176	40 049	1 010	2 125	28 211	165 153	272 508	436 495	D
33639	Other motor vehicle parts mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
<b>CLARK COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>-</b>	<b>230</b>	<b>91</b>	<b>13 231</b>	<b>519 968</b>	<b>10 009</b>	<b>20 640</b>	<b>369 091</b>	<b>1 575 185</b>	<b>2 506 108</b>	<b>4 071 535</b>	<b>82 816</b>
332	Fabricated metal product mfg . . . . .	-	67	26	g	D	D	D	D	D	D	D	11 620
3321	Forging & stamping . . . . .	-	5	3	f	D	D	D	D	D	D	D	D
33211	Forging & stamping . . . . .	-	5	3	f	D	D	D	D	D	D	D	D
332116	Metal stamping . . . . .	-	4	3	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	-	29	11	f	D	D	D	D	D	D	D	5 578
333	Machinery mfg . . . . .	-	32	14	g	D	D	D	D	D	D	D	14 644
3339	Other general-purpose machinery mfg . . . . .	-	6	6	f	D	D	D	D	D	D	D	10 997
336	Transportation equipment mfg . . . . .	-	20	15	i	D	D	D	D	D	D	D	43 037
3361	Motor vehicle mfg . . . . .	-	3	2	i	D	D	D	D	D	D	D	D
33612	Heavy duty truck mfg . . . . .	-	2	2	i	D	D	D	D	D	D	D	D
336120	Heavy duty truck mfg . . . . .	-	2	2	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . . . .	1	13	9	g	D	D	D	D	D	D	D	D
339	Miscellaneous mfg . . . . .	-	17	6	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg . . . . .	-	12	6	f	D	D	D	D	D	D	D	D
33999	All other miscellaneous mfg . . . . .	-	7	6	f	D	D	D	D	D	D	D	D
<b>CLERMONT COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>-</b>	<b>167</b>	<b>56</b>	<b>7 892</b>	<b>305 479</b>	<b>5 123</b>	<b>10 452</b>	<b>178 597</b>	<b>887 101</b>	<b>672 119</b>	<b>1 544 253</b>	<b>84 173</b>
323	Printing & related support activities . . . . .	1	14	4	568	13 576	364	616	6 853	48 132	35 906	80 762	807
3231	Printing & related support activities . . . . .	1	14	4	568	13 576	364	616	6 853	48 132	35 906	80 762	807
332	Fabricated metal product mfg . . . . .	-	38	13	f	D	D	D	D	D	D	D	D
333	Machinery mfg . . . . .	-	25	9	2 506	103 215	1 372	2 816	46 776	389 174	185 925	565 111	D
3332	Industrial machinery mfg . . . . .	-	6	3	g	D	D	D	D	D	D	D	D
33322	Plastics & rubber industry machinery mfg . . . . .	-	2	1	f	D	D	D	D	D	D	D	D
333220	Plastics & rubber industry machinery mfg . . . . .	-	2	1	f	D	D	D	D	D	D	D	D
3333	Commercial & service industry machinery mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
33331	Commercial & service industry machinery mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
333314	Optical instrument & lens mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	-	7	5	1 651	92 198	1 304	2 846	71 340	237 490	245 271	474 227	D
3363	Motor vehicle parts mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)					Wages (\$1,000)
<b>CLINTON COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>50</b>	<b>26</b>	<b>4 969</b>	<b>135 476</b>	<b>3 897</b>	<b>7 907</b>	<b>86 634</b>	<b>352 444</b>	<b>465 834</b>	<b>809 559</b>	<b>32 457</b>
332	Fabricated metal product mfg .....	-	10	6	866	23 461	618	1 142	13 796	95 942	36 063	129 055	2 219
334	Computer & electronic product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	3	3	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	3	3	g	D	D	D	D	D	D	D	D
33633	Motor vehicle steering & suspension component (except spring) mfg ....	-	1	1	f	D	D	D	D	D	D	D	D
336330	Motor vehicle steering & suspension component (except spring) mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
<b>COLUMBIANA COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>209</b>	<b>82</b>	<b>8 616</b>	<b>246 325</b>	<b>7 016</b>	<b>14 001</b>	<b>169 784</b>	<b>583 190</b>	<b>530 966</b>	<b>1 109 266</b>	<b>36 252</b>
311	Food mfg .....	-	5	2	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	9	5	3	1 063	23 419	920	1 791	17 812	72 053	45 789	117 914	D
3261	Plastics product mfg .....	9	5	3	1 063	23 419	920	1 791	17 812	72 053	45 789	117 914	D
32619	Other plastics product mfg .....	9	3	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	9	3	2	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	-	28	13	1 717	41 229	1 449	2 851	29 883	105 173	56 184	160 785	6 340
3271	Clay product & refractory mfg .....	-	17	11	g	D	D	D	D	D	D	D	5 908
32711	Pottery, ceramics, & plumbing fixture mfg ...	-	10	6	g	D	D	D	D	D	D	D	D
327112	Vitreous china, fine earthenware, & other pottery product mfg ..	-	10	6	g	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	14	7	583	17 825	475	973	11 634	32 507	29 399	61 821	D
3315	Foundries .....	1	13	6	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	1	51	21	2 150	66 084	1 759	3 610	49 104	166 917	117 510	283 124	10 129
3329	Other fabricated metal product mfg .....	-	13	9	1 341	42 109	1 126	2 337	32 774	116 122	70 831	185 641	4 819
33299	All other fabricated metal product mfg .....	-	11	7	g	D	D	D	D	D	D	D	D
332998	Enameled iron & metal sanitary ware mfg ...	-	2	2	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	42	21	g	D	D	D	D	D	D	D	7 151
3335	Metalworking machinery mfg .....	-	18	9	f	D	D	D	D	D	D	D	5 650
33351	Metalworking machinery mfg .....	-	18	9	f	D	D	D	D	D	D	D	5 650
3339	Other general-purpose machinery mfg .....	-	12	7	f	D	D	D	D	D	D	D	D
<b>COSHOCTON COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>55</b>	<b>28</b>	<b>4 814</b>	<b>162 921</b>	<b>3 508</b>	<b>7 649</b>	<b>104 981</b>	<b>513 448</b>	<b>684 426</b>	<b>1 191 259</b>	<b>44 672</b>
326	Plastics & rubber products mfg .....	-	3	2	g	D	D	D	D	D	D	D	D
3262	Rubber product mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
32629	Other rubber product mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
326299	All other rubber product mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	3	3	g	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel .....	-	1	1	f	D	D	D	D	D	D	D	D
33122	Rolling & drawing of purchased steel .....	-	1	1	f	D	D	D	D	D	D	D	D
331221	Cold-rolled steel shape mfg .....	-	1	1	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>CRAWFORD COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>90</b>	<b>46</b>	<b>6 575</b>	<b>211 584</b>	<b>5 213</b>	<b>10 495</b>	<b>156 559</b>	<b>674 489</b>	<b>532 555</b>	<b>1 194 663</b>	<b>38 344</b>
326	Plastics & rubber products mfg . . . . .	-	6	5	969	28 945	761	1 618	21 619	58 486	80 315	136 848	D
3262	Rubber product mfg . . . . .	-	3	2	f	D	D	D	D	D	D	D	D
32622	Rubber & plastics hoses & belting mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
326220	Rubber & plastics hoses & belting mfg. . . . .	-	1	1	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	-	2	1	f	D	D	D	D	D	D	D	D
3272	Glass & glass product mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
327215	Glass product mfg made of purchased glass . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	-	21	7	1 341	55 274	1 112	2 249	45 831	214 645	116 640	330 575	11 405
3329	Other fabricated metal product mfg . . . . .	-	5	2	f	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg . . . . .	-	5	2	f	D	D	D	D	D	D	D	D
332991	Ball & roller bearing mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg . . . . .	-	13	10	1 165	38 207	836	1 550	23 032	84 491	118 288	196 334	4 201
3331	Agriculture, construction, & mining machinery mfg . . . . .	-	7	6	f	D	D	D	D	D	D	D	D
33312	Construction machinery mfg . . . . .	-	7	6	f	D	D	D	D	D	D	D	D
333120	Construction machinery mfg . . . . .	-	7	6	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	-	10	9	984	21 872	760	1 538	14 606	57 866	81 403	137 847	D
<b>CUYAHOGA COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>2 712</b>	<b>975</b>	<b>116 680</b>	<b>4 640 647</b>	<b>79 865</b>	<b>168 379</b>	<b>2 783 617</b>	<b>11 552 746</b>	<b>11 936 791</b>	<b>23 382 330</b>	<b>1 241 924</b>
311	Food mfg . . . . .	1	118	31	3 813	113 906	2 724	5 381	71 668	645 639	491 184	1 137 016	25 643
3114	Fruit & vegetable preserving & specialty food mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg . . . . .	-	2	1	f	D	D	D	D	D	D	D	D
3115	Dairy product mfg . . . . .	-	6	4	f	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg . . . . .	-	71	11	1 341	34 851	998	1 783	19 915	121 707	48 417	170 591	3 759
31181	Bread & bakery product mfg . . . . .	1	67	8	g	D	D	D	D	D	D	D	D
311812	Commercial bakeries . . . . .	-	13	7	f	D	D	D	D	D	D	D	D
312	Beverage & tobacco product mfg . . . . .	2	14	5	f	D	D	D	D	D	D	D	D
3121	Beverage mfg . . . . .	2	14	5	f	D	D	D	D	D	D	D	D
315	Apparel mfg . . . . .	3	32	7	f	D	D	D	D	D	D	D	D
3152	Cut & sew apparel mfg . . . . .	3	20	5	f	D	D	D	D	D	D	D	D
322	Paper mfg . . . . .	-	58	39	3 490	118 894	2 627	5 514	75 981	260 795	346 541	605 254	29 568
3222	Converted paper product mfg . . . . .	-	56	38	h	D	D	D	D	D	D	D	D
32221	Paperboard container mfg . . . . .	-	37	26	g	D	D	D	D	D	D	D	D
322211	Corrugated & solid fiber box mfg . . . . .	1	18	13	916	26 558	657	1 294	16 642	63 132	96 606	160 283	D
322212	Folding paperboard box mfg . . . . .	-	11	8	f	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg . . . . .	-	9	4	f	D	D	D	D	D	D	D	D
323	Printing & related support activities . . . . .	2	324	57	6 346	199 112	4 707	9 500	120 113	426 024	238 516	664 625	30 643
3231	Printing & related support activities . . . . .	2	324	57	6 346	199 112	4 707	9 500	120 113	426 024	238 516	664 625	30 643
32311	Printing . . . . .	2	284	52	5 890	184 460	4 353	8 775	110 232	397 617	231 721	629 521	D
323110	Commercial lithographic printing . . . . .	1	161	40	h	D	D	D	D	D	D	D	20 010

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CUYAHOGA COUNTY, OH—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
324	Petroleum & coal products mfg .....	5	24	10	f	D	D	D	D	D	D	D	D
3241	Petroleum & coal products mfg .....	5	24	10	f	D	D	D	D	D	D	D	D
325	Chemical mfg .....	—	113	58	8 066	329 676	4 162	8 313	140 130	1 299 596	1 248 951	2 561 225	87 244
3251	Basic chemical mfg .....	—	16	11	1 056	42 975	473	1 018	18 906	185 671	240 803	425 497	14 233
32519	Other basic organic chemical mfg .....	—	8	6	527	18 647	267	550	9 380	83 634	152 508	235 001	9 955
3254	Pharmaceutical & medicine mfg .....	—	6	3	f	D	D	D	D	D	D	D	D
32541	Pharmaceutical & medicine mfg .....	—	6	3	f	D	D	D	D	D	D	D	D
325412	Pharmaceutical preparation mfg .....	—	3	3	f	D	D	D	D	D	D	D	D
3255	Paint, coating, & adhesive mfg .....	—	28	16	h	D	D	D	D	D	D	D	D
32551	Paint & coating mfg .....	—	20	11	2 179	106 238	828	1 723	36 057	268 114	352 133	622 799	16 091
325510	Paint & coating mfg .....	—	20	11	2 179	106 238	828	1 723	36 057	268 114	352 133	622 799	16 091
32552	Adhesive mfg .....	1	8	5	f	D	D	D	D	D	D	D	D
325520	Adhesive mfg .....	1	8	5	f	D	D	D	D	D	D	D	D
3256	Soap, cleaning compound, & toilet preparation mfg ..	—	19	7	1 903	62 894	1 031	1 932	25 403	392 038	235 279	635 600	D
32561	Soap & cleaning compound mfg .....	—	16	5	f	D	D	D	D	D	D	D	D
32562	Toilet preparation mfg .....	1	3	2	g	D	D	D	D	D	D	D	D
325620	Toilet preparation mfg .....	1	3	2	g	D	D	D	D	D	D	D	D
3259	Other chemical product mfg .....	2	35	16	1 354	58 905	765	1 550	24 895	217 826	219 162	437 869	16 489
32599	All other chemical product & preparation mfg .....	2	25	12	1 086	48 628	610	1 211	20 117	202 798	189 364	390 022	D
325998	All other miscellaneous chemical product & preparation mfg .....	2	18	8	831	37 462	466	903	15 994	171 140	152 878	323 032	D
326	Plastics & rubber products mfg .....	1	92	45	3 841	112 514	2 971	6 141	69 865	290 008	259 927	549 962	22 556
3261	Plastics product mfg .....	1	79	40	h	D	D	D	D	D	D	D	18 948
32619	Other plastics product mfg .....	1	48	26	2 076	57 799	1 570	3 366	35 678	161 592	135 730	297 073	D
326199	All other plastics product mfg .....	1	47	25	g	D	D	D	D	D	D	D	D
3262	Rubber product mfg .....	—	13	5	f	D	D	D	D	D	D	D	3 608
327	Nonmetallic mineral product mfg .....	4	72	24	1 633	57 043	1 206	2 651	38 545	135 731	126 818	260 002	13 222
331	Primary metal mfg .....	—	76	51	11 700	642 265	9 466	22 121	499 024	1 447 945	2 333 496	3 728 869	219 478
3311	Iron & steel mills & ferroalloy mfg .....	—	2	2	h	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg .....	—	2	2	h	D	D	D	D	D	D	D	D
331111	Iron & steel mills .....	—	2	2	h	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel .....	—	11	6	f	D	D	D	D	D	D	D	D
33122	Rolling & drawing of purchased steel .....	—	10	5	f	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing .....	1	18	14	g	D	D	D	D	D	D	D	D
33142	Copper rolling, drawing, extruding, & alloying ...	—	5	5	f	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying ...	2	11	7	f	D	D	D	D	D	D	D	D
3315	Foundries .....	—	41	25	h	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries ..	—	9	5	h	D	D	D	D	D	D	D	D
331511	Iron foundries .....	—	6	2	h	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	—	32	20	1 609	56 143	1 229	2 620	38 466	115 901	90 885	204 697	9 802
331521	Aluminum die-casting foundries .....	—	8	6	f	D	D	D	D	D	D	D	D
331524	Aluminum foundries (except die-casting) ..	1	12	7	632	23 564	517	1 130	16 471	41 720	26 456	68 225	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>CUYAHOGA COUNTY, OH—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg . . . . .	1	786	286	24 171	874 197	17 669	37 494	549 049	2 004 040	1 699 672	3 722 062	169 736
3321	Forging & stamping . . . . .	—	68	41	4 522	195 429	3 576	8 261	139 890	493 038	485 664	978 221	68 962
33211	Iron & steel forging . . . . .	—	68	41	4 522	195 429	3 576	8 261	139 890	493 038	485 664	978 221	68 962
332111	Nonferrous forging . . . . .	—	11	8	874	40 027	635	1 450	24 430	85 715	99 662	187 354	D
332112	Metal stamping . . . . .	—	2	1	g	D	D	D	D	D	D	D	D
332116	Metal stamping . . . . .	1	47	27	1 665	54 298	1 284	2 661	35 505	111 249	88 920	199 319	D
3323	Architectural & structural metals mfg . . . . .	1	89	29	1 842	60 512	1 233	2 436	33 923	118 441	113 615	232 411	5 198
33231	Plate work & fabricated structural product mfg . . . . .	—	34	12	629	23 381	430	848	12 695	42 496	49 669	92 180	D
33232	Ornamental & architectural metal products mfg . . . . .	2	55	17	1 213	37 131	803	1 588	21 228	75 945	63 946	140 231	D
332322	Sheet metal work mfg . . . . .	2	30	10	803	24 838	547	1 045	14 174	52 214	40 716	93 464	D
3324	Boiler, tank, & shipping container mfg . . . . .	4	17	7	f	D	D	D	D	D	D	D	D
3325	Hardware mfg . . . . .	5	13	6	1 096	27 564	483	1 090	12 261	71 429	43 631	113 408	D
33251	Hardware mfg . . . . .	5	13	6	1 096	27 564	483	1 090	12 261	71 429	43 631	113 408	D
332510	Hardware mfg . . . . .	5	13	6	1 096	27 564	483	1 090	12 261	71 429	43 631	113 408	D
3326	Spring & wire product mfg . . . . .	—	22	11	986	30 347	766	1 618	18 104	58 704	40 279	98 382	2 632
33261	Spring & wire product mfg . . . . .	—	22	11	986	30 347	766	1 618	18 104	58 704	40 279	98 382	2 632
332618	Other fabricated wire product mfg . . . . .	—	16	10	758	25 270	572	1 182	13 798	47 982	34 107	81 703	1 498
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	—	337	94	7 291	263 162	5 584	11 872	176 900	566 076	336 387	906 789	40 184
33271	Machine shops . . . . .	1	259	58	3 633	131 452	2 790	5 750	87 162	258 212	98 281	356 401	14 946
332710	Machine shops . . . . .	1	259	58	3 633	131 452	2 790	5 750	87 162	258 212	98 281	356 401	14 946
33272	Turned product & screw, nut, & bolt mfg . . . . .	—	78	36	3 658	131 710	2 794	6 122	89 738	307 864	238 106	550 388	25 238
332721	Precision turned product mfg . . . . .	—	47	16	1 708	57 133	1 412	3 242	42 122	161 970	91 887	252 989	9 268
332722	Bolt, nut, screw, rivet, & washer mfg . . . . .	—	31	20	1 950	74 577	1 382	2 880	47 616	145 894	146 219	297 399	15 970
3328	Coating, engraving, heat treating, & allied activities . . . . .	1	143	58	3 733	118 191	2 864	5 800	73 077	282 752	229 813	516 965	20 096
33281	Coating, engraving, heat treating, & allied activities . . . . .	1	143	58	3 733	118 191	2 864	5 800	73 077	282 752	229 813	516 965	20 096
332811	Metal heat treating . . . . .	2	31	12	860	31 471	670	1 386	21 352	66 711	37 776	104 370	D
332812	Metal coating/engraving (exc jewelry/silverware)/allied services . . . . .	—	27	11	804	25 885	582	1 207	13 035	60 633	120 577	185 245	5 693
332813	Electroplating, plating, polishing, anodizing, & coloring . . . . .	1	85	35	2 069	60 835	1 612	3 207	38 690	155 408	71 460	227 350	D
3329	Other fabricated metal product mfg . . . . .	—	80	33	3 687	144 785	2 412	4 937	73 089	344 813	367 984	725 004	24 807
33291	Metal valve mfg . . . . .	—	24	14	2 096	84 211	1 383	2 820	43 759	221 520	253 811	483 700	18 076
332912	Fluid power valve & hose fitting mfg . . . . .	—	7	4	g	D	D	D	D	D	D	D	5 419
33299	All other fabricated metal product mfg . . . . .	1	56	19	1 591	60 574	1 029	2 117	29 330	123 293	114 173	241 304	6 731
332999	All other miscellaneous fabricated metal product mfg . . . . .	—	34	13	852	28 557	618	1 244	16 443	64 249	48 556	114 154	3 957
333	Machinery mfg . . . . .	—	360	138	16 335	641 972	9 811	20 371	335 173	1 329 964	1 490 604	2 748 022	71 697
3332	Industrial machinery mfg . . . . .	—	37	17	1 494	64 553	742	1 324	25 612	210 285	149 288	341 919	3 339
33322	Plastics & rubber industry machinery mfg . . . . .	—	6	3	f	D	D	D	D	D	D	D	D
333220	Plastics & rubber industry machinery mfg . . . . .	—	6	3	f	D	D	D	D	D	D	D	D
33329	Other industrial machinery mfg . . . . .	—	31	14	f	D	D	D	D	D	D	D	D
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	—	14	8	1 318	48 069	729	1 606	20 798	87 006	66 899	153 610	4 317
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	—	14	8	1 318	48 069	729	1 606	20 798	87 006	66 899	153 610	4 317
333414	Heating equipment (except warm air furnaces) mfg . . . . .	—	6	3	771	32 011	371	816	12 151	60 743	33 430	93 559	2 381



**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>CUYAHOGA COUNTY, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
333	Machinery mfg—Con.												
3335	Metalworking machinery mfg.....	-	189	58	4 934	195 754	3 459	7 142	125 102	329 943	192 543	515 199	22 554
33351	Metalworking machinery mfg.....	-	189	58	4 934	195 754	3 459	7 142	125 102	329 943	192 543	515 199	22 554
333511	Industrial mold mfg ...	-	38	10	564	24 578	446	949	17 716	41 635	11 599	53 500	2 977
333512	Machine tool (metal cutting types) mfg ...	-	12	9	766	32 216	511	1 146	19 816	49 724	48 393	96 271	D
333514	Special die & tool, die set, jig, & fixture mfg .	-	85	21	1 860	73 713	1 304	2 540	46 344	130 369	72 600	203 229	8 339
333515	Cutting tool & machine tool accessory mfg ..	1	36	11	1 334	49 060	942	1 918	31 920	73 413	35 927	106 931	8 094
3336	Engine, turbine, & power transmission equipment mfg.....	4	17	13	1 432	56 847	845	1 755	28 513	124 349	90 672	213 055	7 888
33361	Engine, turbine, & power transmission equipment mfg.....	4	17	13	1 432	56 847	845	1 755	28 513	124 349	90 672	213 055	7 888
333612	Speed changer, industrial high-speed drive, & gear mfg ....	5	6	4	f	D	D	D	D	D	D	D	D
333613	Mechanical power transmission equipment mfg.....	5	7	5	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg.....	-	79	33	6 284	245 578	3 426	7 211	117 709	455 218	898 804	1 312 025	31 220
33392	Material handling equipment mfg.....	-	18	13	g	D	D	D	D	D	D	D	D
333922	Conveyor & conveying equipment mfg.....	-	8	5	533	22 123	330	885	10 673	41 253	43 269	84 540	1 197
33399	All other general-purpose machinery mfg.....	-	54	17	4 864	190 324	2 656	5 458	93 390	330 736	733 174	1 030 999	D
333991	Power-driven handtool mfg.....	-	9	5	f	D	D	D	D	D	D	D	D
333992	Welding & soldering equipment mfg.....	-	4	2	h	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg.....	-	99	46	5 600	209 653	2 658	5 484	63 841	526 263	466 094	997 464	33 285
3342	Communications equipment mfg.....	-	11	5	g	D	D	D	D	D	D	D	D
33422	Radio & TV broadcasting & wireless communications equipment mfg.....	-	9	4	g	D	D	D	D	D	D	D	D
334220	Radio & TV broadcasting & wireless communications equipment mfg.....	-	9	4	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg.....	2	25	11	f	D	D	D	D	D	D	D	8 436
33441	Semiconductor & other electronic component mfg.....	2	25	11	f	D	D	D	D	D	D	D	8 436
3345	Navigational, measuring, medical, & control instruments mfg.....	-	44	26	3 213	139 850	1 338	2 861	38 287	368 694	336 032	708 955	D
33451	Navigational, measuring, medical, & control instruments mfg.....	-	44	26	3 213	139 850	1 338	2 861	38 287	368 694	336 032	708 955	D
334515	Electricity measuring & testing instrument mfg.....	-	10	7	g	D	D	D	D	D	D	D	D
334517	Irradiation apparatus mfg.....	-	3	3	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg.....	-	76	44	8 982	352 191	4 652	9 144	128 374	1 043 578	805 088	1 842 494	55 700
3351	Electric lighting equipment mfg.....	-	18	6	g	D	D	D	D	D	D	D	D
33511	Electric lamp bulb & part mfg.....	-	2	2	f	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg.....	-	2	2	f	D	D	D	D	D	D	D	D
33512	Lighting fixture mfg.....	1	16	4	f	D	D	D	D	D	D	D	D
335121	Residential electric lighting fixture mfg ...	1	6	3	f	D	D	D	D	D	D	D	D
3352	Household appliance mfg..	-	5	5	g	D	D	D	D	D	D	D	D
33521	Small electrical appliance mfg.....	-	5	5	g	D	D	D	D	D	D	D	D
335211	Electric housewares & household fan mfg...	-	2	2	f	D	D	D	D	D	D	D	D
335212	Household vacuum cleaner mfg.....	-	3	3	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CUYAHOGA COUNTY, OH—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
335	Electrical equipment, appliance, & component mfg—Con.												
3353	Electrical equipment mfg ..	-	28	15	4 468	202 749	1 776	3 759	55 559	682 543	335 692	1 014 001	D
33531	Electrical equipment mfg .....	-	28	15	4 468	202 749	1 776	3 759	55 559	682 543	335 692	1 014 001	D
335312	Motor & generator mfg .....	-	10	5	f	D	D	D	D	D	D	D	D
335314	Relay & industrial control mfg .....	-	10	6	3 112	158 532	763	1 595	27 718	575 398	255 227	831 847	D
3359	Other electrical equipment & component mfg .....	-	25	18	g	D	D	D	D	D	D	D	10 386
33593	Wiring device mfg .....	-	9	7	f	D	D	D	D	D	D	D	D
33599	All other electrical equipment & component mfg .....	1	10	6	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	108	67	j	D	D	D	D	D	D	D	443 243
3363	Motor vehicle parts mfg ...	-	78	50	j	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine & engine parts mfg .....	-	11	5	h	D	D	D	D	D	D	D	D
336311	Carburetor, piston, piston ring, & valve mfg .....	-	6	3	f	D	D	D	D	D	D	D	D
336312	Gasoline engine & engine parts mfg ....	-	5	2	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	34	27	i	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	-	34	27	i	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg .....	4	16	10	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg .....	5	14	8	f	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg .....	-	16	11	g	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	-	16	11	g	D	D	D	D	D	D	D	D
336412	Aircraft engine & engine parts mfg ....	-	5	5	f	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg .....	-	11	6	g	D	D	D	D	D	D	D	D
337	Furniture & related product mfg .....	1	93	18	1 332	40 618	895	1 784	21 162	72 723	85 287	157 853	D
3371	Household & institutional furniture & kitchen cabinet mfg .....	1	65	6	f	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) mfg .....	2	22	10	f	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) mfg .....	2	22	10	f	D	D	D	D	D	D	D	D
337215	Showcase, partition, shelving, & locker mfg .....	2	15	8	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	2	188	38	2 851	81 143	2 025	3 769	42 995	182 650	118 964	299 861	D
3391	Medical equipment & supplies mfg .....	2	88	21	1 570	44 536	1 135	2 050	23 690	94 098	56 758	148 795	5 532
33911	Medical equipment & supplies mfg .....	2	88	21	1 570	44 536	1 135	2 050	23 690	94 098	56 758	148 795	5 532
339113	Surgical appliance & supplies mfg .....	-	12	6	694	17 281	544	954	9 907	37 652	26 833	63 795	D
3399	Other miscellaneous mfg ...	1	100	17	1 281	36 607	890	1 719	19 305	88 552	62 206	151 066	D
33995	Sign mfg .....	-	32	8	507	17 072	305	624	7 553	35 026	22 394	57 359	D
339950	Sign mfg .....	-	32	8	507	17 072	305	624	7 553	35 026	22 394	57 359	D
33999	All other miscellaneous mfg .....	2	39	6	531	14 236	416	809	9 006	35 537	29 637	65 249	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>DARKE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>1</b>	<b>92</b>	<b>29</b>	<b>5 811</b>	<b>172 412</b>	<b>4 299</b>	<b>8 490</b>	<b>107 075</b>	<b>545 213</b>	<b>600 670</b>	<b>1 147 367</b>	<b>41 481</b>
326	Plastics & rubber products mfg . . . . .	2	7	5	832	24 153	693	1 691	19 482	55 276	111 499	166 177	20 827
3261	Plastics product mfg . . . . .	2	7	5	832	24 153	693	1 691	19 482	55 276	111 499	166 177	20 827
32619	Other plastics product mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	-	4	2	f	D	D	D	D	D	D	D	D
3272	Glass & glass product mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	-	20	7	1 184	31 758	630	881	10 919	20 585	47 146	65 438	2 844
3329	Other fabricated metal product mfg . . . . .	2	2	2	f	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg . . . . .	2	2	2	f	D	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product mfg . . . . .	2	2	2	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	-	6	4	1 225	38 456	1 073	2 257	31 598	219 055	179 605	405 626	D
3363	Motor vehicle parts mfg . . . . .	-	5	3	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
339	Miscellaneous mfg . . . . .	9	8	2	f	D	D	D	D	D	D	D	D
<b>DEFIANCE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>-</b>	<b>48</b>	<b>24</b>	<b>7 150</b>	<b>329 244</b>	<b>6 119</b>	<b>13 337</b>	<b>272 245</b>	<b>645 795</b>	<b>698 771</b>	<b>1 338 882</b>	<b>29 629</b>
327	Nonmetallic mineral product mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
3279	Other nonmetallic mineral product mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
32799	All other nonmetallic mineral product mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
327993	Mineral wool mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
3315	Foundries . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
331511	Iron foundries . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	-	16	8	766	22 115	638	1 289	16 815	65 669	59 167	120 767	3 427
333	Machinery mfg . . . . .	-	6	2	f	D	D	D	D	D	D	D	3 978
336	Transportation equipment mfg . . . . .	-	5	4	559	21 194	411	927	12 950	41 420	33 142	73 665	6 159
3363	Motor vehicle parts mfg . . . . .	-	5	4	559	21 194	411	927	12 950	41 420	33 142	73 665	6 159
<b>DELAWARE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>-</b>	<b>117</b>	<b>40</b>	<b>5 131</b>	<b>187 616</b>	<b>3 234</b>	<b>6 804</b>	<b>97 748</b>	<b>725 123</b>	<b>571 824</b>	<b>1 285 693</b>	<b>32 523</b>
323	Printing & related support activities . . . . .	-	13	3	518	14 222	338	687	7 731	33 952	19 081	52 601	1 874
3231	Printing & related support activities . . . . .	-	13	3	518	14 222	338	687	7 731	33 952	19 081	52 601	1 874
32311	Printing . . . . .	-	13	3	518	14 222	338	687	7 731	33 952	19 081	52 601	1 874
325	Chemical mfg . . . . .	-	8	3	g	D	D	D	D	D	D	D	D
3255	Paint, coating, & adhesive mfg . . . . .	-	4	1	g	D	D	D	D	D	D	D	D
32551	Paint & coating mfg . . . . .	-	3	1	g	D	D	D	D	D	D	D	D
325510	Paint & coating mfg . . . . .	-	3	1	g	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	2	12	6	556	18 554	356	647	8 264	47 485	25 491	73 124	D
331	Primary metal mfg . . . . .	-	5	4	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	-	21	5	552	16 533	492	1 012	13 166	50 792	53 263	101 457	2 403

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>ERIE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>117</b>	<b>60</b>	<b>9 176</b>	<b>409 211</b>	<b>7 192</b>	<b>15 606</b>	<b>304 126</b>	<b>1 006 347</b>	<b>1 249 309</b>	<b>2 251 459</b>	<b>108 218</b>
311	Food mfg .....	-	8	5	533	15 004	461	917	11 968	44 439	190 888	235 436	1 029
326	Plastics & rubber products mfg .....	-	10	6	1 133	36 296	1 005	2 095	29 654	81 679	72 831	154 141	14 509
3261	Plastics product mfg .....	-	8	4	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	21	12	2 305	127 527	1 832	4 229	98 492	76 011	206 034	280 524	9 880
3329	Other fabricated metal product mfg .....	-	3	2	g	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
332991	Ball & roller bearing mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	14	8	1 008	37 051	585	1 119	17 047	80 452	44 703	124 311	3 774
336	Transportation equipment mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	g	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical & electronic equipment mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336321	Vehicular lighting equipment mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>FAIRFIELD COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>154</b>	<b>41</b>	<b>6 251</b>	<b>188 190</b>	<b>4 762</b>	<b>9 335</b>	<b>125 351</b>	<b>464 348</b>	<b>373 783</b>	<b>833 702</b>	<b>32 676</b>
327	Nonmetallic mineral product mfg .....	-	14	7	1 971	62 510	1 584	3 157	43 178	118 879	76 950	195 641	12 663
3272	Glass & glass product mfg .....	-	7	6	1 903	60 702	1 534	3 064	41 984	115 159	73 099	188 029	D
32721	Glass & glass product mfg .....	-	7	6	1 903	60 702	1 534	3 064	41 984	115 159	73 099	188 029	D
327212	Other pressed & blown glass & glassware mfg .....	-	4	4	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	46	12	1 350	40 314	991	1 936	25 116	91 746	59 732	150 098	2 491
<b>FAYETTE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>45</b>	<b>22</b>	<b>2 959</b>	<b>83 460</b>	<b>2 426</b>	<b>4 754</b>	<b>66 188</b>	<b>241 045</b>	<b>334 077</b>	<b>572 809</b>	<b>19 845</b>
311	Food mfg .....	-	9	5	513	9 181	359	798	7 361	33 655	85 341	117 790	5 885
326	Plastics & rubber products mfg .....	-	8	5	1 120	38 739	1 003	1 944	33 901	114 007	107 987	220 569	7 894
3261	Plastics product mfg .....	-	6	4	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	4	4	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	4	4	f	D	D	D	D	D	D	D	D
<b>FRANKLIN COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>1 061</b>	<b>376</b>	<b>48 265</b>	<b>1 754 559</b>	<b>34 268</b>	<b>66 850</b>	<b>1 059 500</b>	<b>6 256 934</b>	<b>5 635 190</b>	<b>11 837 662</b>	<b>470 977</b>
311	Food mfg .....	-	69	29	4 969	172 821	3 388	6 552	100 140	1 430 645	828 402	2 278 733	29 955
3115	Dairy product mfg .....	-	4	4	f	D	D	D	D	D	D	D	D
31151	Dairy product (except frozen) mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
311514	Dry, condensed, & evaporated dairy product mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3116	Meat product mfg .....	1	11	9	f	D	D	D	D	D	D	D	D
31161	Animal slaughtering & processing .....	1	11	9	f	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg .....	-	32	5	g	D	D	D	D	D	D	D	D
31181	Bread & bakery product mfg .....	-	32	5	g	D	D	D	D	D	D	D	D
311812	Commercial bakeries .....	-	7	2	g	D	D	D	D	D	D	D	D
3119	Other food mfg .....	-	9	5	f	D	D	D	D	D	D	D	D
312	Beverage & tobacco product mfg .....	-	11	7	g	D	D	D	D	D	D	D	D
3121	Beverage mfg .....	-	11	7	g	D	D	D	D	D	D	D	D
31211	Soft drink & ice mfg .....	-	8	5	f	D	D	D	D	D	D	D	D
312111	Soft drink mfg .....	-	4	4	f	D	D	D	D	D	D	D	D
31212	Breweries .....	-	2	1	f	D	D	D	D	D	D	D	D
312120	Breweries .....	-	2	1	f	D	D	D	D	D	D	D	D
315	Apparel mfg .....	8	14	4	f	D	D	D	D	D	D	D	D
3152	Cut & sew apparel mfg ....	8	10	4	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>FRANKLIN COUNTY, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
322	Paper mfg . . . . .	—	17	13	793	24 964	606	1 235	14 843	62 228	66 979	127 866	4 623
3222	Converted paper product mfg . . . . .	—	16	12	f	D	D	D	D	D	D	D	D
32221	Paperboard container mfg . . . . .	—	10	9	661	21 162	497	1 034	12 253	52 553	56 463	107 650	D
323	Printing & related support activities . . . . .	1	192	46	3 626	112 093	2 621	4 811	67 807	229 038	158 472	388 132	18 239
3231	Printing & related support activities . . . . .	1	192	46	3 626	112 093	2 621	4 811	67 807	229 038	158 472	388 132	18 239
32311	Printing . . . . .	1	168	40	h	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing . . . . .	1	80	33	2 424	77 046	1 808	3 375	47 968	163 507	126 080	289 320	14 887
325	Chemical mfg . . . . .	—	51	24	3 125	123 002	1 798	3 554	54 969	498 210	425 051	905 325	83 114
3254	Pharmaceutical & medicine mfg . . . . .	—	6	5	1 019	41 836	653	1 213	20 989	275 437	111 780	371 737	D
32541	Pharmaceutical & medicine mfg . . . . .	—	6	5	1 019	41 836	653	1 213	20 989	275 437	111 780	371 737	D
325412	Pharmaceutical preparation mfg . . . . .	—	2	2	f	D	D	D	D	D	D	D	D
3255	Paint, coating, & adhesive mfg . . . . .	1	18	11	g	D	D	D	D	D	D	D	D
32551	Paint & coating mfg . . . . .	—	8	5	f	D	D	D	D	D	D	D	D
325510	Paint & coating mfg . . . . .	—	8	5	f	D	D	D	D	D	D	D	D
32552	Adhesive mfg . . . . .	2	10	6	f	D	D	D	D	D	D	D	D
325520	Adhesive mfg . . . . .	2	10	6	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	2	60	26	4 005	130 147	3 109	5 489	77 820	342 764	269 854	610 175	28 611
3261	Plastics product mfg . . . . .	2	52	25	h	D	D	D	D	D	D	D	D
32611	Unsupported plastics film, sheet, & bag mfg . . . . .	—	5	3	f	D	D	D	D	D	D	D	D
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg . . . . .	—	6	3	f	D	D	D	D	D	D	D	D
326121	Unsupported plastics profile shape mfg . . . . .	—	3	2	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg . . . . .	3	31	15	2 598	79 590	1 983	3 371	46 494	206 406	157 551	362 502	D
326199	All other plastics product mfg . . . . .	3	27	13	h	D	D	D	D	D	D	D	19 898
327	Nonmetallic mineral product mfg . . . . .	—	48	25	3 601	133 683	2 730	5 750	89 510	484 185	273 483	747 622	63 727
3272	Glass & glass product mfg . . . . .	—	10	4	g	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg . . . . .	—	10	4	g	D	D	D	D	D	D	D	D
327212	Other pressed & blown glass & glassware mfg . . . . .	—	4	2	g	D	D	D	D	D	D	D	D
3273	Cement & concrete product mfg . . . . .	1	19	12	f	D	D	D	D	D	D	D	D
3279	Other nonmetallic mineral product mfg . . . . .	—	11	6	1 079	47 673	749	1 601	27 748	180 002	112 598	300 839	D
32791	Abrasive product mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
327910	Abrasive product mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	—	18	8	2 219	70 802	1 811	3 239	51 200	193 595	220 197	415 413	D
3315	Foundries . . . . .	—	10	4	g	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries . . . . .	—	6	4	g	D	D	D	D	D	D	D	D
331512	Steel investment foundries . . . . .	—	3	2	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	—	175	62	6 285	248 157	4 844	9 808	170 650	649 500	668 448	1 305 835	30 012
3321	Forging & stamping . . . . .	1	10	7	f	D	D	D	D	D	D	D	D
33211	Forging & stamping . . . . .	1	10	7	f	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg . . . . .	1	41	19	1 013	33 726	727	1 348	19 094	105 551	54 376	158 413	2 465
33232	Ornamental & architectural metal products mfg . . . . .	2	25	12	620	20 869	450	884	11 981	40 129	24 508	64 763	1 249
3324	Boiler, tank, & shipping container mfg . . . . .	—	11	6	f	D	D	D	D	D	D	D	D
3325	Hardware mfg . . . . .	—	2	2	g	D	D	D	D	D	D	D	D
33251	Hardware mfg . . . . .	—	2	2	g	D	D	D	D	D	D	D	D
332510	Hardware mfg . . . . .	—	2	2	g	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	3	57	10	f	D	D	D	D	D	D	D	D
33271	Machine shops . . . . .	3	53	10	628	19 399	480	954	13 744	33 411	17 985	51 111	2 157
332710	Machine shops . . . . .	3	53	10	628	19 399	480	954	13 744	33 411	17 985	51 111	2 157

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>FRANKLIN COUNTY, OH—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg—Con.												
3328	Coating, engraving, heat treating, & allied activities.	—	20	7	559	19 324	419	818	12 072	71 156	26 352	97 210	1 282
33281	Coating, engraving, heat treating, & allied activities.....	—	20	7	559	19 324	419	818	12 072	71 156	26 352	97 210	1 282
3329	Other fabricated metal product mfg.....	—	17	6	f	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg.....	—	17	6	f	D	D	D	D	D	D	D	D
333	Machinery mfg.....	—	77	39	4 411	171 074	2 686	5 599	84 334	456 591	402 957	857 813	28 152
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg.....	—	5	5	1 983	78 332	1 256	2 837	41 600	218 139	193 728	415 393	12 804
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg.	—	5	5	1 983	78 332	1 256	2 837	41 600	218 139	193 728	415 393	12 804
333415	AC & warm air heating & commercial industrial refrig equip mfg.....	—	3	3	g	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg.....	1	24	10	1 014	39 305	546	993	15 906	109 396	96 945	205 964	4 406
33399	All other general-purpose machinery mfg.....	1	16	8	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg.....	—	54	23	5 086	247 028	3 200	5 912	145 843	723 182	879 574	1 575 131	50 486
3342	Communications equipment mfg.....	—	6	3	h	D	D	D	D	D	D	D	D
33421	Telephone apparatus mfg.....	—	4	2	h	D	D	D	D	D	D	D	D
334210	Telephone apparatus mfg.....	—	4	2	h	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg.....	3	18	8	f	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg.....	3	18	8	f	D	D	D	D	D	D	D	D
334419	Other electronic component mfg.....	3	10	7	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg.....	—	21	10	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg.....	—	21	10	g	D	D	D	D	D	D	D	D
334513	Industrial process control instrument mfg.....	—	4	3	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg.....	—	36	19	3 209	96 911	2 647	5 807	70 027	315 522	651 069	964 080	42 101
3362	Motor vehicle body & trailer mfg.....	—	5	5	f	D	D	D	D	D	D	D	D
33621	Motor vehicle body & trailer mfg.....	—	5	5	f	D	D	D	D	D	D	D	D
336211	Motor vehicle body mfg.....	—	5	5	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg... Motor vehicle seating & interior trim mfg.....	—	24	12	g	D	D	D	D	D	D	D	41 148
33636	Motor vehicle seating & interior trim mfg.....	—	4	3	g	D	D	D	D	D	D	D	D
336360	Motor vehicle seating & interior trim mfg... Other motor vehicle parts mfg.....	—	4	3	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg.....	—	10	5	874	28 590	724	1 578	18 813	91 990	150 381	243 283	D
336399	All other motor vehicle parts mfg.....	—	10	5	874	28 590	724	1 578	18 813	91 990	150 381	243 283	D
337	Furniture & related product mfg.....	1	48	11	1 266	37 533	944	1 828	22 879	85 081	75 594	160 840	2 617
3372	Office furniture (including fixtures) mfg.....	2	17	6	763	23 903	572	1 115	14 240	40 394	27 882	68 476	1 576
33721	Office furniture (including fixtures) mfg.....	2	17	6	763	23 903	572	1 115	14 240	40 394	27 882	68 476	1 576
337215	Showcase, partition, shelving, & locker mfg.....	3	13	5	679	21 549	503	965	12 632	36 517	24 944	61 571	1 550

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<b>FRANKLIN COUNTY, OH—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>												
339	Miscellaneous mfg.....	3	119	24	1 883	57 166	1 251	2 407	29 800	106 771	108 305	215 911	D
3391	Medical equipment & supplies mfg.....	3	56	10	f	D	D	D	D	D	D	D	D
33911	Medical equipment & supplies mfg.....	3	56	10	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg..	2	63	14	g	D	D	D	D	D	D	D	D
33995	Sign mfg.....	2	37	12	f	D	D	D	D	D	D	D	D
339950	Sign mfg.....	2	37	12	f	D	D	D	D	D	D	D	D
<b>FULTON COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing....</b>	<b>-</b>	<b>110</b>	<b>59</b>	<b>9 108</b>	<b>276 538</b>	<b>7 288</b>	<b>15 256</b>	<b>165 470</b>	<b>807 833</b>	<b>870 386</b>	<b>1 673 351</b>	<b>105 701</b>
311	Food mfg.....	-	9	4	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg.....	-	3	3	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg.....	3	10	7	662	16 274	513	1 024	10 689	39 067	43 206	81 158	6 399
3261	Plastics product mfg.....	5	9	6	f	D	D	D	D	D	D	D	D
331	Primary metal mfg.....	-	6	6	g	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel.....	-	2	2	f	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel.....	-	2	2	f	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel.....	-	2	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg.....	-	26	14	1 583	49 764	1 251	2 567	32 730	115 782	157 688	268 466	D
3323	Architectural & structural metals mfg.....	-	7	5	517	17 323	400	766	10 256	36 036	45 783	81 294	D
336	Transportation equipment mfg.....	-	9	6	898	24 487	681	1 761	16 351	58 076	113 721	175 445	D
3363	Motor vehicle parts mfg....	-	9	6	898	24 487	681	1 761	16 351	58 076	113 721	175 445	D
337	Furniture & related product mfg.....	-	8	5	h	D	D	D	D	D	D	D	D
3371	Household & institutional furniture & kitchen cabinet mfg.....	-	8	5	h	D	D	D	D	D	D	D	D
33712	Household & institutional furniture mfg.....	-	5	5	h	D	D	D	D	D	D	D	D
337122	Nonupholstered wood household furniture mfg.....	-	4	4	h	D	D	D	D	D	D	D	D
<b>GALLIA COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing....</b>	<b>-</b>	<b>18</b>	<b>5</b>	<b>948</b>	<b>26 851</b>	<b>759</b>	<b>1 619</b>	<b>19 216</b>	<b>72 748</b>	<b>45 606</b>	<b>117 640</b>	<b>3 821</b>
<b>GEAUGA COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing....</b>	<b>1</b>	<b>233</b>	<b>82</b>	<b>9 851</b>	<b>306 167</b>	<b>7 117</b>	<b>14 401</b>	<b>180 718</b>	<b>692 614</b>	<b>679 650</b>	<b>1 380 222</b>	<b>47 773</b>
325	Chemical mfg.....	3	11	4	512	14 237	339	529	7 364	44 505	60 955	104 618	3 485
326	Plastics & rubber products mfg.....	-	43	31	3 629	100 682	2 733	5 261	61 750	243 928	216 678	460 874	15 160
3261	Plastics product mfg.....	1	30	21	1 894	49 984	1 440	2 571	30 349	125 259	84 269	209 117	8 835
32619	Other plastics product mfg.....	1	22	16	1 546	41 297	1 170	2 134	24 973	105 796	64 597	169 983	7 994
326199	All other plastics product mfg.....	1	21	16	g	D	D	D	D	D	D	D	D
3262	Rubber product mfg.....	-	13	10	1 735	50 698	1 293	2 690	31 401	118 669	132 409	251 757	6 325
32629	Other rubber product mfg.....	-	13	10	1 735	50 698	1 293	2 690	31 401	118 669	132 409	251 757	6 325
326291	Rubber product mfg for mechanical use.....	-	9	7	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg.....	2	45	9	691	23 636	456	834	11 693	43 509	31 100	75 343	3 063
333	Machinery mfg.....	-	25	12	1 195	46 424	761	1 572	24 176	107 838	70 421	179 072	5 446

**Table 3. Industry Statistics for Counties: 1997—Con.**

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
<b>GAUGA COUNTY, OH</b>														
<b>—Con.</b>														
<b>31-33</b>	<b>Manufacturing—Con.</b>													
337	Furniture & related product mfg .....	—	8	1	g	D	D	D	D	D	D	D	D	
3371	Household & institutional furniture & kitchen cabinet mfg .....	—	8	1	g	D	D	D	D	D	D	D	D	
33711	Wood kitchen cabinet & counter top mfg .....	—	6	1	g	D	D	D	D	D	D	D	D	
337110	Wood kitchen cabinet & counter top mfg ...	—	6	1	g	D	D	D	D	D	D	D	D	
<b>GREENE COUNTY, OH</b>														
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>141</b>	<b>48</b>		<b>4 952</b>	<b>166 168</b>	<b>3 542</b>	<b>7 499</b>	<b>102 997</b>	<b>430 549</b>	<b>306 003</b>	<b>737 958</b>	<b>41 039</b>
326	Plastics & rubber products mfg .....	—	9	6		870	28 157	635	1 271	15 011	62 497	70 082	132 160	6 233
332	Fabricated metal product mfg .....	1	27	9	f	D	D	D	D	D	D	D	D	4 684
333	Machinery mfg .....	—	24	8	f	D	D	D	D	D	D	D	D	2 512
336	Transportation equipment mfg .....	—	3	3	f	D	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	D
336412	Aircraft engine & engine parts mfg ....	—	1	1	f	D	D	D	D	D	D	D	D	D
<b>GUERNSEY COUNTY, OH</b>														
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>59</b>	<b>26</b>		<b>3 773</b>	<b>113 675</b>	<b>3 048</b>	<b>6 241</b>	<b>86 328</b>	<b>399 807</b>	<b>496 326</b>	<b>899 947</b>	<b>26 802</b>
326	Plastics & rubber products mfg .....	—	13	8		1 145	31 475	917	1 954	22 167	74 973	78 959	152 642	4 293
3261	Plastics product mfg .....	—	11	6	f	D	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	—	9	5		737	19 918	582	1 414	13 553	47 204	50 024	97 143	D
326199	All other plastics product mfg .....	—	9	5		737	19 918	582	1 414	13 553	47 204	50 024	97 143	D
333	Machinery mfg .....	—	10	3		646	18 714	497	905	13 728	39 787	43 965	84 830	3 457
3336	Engine, turbine, & power transmission equipment mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	D
33361	Engine, turbine, & power transmission equipment mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	D
333618	Other engine equipment mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	D
<b>HAMILTON COUNTY, OH</b>														
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>1 450</b>	<b>550</b>		<b>76 053</b>	<b>3 027 893</b>	<b>48 484</b>	<b>97 496</b>	<b>1 593 465</b>	<b>10 275 769</b>	<b>9 817 883</b>	<b>20 077 915</b>	<b>853 298</b>
311	Food mfg .....	2	102	44		7 242	238 155	4 256	9 078	124 465	1 319 311	1 088 082	2 388 959	D
3114	Fruit & vegetable preserving & specialty food mfg .....	9	4	3	f	D	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	9	1	1	f	D	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg .....	9	1	1	f	D	D	D	D	D	D	D	D	D
3116	Meat product mfg .....	1	16	7	g	D	D	D	D	D	D	D	D	D
31161	Animal slaughtering & processing .....	1	16	7	g	D	D	D	D	D	D	D	D	D
311612	Meat processed from carcasses .....	1	11	5	g	D	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg .....	—	50	15		2 176	70 345	1 401	2 904	45 604	686 826	174 504	858 650	D
31181	Bread & bakery product mfg .....	—	45	11	g	D	D	D	D	D	D	D	D	D
311812	Commercial bakeries ..	—	14	6	f	D	D	D	D	D	D	D	D	D
31182	Cookie, cracker, & pasta mfg .....	—	5	4	f	D	D	D	D	D	D	D	D	D
311821	Cookie & cracker mfg ..	—	3	3	f	D	D	D	D	D	D	D	D	D
3119	Other food mfg .....	3	18	12	g	D	D	D	D	D	D	D	D	D
31194	Seasoning & dressing mfg .....	—	5	4	f	D	D	D	D	D	D	D	D	D
31199	All other food mfg .....	5	6	3	f	D	D	D	D	D	D	D	D	D



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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>HAMILTON COUNTY, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
312	Beverage & tobacco product mfg	—	11	8	g	D	D	D	D	D	D	D	D
3121	Beverage mfg	—	11	8	g	D	D	D	D	D	D	D	D
31211	Soft drink & ice mfg	—	5	4	f	D	D	D	D	D	D	D	D
312111	Soft drink mfg	—	4	3	961	34 504	391	882	14 765	368 051	265 894	634 974	D
314	Textile product mills	—	31	10	756	18 638	496	984	9 546	30 193	40 968	74 596	D
315	Apparel mfg	1	21	8	f	D	D	D	D	D	D	D	D
3152	Cut & sew apparel mfg	—	14	7	f	D	D	D	D	D	D	D	D
321	Wood product mfg	5	30	8	f	D	D	D	D	D	D	D	D
3219	Other wood product mfg	4	25	7	f	D	D	D	D	D	D	D	D
32199	All other wood product mfg	7	9	4	f	D	D	D	D	D	D	D	D
321999	All other miscellaneous wood product mfg	7	9	4	f	D	D	D	D	D	D	D	D
322	Paper mfg	2	41	29	2 628	89 471	1 978	4 226	57 475	249 099	297 800	548 878	25 133
3222	Converted paper product mfg	2	38	26	g	D	D	D	D	D	D	D	D
32221	Paperboard container mfg	1	24	19	1 887	66 764	1 435	3 136	42 905	174 423	237 247	414 270	20 784
322211	Corrugated & solid fiber box mfg	—	9	8	f	D	D	D	D	D	D	D	D
322212	Folding paperboard box mfg	4	9	7	f	D	D	D	D	D	D	D	D
323	Printing & related support activities	1	250	69	6 700	232 268	4 844	9 698	142 577	523 914	302 845	826 787	D
3231	Printing & related support activities	1	250	69	6 700	232 268	4 844	9 698	142 577	523 914	302 845	826 787	D
32311	Printing	1	213	55	i	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing	1	91	20	3 120	108 474	2 272	4 663	67 057	252 460	132 197	385 758	D
323116	Manifold business form printing	3	8	6	f	D	D	D	D	D	D	D	D
32312	Support activities for printing	—	37	14	f	D	D	D	D	D	D	D	D
323122	Prepress services	—	31	12	f	D	D	D	D	D	D	D	3 706
324	Petroleum & coal products mfg	—	25	6	878	37 145	493	988	17 800	114 982	295 898	412 372	D
3241	Petroleum & coal products mfg	—	25	6	878	37 145	493	988	17 800	114 982	295 898	412 372	D
32419	Other petroleum & coal products mfg	—	5	2	f	D	D	D	D	D	D	D	D
324191	Petroleum lubricating oil & grease mfg	—	5	2	f	D	D	D	D	D	D	D	D
325	Chemical mfg	—	88	49	7 973	369 922	4 703	9 449	199 750	2 278 593	2 108 567	4 372 418	D
3251	Basic chemical mfg	—	20	12	2 544	121 333	1 672	3 383	74 214	521 188	583 900	1 105 512	D
32513	Dye & pigment mfg	2	3	3	f	D	D	D	D	D	D	D	D
325132	Synthetic organic dye & pigment mfg	2	3	3	f	D	D	D	D	D	D	D	D
32519	Other basic organic chemical mfg	—	6	5	g	D	D	D	D	D	D	D	D
325199	All other basic organic chemical mfg	—	4	4	g	D	D	D	D	D	D	D	D
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg	—	2	1	f	D	D	D	D	D	D	D	D
32521	Resin & synthetic rubber mfg	—	2	1	f	D	D	D	D	D	D	D	D
325211	Plastics material & resin mfg	—	1	1	f	D	D	D	D	D	D	D	D
3254	Pharmaceutical & medicine mfg	—	7	3	f	D	D	D	D	D	D	D	D
32541	Pharmaceutical & medicine mfg	—	7	3	f	D	D	D	D	D	D	D	D
325412	Pharmaceutical preparation mfg	—	5	3	f	D	D	D	D	D	D	D	D
3255	Paint, coating, & adhesive mfg	—	16	9	f	D	D	D	D	D	D	D	D
32551	Paint & coating mfg	—	9	7	f	D	D	D	D	D	D	D	D
325510	Paint & coating mfg	—	9	7	f	D	D	D	D	D	D	D	D
3256	Soap, cleaning compound, & toilet preparation mfg	—	20	13	g	D	D	D	D	D	D	D	D
32561	Soap & cleaning compound mfg	—	18	11	g	D	D	D	D	D	D	D	D
325611	Soap & other detergent mfg	—	9	7	g	D	D	D	D	D	D	D	D
32562	Toilet preparation mfg	—	2	2	f	D	D	D	D	D	D	D	D
325620	Toilet preparation mfg	—	2	2	f	D	D	D	D	D	D	D	D
3259	Other chemical product mfg	1	22	10	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>HAMILTON COUNTY, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
326	Plastics & rubber products mfg .....	1	57	25	2 944	92 557	2 222	4 463	58 028	236 934	185 185	424 558	26 661
3261	Plastics product mfg .....	1	49	22	h	D	D	D	D	D	D	D	D
32613	Laminated plastics plate, sheet, & shape mfg ....	—	3	1	f	D	D	D	D	D	D	D	D
326130	Laminated plastics plate, sheet, & shape mfg .....	—	3	1	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	4	28	14	g	D	D	D	D	D	D	D	5 799
326199	All other plastics product mfg .....	4	27	13	g	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	1	42	19	868	28 265	603	1 153	15 444	83 981	74 448	158 795	6 208
331	Primary metal mfg .....	—	22	15	2 021	65 140	1 401	3 053	41 516	122 636	87 504	212 376	6 691
3315	Foundries .....	—	18	12	g	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .	—	5	5	860	29 191	679	1 466	21 762	54 789	28 627	84 138	4 067
331511	Iron foundries .....	—	4	4	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	—	13	7	f	D	D	D	D	D	D	D	D
331524	Aluminum foundries (except die-casting) ..	—	9	6	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	—	268	96	10 705	363 274	8 001	15 484	240 764	784 689	614 618	1 404 074	50 310
3323	Architectural & structural metals mfg .....	—	59	23	2 552	83 771	1 894	3 715	54 083	199 056	159 915	358 238	10 323
33232	Ornamental & architectural metal products mfg .....	—	37	15	g	D	D	D	D	D	D	D	D
332321	Metal window & door mfg .....	—	8	3	g	D	D	D	D	D	D	D	D
332322	Sheet metal work mfg .	—	24	10	f	D	D	D	D	D	D	D	D
3324	Boiler, tank, & shipping container mfg .....	—	8	5	1 770	58 271	1 533	2 532	48 141	84 891	115 436	210 454	D
33242	Metal tank (heavy gauge) mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
332420	Metal tank (heavy gauge) mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
33243	Metal can, box, & other metal container (light gauge) mfg .....	—	7	4	f	D	D	D	D	D	D	D	D
332431	Metal can mfg .....	—	2	2	f	D	D	D	D	D	D	D	D
3326	Spring & wire product mfg .	—	4	3	f	D	D	D	D	D	D	D	D
33261	Spring & wire product mfg .....	—	4	3	f	D	D	D	D	D	D	D	D
332618	Other fabricated wire product mfg .....	—	4	3	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	1	108	28	2 451	88 268	1 851	4 154	59 654	213 868	85 396	294 693	16 516
33271	Machine shops .....	—	95	22	2 030	75 277	1 549	3 552	50 961	186 073	63 505	245 110	13 767
332710	Machine shops .....	—	95	22	2 030	75 277	1 549	3 552	50 961	186 073	63 505	245 110	13 767
3328	Coating, engraving, heat treating, & allied activities .	—	39	18	1 140	39 270	830	1 659	24 655	88 561	24 960	113 088	D
33281	Coating, engraving, heat treating, & allied activities .....	—	39	18	1 140	39 270	830	1 659	24 655	88 561	24 960	113 088	D
3329	Other fabricated metal product mfg .....	1	28	12	1 454	48 170	993	1 957	27 058	114 830	97 908	214 851	10 819
33291	Metal valve mfg .....	1	10	9	g	D	D	D	D	D	D	D	D
332911	Industrial valve mfg ...	1	6	6	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	—	144	64	10 932	441 783	6 027	12 334	198 193	968 844	800 882	1 691 649	D
3332	Industrial machinery mfg ..	—	25	13	g	D	D	D	D	D	D	D	D
33329	Other industrial machinery mfg .....	1	24	12	f	D	D	D	D	D	D	D	D
333298	All other industrial machinery mfg .....	1	14	8	f	D	D	D	D	D	D	D	D
3333	Commercial & service industry machinery mfg ..	—	13	5	f	D	D	D	D	D	D	D	D
33331	Commercial & service industry machinery mfg .....	—	13	5	f	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg .....	—	49	18	h	D	D	D	D	D	D	D	D
33351	Metalworking machinery mfg .....	—	49	18	h	D	D	D	D	D	D	D	D
333512	Machine tool (metal cutting types) mfg ...	—	4	4	g	D	D	D	D	D	D	D	D
333513	Machine tool (metal forming types) mfg ...	—	1	1	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>HAMILTON COUNTY, OH—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
333	Machinery mfg—Con.												
3339	Other general-purpose machinery mfg .....	-	39	21	h	D	D	D	D	D	D	D	D
33391	Pump & compressor mfg .....	-	9	5	g	D	D	D	D	D	D	D	D
333912	Air & gas compressor mfg .....	-	3	1	f	D	D	D	D	D	D	D	D
33392	Material handling equipment mfg .....	1	6	6	f	D	D	D	D	D	D	D	D
333922	Conveyor & conveying equipment mfg .....	1	5	5	796	32 436	458	963	11 185	73 953	60 315	135 339	D
33399	All other general-purpose machinery mfg .....	-	24	10	g	D	D	D	D	D	D	D	D
333991	Power-driven handtool mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	3	51	23	2 466	90 125	1 277	2 655	35 845	194 199	158 496	349 705	D
3342	Communications equipment mfg .....	7	8	3	f	D	D	D	D	D	D	D	D
33422	Radio & TV broadcasting & wireless communications equipment mfg .....	7	8	3	f	D	D	D	D	D	D	D	D
334220	Radio & TV broadcasting & wireless communications equipment mfg .....	7	8	3	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	-	25	13	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg .....	-	25	13	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	34	20	3 283	105 696	2 288	4 679	56 973	282 108	253 953	536 071	13 378
3351	Electric lighting equipment mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
33512	Lighting fixture mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
335129	Other lighting equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3352	Household appliance mfg ..	-	3	2	f	D	D	D	D	D	D	D	D
33521	Small electrical appliance mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335211	Electric housewares & household fan mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	-	18	8	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg .....	-	18	8	f	D	D	D	D	D	D	D	D
335312	Motor & generator mfg .....	-	4	4	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg .....	-	9	7	f	D	D	D	D	D	D	D	D
33593	Wiring device mfg .....	-	5	4	f	D	D	D	D	D	D	D	D
335931	Current-carrying wiring device mfg .....	-	5	4	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	34	17	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	17	7	h	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg .....	-	11	6	i	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	-	11	6	i	D	D	D	D	D	D	D	D
336412	Aircraft engine & engine parts mfg ....	-	7	5	i	D	D	D	D	D	D	D	D
337	Furniture & related product mfg .....	-	67	13	g	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) mfg .....	2	20	5	f	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) mfg .....	2	20	5	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>HAMILTON COUNTY, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
339	Miscellaneous mfg.....	1	120	20	2 455	73 762	1 655	3 183	36 704	204 919	162 048	368 363	11 908
3391	Medical equipment & supplies mfg.....	—	49	9	1 425	45 359	922	1 746	20 737	144 907	111 128	256 770	D
33911	Medical equipment & supplies mfg.....	—	49	9	1 425	45 359	922	1 746	20 737	144 907	111 128	256 770	D
339112	Surgical & medical instrument mfg.....	1	10	4	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg..	2	71	11	1 030	28 403	733	1 437	15 967	60 012	50 920	111 593	D
	<b>HANCOCK COUNTY, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>97</b>	<b>43</b>	<b>11 964</b>	<b>422 536</b>	<b>9 302</b>	<b>18 440</b>	<b>293 046</b>	<b>1 330 152</b>	<b>1 448 667</b>	<b>2 792 395</b>	<b>124 560</b>
311	Food mfg.....	4	8	3	1 122	28 853	1 007	1 543	24 022	83 451	285 692	374 183	9 805
3118	Bakeries & tortilla mfg.....	—	2	1	f	D	D	D	D	D	D	D	D
31182	Cookie, cracker, & pasta mfg.....	—	1	1	f	D	D	D	D	D	D	D	D
311821	Cookie & cracker mfg..	—	1	1	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg.....	—	14	13	3 886	158 917	2 620	5 966	97 674	283 799	327 104	609 182	50 774
3261	Plastics product mfg.....	1	9	9	1 624	43 481	1 377	3 633	36 764	103 163	113 985	219 106	D
32619	Other plastics product mfg.....	3	6	6	1 161	28 469	942	2 683	23 478	56 313	73 349	130 390	2 647
326199	All other plastics product mfg.....	3	6	6	1 161	28 469	942	2 683	23 478	56 313	73 349	130 390	2 647
3262	Rubber product mfg.....	—	5	4	2 262	115 436	1 243	2 333	60 910	180 636	213 119	390 076	D
32621	Tire mfg.....	—	2	2	g	D	D	D	D	D	D	D	D
326211	Tire mfg (except retreading) .....	—	2	2	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg.....	—	11	2	625	26 976	540	1 018	21 431	100 214	179 400	271 868	4 651
334	Computer & electronic product mfg.....	—	2	1	f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg.....	—	1	1	f	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg.....	—	1	1	f	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg...	—	1	1	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg.....	—	2	1	g	D	D	D	D	D	D	D	D
3352	Household appliance mfg..	—	1	1	g	D	D	D	D	D	D	D	D
33522	Major appliance mfg....	—	1	1	g	D	D	D	D	D	D	D	D
335228	Other major household appliance mfg.....	—	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg.....	—	18	13	2 876	86 238	2 335	4 448	62 107	198 736	344 087	547 554	36 142
3363	Motor vehicle parts mfg... ..	—	15	11	h	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system mfg.....	—	2	2	f	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system mfg.....	—	2	2	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping.....	—	3	3	686	29 045	505	1 018	22 007	76 010	76 987	153 321	6 131
336370	Motor vehicle metal stamping.....	—	3	3	686	29 045	505	1 018	22 007	76 010	76 987	153 321	6 131
33639	Other motor vehicle parts mfg.....	—	3	3	684	17 350	543	1 065	11 462	30 976	42 456	73 971	5 048
336399	All other motor vehicle parts mfg.....	—	3	3	684	17 350	543	1 065	11 462	30 976	42 456	73 971	5 048
	<b>HARDIN COUNTY, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>—</b>	<b>38</b>	<b>19</b>	<b>2 412</b>	<b>84 603</b>	<b>1 975</b>	<b>3 710</b>	<b>63 017</b>	<b>212 992</b>	<b>275 478</b>	<b>484 323</b>	<b>15 281</b>
336	Transportation equipment mfg.....	1	5	4	955	39 290	795	1 447	29 560	101 561	138 729	238 131	3 661
3363	Motor vehicle parts mfg... ..	1	4	3	f	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg.....	—	2	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg.....	—	2	1	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>HARRISON COUNTY, OH</b>													
31-33	Manufacturing ....	1	24	9	678	14 213	535	991	8 891	40 669	65 106	105 816	D
<b>HENRY COUNTY, OH</b>													
31-33	Manufacturing ....	-	54	24	3 947	148 631	3 239	6 763	114 700	1 145 543	578 076	1 721 053	62 884
311	Food mfg .....	-	6	3	g	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
31142	Fruit & vegetable canning, pickling, & drying .....	-	2	2	g	D	D	D	D	D	D	D	D
311422	Specialty canning.....	-	1	1	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	15	6	664	21 933	540	1 012	17 200	70 045	70 147	141 155	6 651
336	Transportation equipment mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	2	2	f	D	D	D	D	D	D	D	D
<b>HIGHLAND COUNTY, OH</b>													
31-33	Manufacturing ....	-	41	16	3 851	94 380	3 297	6 758	68 322	280 686	367 097	653 806	32 338
326	Plastics & rubber products mfg .....	4	3	3	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	4	3	3	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	2	2	f	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical & electronic equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical & electronic equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg ..	-	1	1	g	D	D	D	D	D	D	D	D
33999	All other miscellaneous mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
339999	All other miscellaneous mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>HOCKING COUNTY, OH</b>													
31-33	Manufacturing ....	-	26	13	2 102	60 399	1 804	3 487	47 319	174 526	165 492	341 250	7 923
326	Plastics & rubber products mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
32615	Urethane & other foam product (except polystyrene) mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
326150	Urethane & other foam product (except polystyrene) mfg ....	-	1	1	f	D	D	D	D	D	D	D	D
<b>HOLMES COUNTY, OH</b>													
31-33	Manufacturing ....	1	164	52	4 621	100 248	3 889	7 188	76 259	328 952	380 991	710 140	22 654
311	Food mfg .....	1	14	6	778	9 990	678	938	7 338	29 599	104 069	133 593	2 680
3116	Meat product mfg .....	2	3	2	579	5 298	547	693	4 533	16 510	52 109	68 994	D
31161	Animal slaughtering & processing.....	2	3	2	579	5 298	547	693	4 533	16 510	52 109	68 994	D
311615	Poultry processing.....	-	1	1	f	D	D	D	D	D	D	D	D
321	Wood product mfg .....	2	46	15	874	17 380	771	1 415	14 380	38 826	61 582	101 219	5 939
3219	Other wood product mfg ...	1	32	11	591	11 784	526	1 014	9 876	28 779	38 513	66 253	2 513
326	Plastics & rubber products mfg .....	-	13	10	1 069	28 889	950	2 055	22 539	126 692	60 006	186 241	7 020
3262	Rubber product mfg .....	-	6	6	642	16 158	589	1 259	13 374	40 612	17 443	58 328	383
32629	Other rubber product mfg .....	-	6	6	642	16 158	589	1 259	13 374	40 612	17 443	58 328	383
326291	Rubber product mfg for mechanical use .....	-	5	5	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	11	3	632	16 641	538	1 052	12 845	68 709	91 237	159 561	3 195

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>HURON COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>110</b>	<b>56</b>	<b>11 114</b>	<b>326 047</b>	<b>9 239</b>	<b>18 475</b>	<b>239 813</b>	<b>988 289</b>	<b>1 162 801</b>	<b>2 152 726</b>	<b>51 977</b>
311	Food mfg . . . . .	-	4	3	877	28 777	694	1 302	21 812	222 966	319 943	545 686	D
3118	Bakeries & tortilla mfg . . . .	-	3	2	f	D	D	D	D	D	D	D	D
31182	Cookie, cracker, & pasta mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
311821	Cookie & cracker mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
323	Printing & related support activities . . . . .	-	7	1	g	D	D	D	D	D	D	D	D
3231	Printing & related support activities . . . . .	-	7	1	g	D	D	D	D	D	D	D	D
32311	Printing . . . . .	-	7	1	g	D	D	D	D	D	D	D	D
323117	Book printing . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	-	12	8	1 143	26 720	928	2 111	17 228	71 660	58 173	131 032	3 441
3261	Plastics product mfg . . . . .	-	7	4	f	D	D	D	D	D	D	D	2 763
32619	Other plastics product mfg . . . . .	-	6	3	823	16 249	749	1 716	13 860	30 371	33 942	65 235	D
326199	All other plastics product mfg . . . . .	-	6	3	823	16 249	749	1 716	13 860	30 371	33 942	65 235	D
332	Fabricated metal product mfg . . . . .	-	24	9	1 126	30 116	883	1 662	20 468	57 856	35 400	93 374	4 161
3328	Coating, engraving, heat treating, & allied activities . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33281	Coating, engraving, heat treating, & allied activities . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
332812	Metal coating/engraving (exc jewelry/silverware)/allied services . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg . . . . .	-	16	10	2 394	71 719	2 037	4 467	54 845	176 895	359 222	539 264	18 379
3331	Agriculture, construction, & mining machinery mfg . . . .	-	3	1	g	D	D	D	D	D	D	D	D
33311	Agricultural implement mfg . . . . .	-	2	1	g	D	D	D	D	D	D	D	D
333112	Lawn & garden tractor & home lawn & garden equipment mfg . . . . .	-	2	1	g	D	D	D	D	D	D	D	D
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
333415	AC & warm air heating & commercial/industrial refig equip mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	-	8	4	943	24 699	853	1 118	17 470	53 075	73 021	125 030	D
3363	Motor vehicle parts mfg . . . . .	-	5	2	f	D	D	D	D	D	D	D	405
33637	Motor vehicle metal stamping . . . . .	-	3	1	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping . . . . .	-	3	1	f	D	D	D	D	D	D	D	D
337	Furniture & related product mfg . . . . .	-	4	2	f	D	D	D	D	D	D	D	D
3371	Household & institutional furniture & kitchen cabinet mfg . . . . .	-	4	2	f	D	D	D	D	D	D	D	D
33712	Household & institutional furniture mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
337121	Upholstered household furniture mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg . . . . .	1	4	3	567	12 681	455	762	8 418	68 111	29 890	97 017	870
<b>JACKSON COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>37</b>	<b>14</b>	<b>3 631</b>	<b>83 403</b>	<b>3 174</b>	<b>6 570</b>	<b>65 134</b>	<b>422 817</b>	<b>359 631</b>	<b>780 489</b>	<b>34 614</b>
311	Food mfg . . . . .	-	2	2	g	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg . . . . .	-	2	2	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg . . . . .	-	2	2	g	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg . . . . .	-	2	2	g	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
<b>31-33</b>	<b>JACKSON COUNTY, OH—Con.</b>													
	<b>Manufacturing—Con.</b>													
326	Plastics & rubber products mfg .....	8	2	2	f	D	D	D	D	D	D	D	D	
3261	Plastics product mfg .....	8	2	2	f	D	D	D	D	D	D	D	D	
32619	Other plastics product mfg .....	8	2	2	f	D	D	D	D	D	D	D	D	
326199	All other plastics product mfg .....	8	2	2	f	D	D	D	D	D	D	D	D	
	<b>JEFFERSON COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>45</b>	<b>12</b>		<b>2 244</b>	<b>78 694</b>	<b>1 579</b>	<b>3 301</b>	<b>49 589</b>	<b>187 550</b>	<b>301 370</b>	<b>463 283</b>	<b>18 024</b>
331	Primary metal mfg .....	—	4	3	g	D	D	D	D	D	D	D	D	
3311	Iron & steel mills & ferroalloy mfg .....	—	2	2	f	D	D	D	D	D	D	D	D	
33111	Iron & steel mills & ferroalloy mfg .....	—	2	2	f	D	D	D	D	D	D	D	D	
331111	Iron & steel mills .....	—	2	2	f	D	D	D	D	D	D	D	D	
3314	Nonferrous metal (except aluminum) production & processing .....	—	1	1	f	D	D	D	D	D	D	D	D	
33149	Other nonferrous metal rolling, drawing, extruding, & alloying ...	—	1	1	f	D	D	D	D	D	D	D	D	
331491	Other nonferrous metal rolling, drawing, & extruding .....	—	1	1	f	D	D	D	D	D	D	D	D	
	<b>KNOX COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>72</b>	<b>30</b>		<b>4 924</b>	<b>174 423</b>	<b>3 550</b>	<b>7 373</b>	<b>104 621</b>	<b>399 281</b>	<b>573 664</b>	<b>972 343</b>	<b>27 938</b>
333	Machinery mfg .....	—	7	4	g	1 829	86 479	1 042	2 417	40 944	149 941	184 793	329 580	D
3339	Other general-purpose machinery mfg .....	—	4	3	g	D	D	D	D	D	D	D	D	D
33391	Pump & compressor mfg .....	—	4	3	g	D	D	D	D	D	D	D	D	D
333912	Air & gas compressor mfg .....	—	4	3	g	D	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	—	6	5	g	919	29 041	771	1 600	20 971	88 296	178 541	272 072	5 009
3363	Motor vehicle parts mfg ...	—	5	4	f	D	D	D	D	D	D	D	D	D
	<b>LAKE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>769</b>	<b>262</b>		<b>25 423</b>	<b>893 185</b>	<b>18 166</b>	<b>37 099</b>	<b>518 756</b>	<b>2 746 752</b>	<b>1 880 518</b>	<b>4 660 968</b>	<b>186 520</b>
322	Paper mfg .....	—	3	3	g	D	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	—	3	3	g	D	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg .....	—	2	2	f	D	D	D	D	D	D	D	D	D
322222	Coated & laminated paper mfg .....	—	2	2	f	D	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	3	46	8	f	D	D	D	D	D	D	D	D	D
3231	Printing & related support activities .....	3	46	8	f	D	D	D	D	D	D	D	D	D
32311	Printing .....	3	44	8	f	D	D	D	D	D	D	D	D	D
325	Chemical mfg .....	1	26	17	f	1 568	73 435	1 075	2 273	44 898	343 960	463 811	810 422	29 267
3251	Basic chemical mfg .....	—	5	4	f	620	33 838	435	926	20 532	159 806	268 438	431 937	18 437
32519	Other basic organic chemical mfg .....	—	2	2	f	D	D	D	D	D	D	D	D	D
325199	All other basic organic chemical mfg .....	—	2	2	f	D	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	—	42	26	f	1 668	48 602	1 265	2 581	29 494	111 488	111 333	223 154	11 614
3261	Plastics product mfg .....	—	29	18	g	D	D	D	D	D	D	D	D	9 175
32619	Other plastics product mfg .....	—	19	12	f	809	25 514	589	1 178	14 509	62 426	67 427	130 124	7 742
326199	All other plastics product mfg .....	—	18	11	f	D	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	—	33	8	f	683	23 939	516	1 147	17 866	143 617	47 106	191 442	11 779
331	Primary metal mfg .....	—	17	7	f	1 532	44 471	1 191	2 563	29 082	101 306	91 241	195 106	12 508
3315	Foundries .....	—	9	5	g	D	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	—	5	3	f	D	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	—	4	2	f	D	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>LAKE COUNTY, OH—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg .....	—	324	94	7 491	254 417	5 863	12 171	174 778	627 101	344 412	983 815	50 119
3321	Forging & stamping .....	1	25	20	1 175	36 454	889	1 935	24 157	66 060	69 517	135 974	3 190
33211	Forging & stamping .....	1	25	20	1 175	36 454	889	1 935	24 157	66 060	69 517	135 974	3 190
332116	Metal stamping .....	—	17	12	841	24 795	662	1 439	16 902	44 438	30 169	75 145	D
3323	Architectural & structural metals mfg .....	—	25	6	502	14 732	342	636	7 847	41 052	40 180	81 307	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	—	206	37	3 174	106 054	2 600	5 264	76 468	207 862	97 195	305 324	20 607
33271	Machine shops .....	1	170	19	1 550	48 398	1 204	2 234	32 486	88 739	35 021	123 647	8 162
332710	Machine shops .....	1	170	19	1 550	48 398	1 204	2 234	32 486	88 739	35 021	123 647	8 162
33272	Turned product & screw, nut, & bolt mfg .....	—	36	18	1 624	57 656	1 396	3 030	43 982	119 123	62 174	181 677	12 445
332721	Precision turned product mfg .....	—	30	17	1 582	56 501	1 369	2 967	43 191	117 139	61 261	178 780	12 288
3329	Other fabricated metal product mfg .....	—	36	23	2 133	82 065	1 650	3 603	56 812	278 524	123 232	413 715	22 593
33291	Metal valve mfg .....	—	21	17	1 743	69 586	1 339	2 996	49 156	259 568	103 960	375 243	21 480
332911	Industrial valve mfg ...	—	9	8	f	D	D	D	D	D	D	D	D
332912	Fluid power valve & hose fitting mfg .....	—	9	6	934	39 891	652	1 558	25 540	205 322	69 612	280 835	D
333	Machinery mfg .....	—	113	41	3 493	132 552	2 474	5 058	74 740	362 817	267 917	657 775	18 823
3332	Industrial machinery mfg ..	—	9	6	588	22 617	397	880	12 781	40 155	34 352	76 146	1 592
3335	Metalworking machinery mfg .....	1	66	20	1 576	60 954	1 086	2 183	34 958	93 033	76 811	192 604	9 370
33351	Metalworking machinery mfg .....	1	66	20	1 576	60 954	1 086	2 183	34 958	93 033	76 811	192 604	9 370
333514	Special die & tool, die set, jig, & fixture mfg .	—	25	5	528	18 040	410	744	12 209	28 539	12 064	39 400	1 705
3339	Other general-purpose machinery mfg .....	—	25	7	930	34 892	709	1 410	19 510	201 052	130 638	334 240	6 342
33399	All other general-purpose machinery mfg .....	—	19	3	774	28 459	602	1 209	16 741	188 851	121 977	312 931	5 786
333992	Welding & soldering equipment mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	1	25	14	2 228	88 179	990	1 673	26 611	239 595	129 849	372 895	D
3344	Semiconductor & other electronic component mfg .....	1	14	9	706	17 930	503	947	10 503	72 252	45 956	119 405	D
33441	Semiconductor & other electronic component mfg .....	1	14	9	706	17 930	503	947	10 503	72 252	45 956	119 405	D
3345	Navigational, measuring, medical, & control instruments mfg .....	—	4	2	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg .....	—	4	2	g	D	D	D	D	D	D	D	D
334513	Industrial process control instrument mfg .....	—	2	2	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	—	26	18	1 842	48 733	1 308	2 414	25 883	123 656	109 009	230 867	D
3353	Electrical equipment mfg ..	—	8	2	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg .....	—	8	2	f	D	D	D	D	D	D	D	D
335314	Relay & industrial control mfg .....	—	5	2	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg .....	—	11	10	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	1	15	7	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	—	46	16	2 228	68 747	1 534	2 764	32 341	255 081	92 521	327 005	8 585
3391	Medical equipment & supplies mfg .....	—	20	6	971	33 436	500	795	10 786	167 999	57 768	207 369	6 284
33911	Medical equipment & supplies mfg .....	—	20	6	971	33 436	500	795	10 786	167 999	57 768	207 369	6 284
339113	Surgical appliance & supplies mfg .....	—	6	3	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg ..	1	26	10	1 257	35 311	1 034	1 969	21 555	87 082	34 753	119 636	2 301
33999	All other miscellaneous mfg .....	1	14	7	807	24 274	646	1 200	15 534	60 041	24 219	85 222	1 901



**Table 3. Industry Statistics for Counties: 1997—Con.**

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NAICS code	Geographic area and industry	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)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>LAWRENCE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>44</b>	<b>12</b>	<b>1 969</b>	<b>65 020</b>	<b>1 462</b>	<b>3 100</b>	<b>46 790</b>	<b>530 855</b>	<b>459 192</b>	<b>998 054</b>	<b>33 568</b>
325	Chemical mfg .....	3	6	3	528	28 528	325	788	20 188	139 428	353 616	500 663	29 490
<b>LICKING COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>150</b>	<b>55</b>	<b>9 489</b>	<b>321 100</b>	<b>7 635</b>	<b>15 544</b>	<b>239 585</b>	<b>1 315 655</b>	<b>1 136 065</b>	<b>2 455 079</b>	<b>46 812</b>
323	Printing & related support activities.....	-	14	3	603	22 729	393	776	14 492	71 370	40 882	110 914	2 072
3231	Printing & related support activities.....	-	14	3	603	22 729	393	776	14 492	71 370	40 882	110 914	2 072
32311	Printing .....	-	14	3	603	22 729	393	776	14 492	71 370	40 882	110 914	2 072
326	Plastics & rubber products mfg .....	-	16	9	1 047	30 135	826	1 627	20 087	91 627	74 113	163 248	5 948
3261	Plastics product mfg .....	-	14	8	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	10	6	553	13 678	454	926	9 641	27 427	25 893	53 342	D
326199	All other plastics product mfg .....	-	10	6	553	13 678	454	926	9 641	27 427	25 893	53 342	D
327	Nonmetallic mineral product mfg .....	-	10	5	g	D	D	D	D	D	D	D	12 659
3279	Other nonmetallic mineral product mfg .....	-	3	2	g	D	D	D	D	D	D	D	D
32799	All other nonmetallic mineral product mfg ...	-	3	2	g	D	D	D	D	D	D	D	D
327993	Mineral wool mfg .....	-	3	2	g	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	31	9	1 002	24 613	842	1 656	16 945	65 863	51 828	114 978	4 074
3328	Coating, engraving, heat treating, & allied activities ..	-	2	2	f	D	D	D	D	D	D	D	D
33281	Coating, engraving, heat treating, & allied activities ..	-	2	2	f	D	D	D	D	D	D	D	D
332813	Electroplating, plating, polishing, anodizing, & coloring .....	-	2	2	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	-	4	1	f	D	D	D	D	D	D	D	D
3341	Computer & peripheral equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
3351	Electric lighting equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
33512	Lighting fixture mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
335122	Commercial/industrial/institutional electric lighting fixture mfg ...	-	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	6	5	1 302	54 396	1 087	2 206	43 125	160 901	213 462	369 874	D
3363	Motor vehicle parts mfg ...	-	6	5	1 302	54 396	1 087	2 206	43 125	160 901	213 462	369 874	D
33635	Motor vehicle transmission & power train parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D

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[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>LOGAN COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>58</b>	<b>25</b>	<b>6 295</b>	<b>238 900</b>	<b>5 088</b>	<b>10 463</b>	<b>186 328</b>	<b>1 334 710</b>	<b>2 452 106</b>	<b>3 766 000</b>	<b>79 011</b>
327	Nonmetallic mineral product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3272	Glass & glass product mfg .	-	1	1	f	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
327215	Glass product mfg made of purchased glass.....	-	1	1	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335313	Switchgear & switchboard apparatus mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	6	5	h	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336111	Automobile mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	4	4	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>LORAIN COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>437</b>	<b>165</b>	<b>27 252</b>	<b>1 054 368</b>	<b>21 092</b>	<b>42 559</b>	<b>730 080</b>	<b>4 578 744</b>	<b>6 631 358</b>	<b>11 225 530</b>	<b>361 241</b>
325	Chemical mfg .....	-	11	7	980	48 949	560	1 440	27 448	225 863	213 516	438 492	D
326	Plastics & rubber products mfg .....	1	32	22	1 831	47 941	1 489	2 874	33 733	118 129	106 258	222 397	8 754
3261	Plastics product mfg .....	-	27	17	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	19	12	g	D	D	D	D	D	D	D	4 009
326199	All other plastics product mfg .....	-	18	12	g	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	17	11	3 702	160 157	3 212	6 857	120 032	375 963	564 482	955 122	46 859
3311	Iron & steel mills & ferroalloy mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
331111	Iron & steel mills .....	-	1	1	h	D	D	D	D	D	D	D	D
3315	Foundries .....	-	13	9	g	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .	-	5	4	f	D	D	D	D	D	D	D	D
331511	Iron foundries .....	-	4	3	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	148	56	5 216	168 553	3 757	7 515	102 018	458 475	296 482	755 669	23 644
3322	Cutlery & handtool mfg ....	-	4	1	f	D	D	D	D	D	D	D	D
33221	Cutlery & handtool mfg ..	-	4	1	f	D	D	D	D	D	D	D	D
332212	Hand & edge tool mfg .	-	2	1	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	70	17	1 473	48 556	1 036	1 982	28 144	112 403	64 209	175 977	8 102
33271	Machine shops .....	1	51	8	552	16 673	408	675	9 798	30 632	22 523	52 730	1 766
332710	Machine shops .....	1	51	8	552	16 673	408	675	9 798	30 632	22 523	52 730	1 766
33272	Turned product & screw, nut, & bolt mfg .....	-	19	9	921	31 883	628	1 307	18 346	81 771	41 686	123 247	6 336
332721	Precision turned product mfg .....	-	10	5	546	17 121	422	911	11 631	43 933	21 200	64 317	D
3328	Coating, engraving, heat treating, & allied activities .	-	22	10	727	19 079	626	1 305	14 770	41 841	16 246	59 596	2 107
33281	Coating, engraving, heat treating, & allied activities.....	-	22	10	727	19 079	626	1 305	14 770	41 841	16 246	59 596	2 107
3329	Other fabricated metal product mfg .....	-	17	10	1 061	36 825	767	1 527	23 086	68 275	65 522	133 188	4 540
33291	Metal valve mfg .....	-	5	5	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>LORAIN COUNTY, OH—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>												
333	Machinery mfg . . . . .	-	59	17	3 470	121 294	2 294	4 906	65 615	373 805	440 315	822 364	24 272
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	-	4	4	g	D	D	D	D	D	D	D	5 899
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	-	4	4	g	D	D	D	D	D	D	D	5 899
333415	AC & warm air heating & commercial industrial refrig equip mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg . . . . .	-	29	6	518	17 977	407	882	13 252	80 272	42 530	120 807	11 549
33351	Metalworking machinery mfg . . . . .	-	29	6	518	17 977	407	882	13 252	80 272	42 530	120 807	11 549
3339	Other general-purpose machinery mfg . . . . .	-	15	5	1 418	56 455	676	1 306	21 881	128 521	147 190	279 352	5 510
33399	All other general-purpose machinery mfg . . . . .	-	13	4	g	D	D	D	D	D	D	D	D
333993	Packaging machinery mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg . . . . .	-	10	3	646	22 362	361	570	8 188	35 775	32 773	68 303	D
335	Electrical equipment, appliance, & component mfg . . . . .	-	16	6	g	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg . . . . .	-	11	5	g	D	D	D	D	D	D	D	D
33599	All other electrical equipment & component mfg . . . . .	-	6	1	g	D	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment & component mfg . . . . .	-	5	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	-	14	14	i	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg . . . . .	-	2	2	i	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg . . . . .	-	2	2	i	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg . . . . .	-	2	2	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . . . .	-	9	9	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping . . . . .	-	4	4	595	19 908	515	1 034	15 143	35 363	34 513	71 842	D
336370	Motor vehicle metal stamping . . . . .	-	4	4	595	19 908	515	1 034	15 143	35 363	34 513	71 842	D
339	Miscellaneous mfg . . . . .	-	30	7	1 263	34 512	1 061	2 412	25 694	178 115	112 906	294 174	11 259
3391	Medical equipment & supplies mfg . . . . .	-	13	5	1 092	30 255	929	2 145	23 156	169 283	105 480	275 462	D
33911	Medical equipment & supplies mfg . . . . .	-	13	5	1 092	30 255	929	2 145	23 156	169 283	105 480	275 462	D
339113	Surgical appliance & supplies mfg . . . . .	-	7	5	g	D	D	D	D	D	D	D	D
<b>LUCAS COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . . .</b>	-	<b>652</b>	<b>235</b>	<b>33 116</b>	<b>1 404 781</b>	<b>26 522</b>	<b>54 992</b>	<b>1 050 563</b>	<b>3 742 090</b>	<b>8 284 488</b>	<b>12 070 967</b>	<b>266 220</b>
311	Food mfg . . . . .	-	25	7	1 219	55 035	909	1 987	40 567	517 557	338 727	859 977	D
3112	Grain & oilseed milling . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
31123	Breakfast cereal mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
311230	Breakfast cereal mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
313	Textile mills . . . . .	1	3	3	f	D	D	D	D	D	D	D	D
3133	Textile & fabric finishing & fabric coating mills . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
31332	Fabric coating mills . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
313320	Fabric coating mills . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
323	Printing & related support activities . . . . .	2	97	18	1 518	47 658	1 013	2 068	30 264	98 675	68 865	167 335	9 489
3231	Printing & related support activities . . . . .	2	97	18	1 518	47 658	1 013	2 068	30 264	98 675	68 865	167 335	9 489
32311	Printing . . . . .	2	87	15	g	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing . . . . .	2	40	9	761	25 387	531	1 126	16 692	52 266	38 976	91 064	3 938
324	Petroleum & coal products mfg . . . . .	-	8	2	g	D	D	D	D	D	D	D	D
3241	Petroleum & coal products mfg . . . . .	-	8	2	g	D	D	D	D	D	D	D	D
32411	Petroleum refineries . . . . .	-	2	2	g	D	D	D	D	D	D	D	D
324110	Petroleum refineries . . . . .	-	2	2	g	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>LUCAS COUNTY, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
325	Chemical mfg . . . . .	-	29	13	1 103	47 589	706	1 508	24 557	247 395	255 229	501 816	D
3256	Soap, cleaning compound, & toilet preparation mfg . .	-	10	4	f	D	D	D	D	D	D	D	D
32561	Soap & cleaning compound mfg . . . . .	-	10	4	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	1	30	17	931	21 811	712	1 344	14 740	62 200	49 589	112 098	3 838
3261	Plastics product mfg . . . . .	1	23	12	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg . . . . .	1	20	11	656	13 944	495	871	9 213	36 357	32 603	70 150	D
326199	All other plastics product mfg . . . . .	1	18	11	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	-	24	9	2 165	76 747	1 873	3 837	63 334	288 785	198 725	482 963	10 846
3272	Glass & glass product mfg . . . . .	-	8	4	g	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg . . . . .	-	8	4	g	D	D	D	D	D	D	D	D
327212	Other pressed & blown glass & glassware mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	-	13	8	1 179	49 160	956	2 139	37 521	108 974	215 432	322 671	D
3315	Foundries . . . . .	-	7	3	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries . . . . .	-	6	2	f	D	D	D	D	D	D	D	D
331521	Aluminum die-casting foundries . . . . .	-	3	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	-	148	50	3 907	133 261	3 010	6 224	87 675	356 882	323 576	699 846	14 628
3321	Forging & stamping . . . . .	1	12	10	f	D	D	D	D	D	D	D	D
33211	Forging & stamping . . . . .	1	12	10	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	1	61	15	913	33 149	721	1 478	22 584	59 636	30 647	91 456	4 694
33271	Machine shops . . . . .	1	52	10	711	25 953	563	1 156	17 916	46 119	24 783	71 905	3 433
332710	Machine shops . . . . .	1	52	10	711	25 953	563	1 156	17 916	46 119	24 783	71 905	3 433
3328	Coating, engraving, heat treating, & allied activities .	-	25	11	840	26 855	652	1 340	17 818	50 614	142 801	209 627	D
33281	Coating, engraving, heat treating, & allied activities . . . . .	-	25	11	840	26 855	652	1 340	17 818	50 614	142 801	209 627	D
333	Machinery mfg . . . . .	1	82	35	2 327	97 759	1 626	3 406	57 039	174 989	150 415	335 046	11 704
3335	Metalworking machinery mfg . . . . .	1	45	20	1 195	53 471	967	2 096	38 108	77 067	33 109	119 031	8 238
33351	Metalworking machinery mfg . . . . .	1	45	20	1 195	53 471	967	2 096	38 108	77 067	33 109	119 031	8 238
333511	Industrial mold mfg . . . . .	-	15	6	511	22 784	431	929	18 392	20 368	8 579	37 326	D
3339	Other general-purpose machinery mfg . . . . .	1	15	8	f	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg . . . . .	1	11	6	565	25 258	325	679	9 923	50 654	55 634	108 550	D
334	Computer & electronic product mfg . . . . .	2	24	11	596	18 268	374	703	9 266	97 194	24 155	114 172	2 291
335	Electrical equipment, appliance, & component mfg . . . . .	-	13	5	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg . . . . .	-	5	3	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	-	34	25	12 805	668 835	11 595	24 333	577 826	1 247 058	4 174 741	5 445 486	D
3361	Motor vehicle mfg . . . . .	-	1	1	i	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg . . . . .	-	1	1	i	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg . . . . .	-	1	1	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . . . .	-	26	20	i	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping . . . . .	-	10	8	1 506	85 933	1 253	2 781	67 977	202 077	178 508	378 208	39 219
336370	Motor vehicle metal stamping . . . . .	-	10	8	1 506	85 933	1 253	2 781	67 977	202 077	178 508	378 208	39 219
33639	Other motor vehicle parts mfg . . . . .	3	11	9	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg . . . . .	3	11	9	g	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>LUCAS COUNTY, OH—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>												
339	Miscellaneous mfg.....	3	54	14	1 210	33 479	777	1 310	15 189	85 684	46 878	132 161	D
3391	Medical equipment & supplies mfg.....	3	25	6	f	D	D	D	D	D	D	D	D
33911	Medical equipment & supplies mfg.....	3	25	6	f	D	D	D	D	D	D	D	D
<b>MADISON COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing....</b>	<b>—</b>	<b>51</b>	<b>23</b>	<b>3 401</b>	<b>102 807</b>	<b>2 744</b>	<b>5 457</b>	<b>72 054</b>	<b>287 047</b>	<b>317 509</b>	<b>606 543</b>	<b>71 167</b>
332	Fabricated metal product mfg.....	—	13	4	1 128	32 667	874	1 533	20 683	114 344	72 191	190 492	4 700
3329	Other fabricated metal product mfg.....	—	3	3	g	D	D	D	D	D	D	D	D
33291	Metal valve mfg.....	—	2	2	f	D	D	D	D	D	D	D	D
332911	Industrial valve mfg....	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg.....	—	6	3	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg....	—	3	2	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg.....	—	2	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg.....	—	2	1	f	D	D	D	D	D	D	D	D
<b>MAHONING COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing....</b>	<b>1</b>	<b>405</b>	<b>147</b>	<b>13 001</b>	<b>398 635</b>	<b>9 883</b>	<b>19 660</b>	<b>259 212</b>	<b>953 686</b>	<b>1 157 896</b>	<b>2 110 011</b>	<b>51 484</b>
323	Printing & related support activities.....	6	34	7	f	D	D	D	D	D	D	D	D
3231	Printing & related support activities.....	6	34	7	f	D	D	D	D	D	D	D	D
32311	Printing.....	6	32	7	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg.....	1	30	9	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg.....	1	24	8	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg.....	—	13	6	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg.....	—	11	6	f	D	D	D	D	D	D	D	D
331	Primary metal mfg.....	—	20	17	2 305	85 644	1 835	3 816	59 154	281 482	453 474	740 576	D
3311	Iron & steel mills & ferroalloy mfg.....	—	3	3	532	27 559	434	1 002	22 320	149 780	251 075	404 764	D
33111	Iron & steel mills & ferroalloy mfg.....	—	3	3	532	27 559	434	1 002	22 320	149 780	251 075	404 764	D
331111	Iron & steel mills.....	—	3	3	532	27 559	434	1 002	22 320	149 780	251 075	404 764	D
3313	Alumina & aluminum production & processing..	—	7	7	g	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing.....	—	7	7	g	D	D	D	D	D	D	D	D
331316	Aluminum extruded product mfg.....	—	7	7	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg.....	1	103	40	2 418	76 470	1 792	3 219	46 131	135 594	166 659	303 703	7 516
3323	Architectural & structural metals mfg.....	1	32	14	953	30 660	651	1 167	16 469	33 112	69 760	103 372	2 195
33231	Plate work & fabricated structural product mfg..	—	13	7	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg.....	—	34	10	517	14 936	408	645	9 403	36 391	17 567	53 423	1 085
333	Machinery mfg.....	1	53	24	2 157	82 129	1 578	3 132	51 766	177 405	95 127	270 242	14 526
3335	Metalworking machinery mfg.....	1	35	13	f	D	D	D	D	D	D	D	4 253
33351	Metalworking machinery mfg.....	1	35	13	f	D	D	D	D	D	D	D	4 253
3339	Other general-purpose machinery mfg.....	—	11	6	g	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg.....	—	11	6	g	D	D	D	D	D	D	D	D
333996	Fluid power pump & motor mfg.....	—	2	1	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg.....	—	6	3	710	23 225	433	996	14 466	62 517	73 587	136 449	D
336	Transportation equipment mfg.....	—	10	3	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg....	—	4	2	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>MARION COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>86</b>	<b>39</b>	<b>6 842</b>	<b>229 826</b>	<b>5 270</b>	<b>10 682</b>	<b>160 030</b>	<b>837 517</b>	<b>1 065 971</b>	<b>1 924 683</b>	<b>60 884</b>
311	Food mfg.....	1	8	5	730	23 569	546	1 176	17 255	89 977	305 483	396 825	D
322	Paper mfg.....	—	4	4	621	18 891	505	1 032	13 032	81 954	105 169	188 186	8 092
3222	Converted paper product mfg.....	—	4	4	621	18 891	505	1 032	13 032	81 954	105 169	188 186	8 092
332	Fabricated metal product mfg.....	6	23	7	772	26 360	565	1 097	17 766	70 237	59 721	129 872	4 634
333	Machinery mfg.....	—	11	4	672	28 226	322	794	11 831	45 813	60 922	112 754	D
335	Electrical equipment, appliance, & component mfg.....	—	1	1	g	D	D	D	D	D	D	D	D
3352	Household appliance mfg...	—	1	1	g	D	D	D	D	D	D	D	D
33522	Major appliance mfg.....	—	1	1	g	D	D	D	D	D	D	D	D
335224	Household laundry equipment mfg.....	—	1	1	g	D	D	D	D	D	D	D	D
<b>MEDINA COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>306</b>	<b>124</b>	<b>10 672</b>	<b>346 701</b>	<b>7 492</b>	<b>17 721</b>	<b>195 584</b>	<b>890 036</b>	<b>860 105</b>	<b>1 744 712</b>	<b>92 308</b>
311	Food mfg.....	—	13	6	g	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg.....	—	5	1	f	D	D	D	D	D	D	D	D
31181	Bread & bakery product mfg.....	—	5	1	f	D	D	D	D	D	D	D	D
311812	Commercial bakeries	—	2	1	f	D	D	D	D	D	D	D	D
323	Printing & related support activities.....	—	26	7	f	D	D	D	D	D	D	D	4 587
3231	Printing & related support activities.....	—	26	7	f	D	D	D	D	D	D	D	4 587
32311	Printing.....	—	21	4	f	D	D	D	D	D	D	D	D
325	Chemical mfg.....	1	17	9	854	31 401	515	1 057	13 971	91 559	89 544	178 500	D
326	Plastics & rubber products mfg.....	1	27	15	1 556	38 334	1 265	2 722	26 965	88 430	127 238	214 811	10 939
3261	Plastics product mfg.....	1	16	10	1 140	28 623	950	2 196	21 799	64 872	107 739	171 861	D
32619	Other plastics product mfg.....	1	11	8	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg.....	1	9	6	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg.....	3	15	9	603	25 266	389	943	14 354	41 855	61 179	101 109	D
331	Primary metal mfg.....	1	14	13	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg.....	—	63	16	1 265	38 308	967	1 987	24 885	99 287	65 095	165 833	10 336
333	Machinery mfg.....	2	43	15	928	31 742	644	3 500	18 544	73 456	73 923	147 802	4 040
3339	Other general-purpose machinery mfg.....	4	15	5	525	14 815	334	2 822	8 052	33 389	25 325	59 648	1 845
336	Transportation equipment mfg.....	—	9	5	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg...	—	6	3	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping.....	—	5	3	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping.....	—	5	3	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg.....	1	25	8	698	21 635	404	707	8 330	54 767	31 280	85 003	D
3399	Other miscellaneous mfg...	—	19	6	522	14 443	305	501	5 531	37 846	20 550	57 417	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>MERCER COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>62</b>	<b>26</b>	<b>4 473</b>	<b>130 820</b>	<b>3 720</b>	<b>7 616</b>	<b>93 575</b>	<b>413 195</b>	<b>379 240</b>	<b>775 725</b>	<b>46 429</b>
311	Food mfg .....	-	9	4	606	11 597	539	1 145	9 276	28 210	66 600	95 168	1 764
323	Printing & related support activities .....	-	6	1	f	D	D	D	D	D	D	D	D
3231	Printing & related support activities .....	-	6	1	f	D	D	D	D	D	D	D	D
32311	Printing .....	-	6	1	f	D	D	D	D	D	D	D	D
323116	Manifold business form printing .....	-	1	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	10	4	754	30 352	648	1 500	24 948	55 915	65 033	117 534	D
3331	Agriculture, construction, & mining machinery mfg. ....	-	2	2	f	D	D	D	D	D	D	D	D
33311	Agricultural implement mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
333111	Farm machinery & equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	3	3	g	D	D	D	D	D	D	D	D
3369	Other transportation equipment mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33699	Other transportation equipment mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336991	Motorcycle, bicycle, & parts mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>MIAMI COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>265</b>	<b>95</b>	<b>13 848</b>	<b>454 903</b>	<b>9 839</b>	<b>20 192</b>	<b>265 412</b>	<b>1 338 462</b>	<b>1 312 576</b>	<b>2 611 753</b>	<b>124 376</b>
311	Food mfg .....	-	11	5	f	D	D	D	D	D	D	D	D
322	Paper mfg .....	-	5	4	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	-	5	4	f	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
322222	Coated & laminated paper mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	-	24	12	1 288	34 649	1 034	2 137	21 463	85 151	92 281	176 871	9 350
3261	Plastics product mfg .....	-	23	12	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	12	5	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	12	5	f	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	10	5	831	32 046	671	1 441	23 030	71 548	97 629	165 632	7 149
3312	Steel product mfg from purchased steel .....	-	2	2	f	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel .....	-	2	2	f	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel .....	-	2	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	2	66	12	g	D	D	D	D	D	D	D	6 313
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	1	42	8	f	D	D	D	D	D	D	D	5 101
33271	Machine shops .....	1	37	8	f	D	D	D	D	D	D	D	4 642
332710	Machine shops .....	1	37	8	f	D	D	D	D	D	D	D	4 642
333	Machinery mfg .....	-	59	24	2 992	101 898	1 874	4 049	59 647	316 457	253 231	578 898	22 283
3335	Metalworking machinery mfg .....	1	32	9	f	D	D	D	D	D	D	D	4 060
33351	Metalworking machinery mfg .....	1	32	9	f	D	D	D	D	D	D	D	4 060
3339	Other general-purpose machinery mfg .....	-	11	6	g	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg .....	-	9	4	f	D	D	D	D	D	D	D	D
333992	Welding & soldering equipment mfg .....	-	5	4	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	-	7	4	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg .....	-	6	4	g	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg .....	-	6	4	g	D	D	D	D	D	D	D	D
334411	Electron tube mfg .....	-	1	1	g	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
	<b>MIAMI COUNTY, OH—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>													
336	Transportation equipment mfg .....	1	8	7	g	D	D	D	D	D	D	D	D	
3363	Motor vehicle parts mfg ...	4	5	5	g	D	D	D	D	D	D	D	D	
33639	Other motor vehicle parts mfg .....	—	3	3	f	D	D	D	D	D	D	D	D	
3364	Aerospace product & parts mfg .....	—	3	2	g	D	D	D	D	D	D	D	D	
33641	Aerospace product & parts mfg .....	—	3	2	g	D	D	D	D	D	D	D	D	
336413	Other aircraft part & auxiliary equipment mfg .....	—	3	2	g	D	D	D	D	D	D	D	D	
337	Furniture & related product mfg .....	—	11	4	f	D	D	D	D	D	D	D	D	
3371	Household & institutional furniture & kitchen cabinet mfg .....	—	8	2	f	D	D	D	D	D	D	D	D	
33712	Household & institutional furniture mfg .....	—	2	1	f	D	D	D	D	D	D	D	D	
337124	Metal household furniture mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	
	<b>MONROE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>21</b>	<b>3</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	
331	Primary metal mfg .....	—	2	2	g	D	D	D	D	D	D	D	D	
3313	Alumina & aluminum production & processing ..	—	2	2	g	D	D	D	D	D	D	D	D	
33131	Alumina & aluminum production & processing, .....	—	2	2	g	D	D	D	D	D	D	D	D	
331312	Primary aluminum production .....	—	1	1	g	D	D	D	D	D	D	D	D	
331315	Aluminum sheet, plate, & foil mfg .....	—	1	1	f	D	D	D	D	D	D	D	D	
	<b>MONTGOMERY COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>927</b>	<b>356</b>		<b>56 299</b>	<b>2 337 335</b>	<b>41 924</b>	<b>88 617</b>	<b>1 592 602</b>	<b>7 143 376</b>	<b>8 599 759</b>	<b>15 734 684</b>	<b>402 528</b>
311	Food mfg .....	—	23	4	f	D	D	D	D	D	D	D	10 705	
321	Wood product mfg .....	—	17	7	f	D	D	D	D	D	D	D	3 081	
322	Paper mfg .....	—	19	12	g	D	D	D	D	D	D	D	47 591	
3221	Pulp, paper, & paperboard mills .....	—	2	2	f	D	D	D	D	D	D	D	D	
32212	Paper mills .....	—	2	2	f	D	D	D	D	D	D	D	D	
3222	Converted paper product mfg .....	—	17	10	f	D	D	D	D	D	D	D	D	
323	Printing & related support activities .....	1	126	32		3 729	139 514	2 228	4 345	66 989	313 559	182 522	490 967	26 159
3231	Printing & related support activities .....	1	126	32		3 729	139 514	2 228	4 345	66 989	313 559	182 522	490 967	26 159
32311	Printing .....	1	109	25	h	D	D	D	D	D	D	D	D	24 219
323110	Commercial lithographic printing ..	2	47	11		1 033	37 922	759	1 493	23 619	73 123	49 363	122 232	6 745
323112	Commercial flexographic printing ..	—	4	3	g	D	D	D	D	D	D	D	D	D
325	Chemical mfg .....	2	22	13	g	D	D	D	D	D	D	D	D	10 094
326	Plastics & rubber products mfg .....	1	49	25		3 675	114 321	2 943	5 597	77 724	181 163	178 691	360 031	23 369
3261	Plastics product mfg .....	2	37	21	g	D	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	2	33	19		2 147	54 163	1 684	3 118	33 818	110 808	94 419	204 603	17 857
326199	All other plastics product mfg .....	2	32	19	g	D	D	D	D	D	D	D	D	D
3262	Rubber product mfg .....	—	12	4	g	D	D	D	D	D	D	D	D	D
32629	Other rubber product mfg .....	—	8	3	g	D	D	D	D	D	D	D	D	D
326291	Rubber product mfg for mechanical use .....	—	7	3	g	D	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	2	20	14	f	D	D	D	D	D	D	D	D	3 927
3273	Cement & concrete product mfg .....	2	10	8	f	D	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	3	13	10	f	D	D	D	D	D	D	D	D	2 983
3315	Foundries .....	3	11	8	f	D	D	D	D	D	D	D	D	D



**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>MONTGOMERY COUNTY, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg .....	1	248	91	i	D	D	D	D	D	D	D	32 261
3321	Forging & stamping .....	—	18	10	f	D	D	D	D	D	D	D	D
33211	Forging & stamping .....	—	18	10	f	D	D	D	D	D	D	D	D
332116	Metal stamping .....	—	13	6	f	D	D	D	D	D	D	D	D
3322	Cutlery & handtool mfg. ....	6	8	7	702	29 442	303	633	10 850	69 993	19 803	92 791	3 911
33221	Cutlery & handtool mfg. ...	6	8	7	702	29 442	303	633	10 850	69 993	19 803	92 791	3 911
332212	Hand & edge tool mfg. .	6	8	7	702	29 442	303	633	10 850	69 993	19 803	92 791	3 911
3323	Architectural & structural metals mfg .....	1	28	11	f	D	D	D	D	D	D	D	1 504
3327	Machine shops, turned product, & screw, nut, & bolt mfg. ....	1	127	38	g	D	D	D	D	D	D	D	13 709
33271	Machine shops .....	1	103	26	1 761	65 695	1 340	2 890	44 813	111 252	49 550	159 535	10 487
332710	Machine shops .....	1	103	26	1 761	65 695	1 340	2 890	44 813	111 252	49 550	159 535	10 487
33272	Turned product & screw, nut, & bolt mfg .....	3	24	12	f	D	D	D	D	D	D	D	3 222
332721	Precision turned product mfg. ....	3	21	10	f	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, & allied activities .	1	38	17	f	D	D	D	D	D	D	D	4 363
33281	Coating, engraving, heat treating, & allied activities .....	1	38	17	f	D	D	D	D	D	D	D	4 363
332813	Electroplating, plating, polishing, anodizing, & coloring .....	—	21	8	f	D	D	D	D	D	D	D	1 979
3329	Other fabricated metal product mfg. ....	—	20	4	g	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg. ....	—	17	3	g	D	D	D	D	D	D	D	D
332995	Other ordnance & accessories mfg. ....	—	2	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	1	179	76	8 959	373 700	6 128	13 948	233 399	769 906	689 616	1 458 427	43 134
3332	Industrial machinery mfg. .	2	17	10	2 199	80 922	1 350	3 284	44 782	201 780	179 586	369 074	10 610
33329	Other industrial machinery mfg .....	2	13	9	g	D	D	D	D	D	D	D	D
333293	Printing machinery & equipment mfg. ....	—	3	1	f	D	D	D	D	D	D	D	D
333298	All other industrial machinery mfg. ....	4	9	7	g	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg .....	1	118	45	3 963	173 771	3 013	6 632	123 120	304 653	143 850	458 310	17 608
33351	Metalworking machinery mfg .....	1	118	45	3 963	173 771	3 013	6 632	123 120	304 653	143 850	458 310	17 608
333511	Industrial mold mfg. .	—	28	13	899	41 304	721	1 567	28 988	61 876	26 182	90 049	4 483
333514	Special die & tool, die set, jig, & fixture mfg. .	—	69	22	2 040	84 467	1 600	3 529	62 251	150 564	46 402	196 580	9 496
3336	Engine, turbine, & power transmission equipment mfg .....	—	8	3	f	D	D	D	D	D	D	D	D
33361	Engine, turbine, & power transmission equipment mfg .....	—	8	3	f	D	D	D	D	D	D	D	D
333618	Other engine equipment mfg. ....	—	1	1	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg .....	—	23	13	1 650	72 706	896	2 228	35 510	150 039	132 640	276 151	D
33399	All other general-purpose machinery mfg .....	—	16	9	g	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	1	42	20	2 646	96 722	1 619	3 128	41 715	300 606	139 096	433 140	D
3341	Computer & peripheral equipment mfg .....	—	7	1	f	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg .....	—	7	1	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg .....	—	4	1	f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg .....	2	12	10	f	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg .....	2	12	10	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	1	19	8	f	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg .....	1	19	8	f	D	D	D	D	D	D	D	D
334519	Other measuring & controlling device mfg .....	—	6	3	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
<b>31-33</b>	<b>MONTGOMERY COUNTY, OH—Con.</b>													
	<b>Manufacturing—Con.</b>													
335	Electrical equipment, appliance, & component mfg .....	-	11	5	g	D	D	D	D	D	D	D	D	
3353	Electrical equipment mfg ..	-	9	5	g	D	D	D	D	D	D	D	D	
33531	Electrical equipment mfg .....	-	9	5	g	D	D	D	D	D	D	D	D	
335312	Motor & generator mfg .....	-	4	3	g	D	D	D	D	D	D	D	D	
336	Transportation equipment mfg .....	-	38	26	j	D	D	D	D	D	D	D	164 878	
3361	Motor vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D	
33611	Automobile & light duty motor vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D	
336112	Light truck & utility vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D	
3363	Motor vehicle parts mfg ...	-	31	21	j	D	D	D	D	D	D	D	D	
33633	Motor vehicle steering & suspension component (except spring) mfg .....	-	2	2	h	D	D	D	D	D	D	D	D	
336330	Motor vehicle steering & suspension component (except spring) mfg .....	-	2	2	h	D	D	D	D	D	D	D	D	
33634	Motor vehicle brake system mfg .....	-	4	2	h	D	D	D	D	D	D	D	D	
336340	Motor vehicle brake system mfg .....	-	4	2	h	D	D	D	D	D	D	D	D	
33637	Motor vehicle metal stamping .....	-	5	3	f	D	D	D	D	D	D	D	D	
336370	Motor vehicle metal stamping .....	-	5	3	f	D	D	D	D	D	D	D	D	
33639	Other motor vehicle parts mfg .....	-	12	9	i	D	D	D	D	D	D	D	37 352	
336391	Motor vehicle air-conditioning mfg .....	-	2	2	i	D	D	D	D	D	D	D	D	
336399	All other motor vehicle parts mfg .....	-	10	7	h	D	D	D	D	D	D	D	D	
339	Miscellaneous mfg .....	1	68	10	g	D	D	D	D	D	D	D	2 517	
3399	Other miscellaneous mfg ..	1	34	5	f	D	D	D	D	D	D	D	D	
33995	Sign mfg .....	-	20	4	f	D	D	D	D	D	D	D	D	
339950	Sign mfg .....	-	20	4	f	D	D	D	D	D	D	D	D	
	<b>MORGAN COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>10</b>	<b>3</b>		<b>921</b>	<b>27 480</b>	<b>736</b>	<b>1 385</b>	<b>18 601</b>	<b>72 333</b>	<b>64 196</b>	<b>135 528</b>	<b>7 680</b>
	<b>MORROW COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>27</b>	<b>10</b>		<b>1 778</b>	<b>57 537</b>	<b>1 169</b>	<b>2 309</b>	<b>28 151</b>	<b>147 501</b>	<b>223 339</b>	<b>366 173</b>	<b>20 341</b>
333	Machinery mfg .....	-	3	1	f	D	D	D	D	D	D	D	D	
3332	Industrial machinery mfg ..	-	1	1	f	D	D	D	D	D	D	D	D	
33322	Plastics & rubber industry machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D	
333220	Plastics & rubber industry machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D	
	<b>MUSKINGUM COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	1	<b>113</b>	<b>39</b>		<b>10 096</b>	<b>248 775</b>	<b>8 869</b>	<b>16 963</b>	<b>199 187</b>	<b>765 725</b>	<b>456 886</b>	<b>1 214 575</b>	<b>74 825</b>
311	Food mfg .....	-	9	7		606	17 810	398	771	8 656	89 298	71 479	160 806	4 785
314	Textile product mills .....	-	3	3	f	D	D	D	D	D	D	D	D	D
321	Wood product mfg .....	-	13	2	h	D	D	D	D	D	D	D	D	D
3219	Other wood product mfg ...	-	10	2	h	D	D	D	D	D	D	D	D	D
32199	All other wood product mfg .....	-	3	2	h	D	D	D	D	D	D	D	D	D
321999	All other miscellaneous wood product mfg ...	-	3	2	h	D	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	1	22	9		947	26 814	813	1 443	20 773	66 543	53 113	119 070	9 471
331	Primary metal mfg .....	-	3	2	f	D	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>MUSKINGUM COUNTY, OH—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>												
335	Electrical equipment, appliance, & component mfg .....	—	2	1	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
33593	Wiring device mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
335931	Current-carrying wiring device mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	6	4	2	1 339	27 244	1 178	2 509	21 072	43 595	48 560	91 425	3 949
3363	Motor vehicle parts mfg . . .	6	3	2	g	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical & electronic equipment mfg .....	5	2	2	g	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical & electronic equipment mfg .....	5	2	2	g	D	D	D	D	D	D	D	D
<b>NOBLE COUNTY, OH</b>													
31-33	Manufacturing .....	—	12	5	f	D	D	D	D	D	D	D	D
<b>OTTAWA COUNTY, OH</b>													
31-33	Manufacturing .....	—	56	24	2 886	100 791	2 308	4 799	74 523	319 561	322 184	634 246	43 083
326	Plastics & rubber products mfg .....	—	5	4	606	20 003	527	1 111	15 305	66 488	71 618	137 174	4 599
327	Nonmetallic mineral product mfg .....	—	5	4	701	25 193	591	1 357	20 155	71 170	91 389	162 753	D
331	Primary metal mfg .....	—	2	1	f	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
331112	Electrometallurgical ferroalloy product mfg .....	—	1	1	f	D	D	D	D	D	D	D	D
<b>PAULDING COUNTY, OH</b>													
31-33	Manufacturing .....	—	39	17	1 628	46 447	1 263	2 569	32 814	108 994	147 271	256 518	8 762
327	Nonmetallic mineral product mfg .....	1	5	4	502	15 475	394	834	10 885	34 227	35 891	70 197	4 352
<b>PERRY COUNTY, OH</b>													
31-33	Manufacturing .....	—	35	15	1 763	50 757	1 515	2 997	38 403	148 484	91 881	238 876	8 775
331	Primary metal mfg .....	—	2	2	f	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel .....	—	1	1	f	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel .....	—	1	1	f	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel .....	—	1	1	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>PICKAWAY COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>44</b>	<b>19</b>	<b>4 726</b>	<b>188 617</b>	<b>3 369</b>	<b>7 338</b>	<b>116 021</b>	<b>609 722</b>	<b>516 597</b>	<b>1 134 398</b>	<b>65 008</b>
326	Plastics & rubber products mfg . . . . .	-	4	4	1 550	64 185	1 154	2 425	40 290	168 328	129 308	299 626	D
3261	Plastics product mfg . . . . .	-	4	4	1 550	64 185	1 154	2 425	40 290	168 328	129 308	299 626	D
32611	Unsupported plastics film, sheet, & bag mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
326113	Unsupported plastics film & sheet (except packaging) mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	-	3	1	g	D	D	D	D	D	D	D	D
3272	Glass & glass product mfg . . . . .	-	2	1	g	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg . . . . .	-	2	1	g	D	D	D	D	D	D	D	D
327212	Other pressed & blown glass & glassware mfg . . . . .	-	2	1	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg . . . . .	-	2	1	f	D	D	D	D	D	D	D	D
3351	Electric lighting equipment mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33511	Electric lamp bulb & part mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
<b>PIKE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>28</b>	<b>10</b>	<b>4 953</b>	<b>190 160</b>	<b>3 161</b>	<b>7 045</b>	<b>103 147</b>	<b>762 141</b>	<b>438 759</b>	<b>1 202 314</b>	<b>24 238</b>
325	Chemical mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
3251	Basic chemical mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
32518	Other basic inorganic chemical mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
325188	All other basic inorganic chemical mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
337	Furniture & related product mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
3371	Household & institutional furniture & kitchen cabinet mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
33711	Wood kitchen cabinet & counter top mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
337110	Wood kitchen cabinet & counter top mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
<b>PORTAGE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>298</b>	<b>124</b>	<b>12 984</b>	<b>417 840</b>	<b>9 633</b>	<b>20 146</b>	<b>265 096</b>	<b>1 109 170</b>	<b>1 017 329</b>	<b>2 154 174</b>	<b>95 115</b>
323	Printing & related support activities . . . . .	-	16	5	896	26 769	666	1 401	19 414	134 712	55 574	189 404	D
3231	Printing & related support activities . . . . .	-	16	5	896	26 769	666	1 401	19 414	134 712	55 574	189 404	D
32311	Printing . . . . .	-	15	5	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	-	49	37	3 693	114 386	2 767	5 895	72 391	307 951	280 963	585 772	24 118
3261	Plastics product mfg . . . . .	-	30	23	2 136	61 801	1 670	3 418	40 656	183 447	125 116	305 993	14 357
32619	Other plastics product mfg . . . . .	-	23	17	g	D	D	D	D	D	D	D	D
326199	All other plastics product mfg . . . . .	-	23	17	g	D	D	D	D	D	D	D	D
3262	Rubber product mfg . . . . .	-	19	14	1 557	52 585	1 097	2 477	31 735	124 504	155 847	279 779	9 761
32622	Rubber & plastics hoses & belting mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
326220	Rubber & plastics hoses & belting mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
32629	Other rubber product mfg . . . . .	1	16	11	636	19 194	466	1 083	11 284	44 127	24 572	68 531	D
326291	Rubber product mfg for mechanical use . . . . .	1	12	8	505	14 120	371	858	8 344	34 751	22 018	56 564	2 108
331	Primary metal mfg . . . . .	-	7	5	982	27 864	834	1 840	21 250	64 304	82 090	145 575	D
3315	Foundries . . . . .	-	5	3	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
331524	Aluminum foundries (except die-casting) . . . . .	-	2	2	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>PORTAGE COUNTY, OH—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg .....	-	83	25	1 858	54 962	1 426	2 868	37 284	121 149	99 630	219 007	21 187
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	44	11	608	17 689	499	1 004	12 447	43 022	23 108	65 544	2 165
3329	Other fabricated metal product mfg .....	-	11	7	601	20 671	441	954	13 839	43 334	46 872	89 314	14 300
333	Machinery mfg .....	1	46	16	1 269	49 866	744	1 575	24 663	89 208	53 616	142 398	5 321
3335	Metalworking machinery mfg .....	1	31	10	548	23 517	428	952	15 756	41 559	13 707	55 167	2 197
33351	Metalworking machinery mfg .....	1	31	10	548	23 517	428	952	15 756	41 559	13 707	55 167	2 197
335	Electrical equipment, appliance, & component mfg .....	-	10	6	1 146	44 388	901	2 018	31 091	140 117	72 449	215 531	4 733
3351	Electric lighting equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33511	Electric lamp bulb & part mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	6	4	g	D	D	D	D	D	D	D	D
3362	Motor vehicle body & trailer mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
33621	Motor vehicle body & trailer mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
336212	Truck trailer mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
<b>PREBLE COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>61</b>	<b>23</b>	<b>3 274</b>	<b>109 179</b>	<b>2 451</b>	<b>5 153</b>	<b>68 668</b>	<b>352 361</b>	<b>345 762</b>	<b>698 034</b>	<b>50 534</b>
326	Plastics & rubber products mfg .....	-	7	4	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	-	7	4	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	7	4	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	6	3	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	17	7	929	29 154	808	1 574	24 488	94 944	43 742	136 533	D
3329	Other fabricated metal product mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
33291	Metal valve mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
332912	Fluid power valve & hose fitting mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
<b>PUTNAM COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>42</b>	<b>22</b>	<b>4 005</b>	<b>129 906</b>	<b>3 433</b>	<b>6 983</b>	<b>98 821</b>	<b>345 548</b>	<b>873 956</b>	<b>1 237 083</b>	<b>126 530</b>
332	Fabricated metal product mfg .....	-	9	8	524	16 862	417	869	11 547	86 147	354 965	448 315	D
333	Machinery mfg .....	-	5	2	f	D	D	D	D	D	D	D	D
3331	Agriculture, construction, & mining machinery mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
33311	Agricultural implement mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
333111	Farm machinery & equipment mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
334411	Electron tube mfg .....	-	1	1	g	D	D	D	D	D	D	D	D

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>RICHLAND COUNTY, OH</b>												
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>220</b>	<b>93</b>	<b>15 212</b>	<b>567 064</b>	<b>11 809</b>	<b>24 301</b>	<b>412 770</b>	<b>1 199 577</b>	<b>1 250 171</b>	<b>2 444 652</b>	<b>126 962</b>
326	Plastics & rubber products mfg . . . . .	1	14	8	601	17 284	492	1 071	12 238	52 643	57 274	111 361	D
3261	Plastics product mfg . . . . .	1	13	8	f	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	-	4	4	g	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
331111	Iron & steel mills . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	1	54	22	1 594	42 405	1 290	2 695	27 614	88 259	80 892	168 295	5 388
333	Machinery mfg . . . . .	-	30	12	1 411	47 337	880	1 564	24 238	145 053	106 610	249 454	7 903
3339	Other general-purpose machinery mfg . . . . .	-	10	5	f	D	D	D	D	D	D	D	D
33391	Pump & compressor mfg . . . . .	-	4	3	f	D	D	D	D	D	D	D	D
333911	Pump & pumping equipment mfg . . . . .	-	3	2	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg . . . . .	-	10	5	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	-	7	3	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	-	7	3	g	D	D	D	D	D	D	D	D
334512	Automatic environmental control mfg . . . . .	-	5	3	2 326	59 859	1 722	3 013	33 689	111 798	59 575	170 946	D
335	Electrical equipment, appliance, & component mfg . . . . .	-	10	5	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	-	17	13	4 224	221 675	3 666	8 141	193 681	367 072	484 383	850 575	D
3363	Motor vehicle parts mfg . . . . .	-	11	9	h	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping . . . . .	-	6	6	h	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping . . . . .	-	6	6	h	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
	<b>ROSS COUNTY, OH</b>												
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>48</b>	<b>14</b>	<b>h</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>57 636</b>
322	Paper mfg . . . . .	-	3	2	g	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
32212	Paper mills . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	-	4	3	g	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
33612	Heavy duty truck mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D
336120	Heavy duty truck mfg . . . . .	-	1	1	g	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>SANDUSKY COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>124</b>	<b>50</b>	<b>10 156</b>	<b>307 078</b>	<b>8 377</b>	<b>15 732</b>	<b>226 865</b>	<b>1 243 491</b>	<b>1 273 390</b>	<b>2 533 643</b>	<b>78 618</b>
311	Food mfg . . . . .	-	10	4	f	D	D	D	D	D	D	D	8 786
326	Plastics & rubber products mfg . . . . .	-	11	9	2 024	48 706	1 630	3 066	30 909	138 525	144 586	284 244	15 226
3261	Plastics product mfg . . . . .	-	10	9	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg . . . . .	-	6	6	g	D	D	D	D	D	D	D	4 135
326199	All other plastics product mfg . . . . .	-	6	6	g	D	D	D	D	D	D	D	4 135
327	Nonmetallic mineral product mfg . . . . .	-	12	7	541	19 544	383	874	13 749	45 208	44 666	92 068	4 502
332	Fabricated metal product mfg . . . . .	1	25	10	859	29 729	649	1 170	18 409	86 593	120 122	203 901	5 574
335	Electrical equipment, appliance, & component mfg . . . . .	-	9	5	h	D	D	D	D	D	D	D	10 867
3352	Household appliance mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
33522	Major appliance mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
335224	Household laundry equipment mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg . . . . .	-	4	2	f	D	D	D	D	D	D	D	D
33591	Battery mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	3	6	4	730	26 182	602	1 202	18 585	64 430	97 250	161 912	D
3363	Motor vehicle parts mfg . . . . .	3	5	4	f	D	D	D	D	D	D	D	D
<b>SCIOTO COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>63</b>	<b>16</b>	<b>1 942</b>	<b>55 025</b>	<b>1 426</b>	<b>2 791</b>	<b>34 735</b>	<b>112 454</b>	<b>179 115</b>	<b>290 775</b>	<b>9 809</b>
331	Primary metal mfg . . . . .	-	3	3	530	19 790	416	877	14 991	45 855	59 228	105 414	D
<b>SENECA COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>101</b>	<b>45</b>	<b>6 882</b>	<b>231 230</b>	<b>5 485</b>	<b>11 026</b>	<b>167 051</b>	<b>662 211</b>	<b>449 793</b>	<b>1 124 638</b>	<b>50 062</b>
327	Nonmetallic mineral product mfg . . . . .	-	9	4	f	D	D	D	D	D	D	D	2 538
3271	Clay product & refractory mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	1 882
32711	Pottery, ceramics, & plumbing fixture mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
327111	Vitreous china plumbing fixture & bathroom accessories mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	-	18	9	910	22 926	724	1 421	15 116	39 094	20 285	58 091	2 773
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	-	11	6	f	D	D	D	D	D	D	D	D
33271	Machine shops . . . . .	-	9	4	588	14 715	473	968	10 857	19 168	6 494	24 657	D
332710	Machine shops . . . . .	-	9	4	588	14 715	473	968	10 857	19 168	6 494	24 657	D
333	Machinery mfg . . . . .	-	15	7	1 548	55 308	1 115	2 337	36 155	124 490	79 391	206 324	21 264
3335	Metalworking machinery mfg . . . . .	-	7	2	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery mfg . . . . .	-	7	2	f	D	D	D	D	D	D	D	D
333513	Machine tool (metal forming types) mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	-	3	2	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . . . .	-	2	2	g	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical & electronic equipment mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical & electronic equipment mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>SHELBY COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>136</b>	<b>72</b>	<b>13 278</b>	<b>470 483</b>	<b>10 060</b>	<b>22 073</b>	<b>304 306</b>	<b>1 464 298</b>	<b>3 743 411</b>	<b>5 129 155</b>	<b>107 867</b>
311	Food mfg .....	-	6	5	882	25 086	755	1 406	17 110	85 261	486 776	569 696	18 543
326	Plastics & rubber products mfg .....	-	6	5	891	25 174	820	1 821	22 081	78 563	75 337	152 159	D
3261	Plastics product mfg .....	-	4	4	f	D	D	D	D	D	D	D	D
32616	Plastics bottle mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
326160	Plastics bottle mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	1	7	7	f	D	D	D	D	D	D	D	D
3315	Foundries .....	1	6	6	f	D	D	D	D	D	D	D	1 803
33152	Nonferrous metal foundries .....	1	6	6	f	D	D	D	D	D	D	D	1 803
331524	Aluminum foundries (except die-casting) ..	1	6	6	f	D	D	D	D	D	D	D	1 803
332	Fabricated metal product mfg .....	-	46	16	1 942	61 330	1 583	3 281	45 330	195 034	352 998	555 431	6 629
3323	Architectural & structural metals mfg .....	-	14	8	1 274	38 424	1 028	2 131	28 687	143 030	305 738	458 098	2 538
33232	Ornamental & architectural metal products mfg .....	-	11	8	g	D	D	D	D	D	D	D	D
332321	Metal window & door mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
332322	Sheet metal work mfg .....	-	8	5	f	D	D	D	D	D	D	D	1 325
333	Machinery mfg .....	-	26	17	3 556	135 133	2 137	4 641	58 763	270 972	351 876	628 499	23 918
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg ..	-	2	2	g	D	D	D	D	D	D	D	D
333415	AC & warm air heating & commercial/ industrial refrig equip mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	5	4	647	20 321	486	941	12 559	14 194	63 016	78 626	3 765
3352	Household appliance mfg ..	-	2	2	f	D	D	D	D	D	D	D	D
33522	Major appliance mfg ....	-	2	2	f	D	D	D	D	D	D	D	D
335222	Household refrigerator & home freezer mfg ..	-	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	8	6	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	4	4	h	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine & engine parts mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336312	Gasoline engine & engine parts mfg ....	-	1	1	g	D	D	D	D	D	D	D	D
33636	Motor vehicle seating & interior trim mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating & interior trim mfg ...	-	2	2	f	D	D	D	D	D	D	D	D
<b>STARK COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>629</b>	<b>250</b>	<b>39 352</b>	<b>1 324 060</b>	<b>30 632</b>	<b>61 052</b>	<b>910 391</b>	<b>4 062 702</b>	<b>4 177 757</b>	<b>8 222 473</b>	<b>298 262</b>
311	Food mfg .....	-	35	15	h	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg .....	-	4	1	f	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3115	Dairy product mfg .....	2	8	5	656	19 076	496	1 010	10 919	65 581	133 042	198 027	2 230
31151	Dairy product (except frozen) mfg .....	2	6	5	f	D	D	D	D	D	D	D	D
3116	Meat product mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
31161	Animal slaughtering & processing .....	-	4	2	f	D	D	D	D	D	D	D	D
311612	Meat processed from carcasses .....	-	2	2	f	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg .....	-	8	2	f	D	D	D	D	D	D	D	D
31181	Bread & bakery product mfg .....	-	8	2	f	D	D	D	D	D	D	D	D
316	Leather & allied product mfg ..	-	4	1	f	D	D	D	D	D	D	D	D
3169	Other leather & allied product mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
31699	Other leather & allied product mfg .....	-	2	1	f	D	D	D	D	D	D	D	D



**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>STARK COUNTY, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
322	Paper mfg . . . . .	-	16	12	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg . . . . .	-	14	10	f	D	D	D	D	D	D	D	D
323	Printing & related support activities . . . . .	-	59	15	g	D	D	D	D	D	D	D	D
3231	Printing & related support activities . . . . .	-	59	15	g	D	D	D	D	D	D	D	D
32311	Printing . . . . .	-	54	15	g	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing . . . . .	-	30	9	g	D	D	D	D	D	D	D	D
325	Chemical mfg . . . . .	1	23	11		708	24 084	253	430	6 424	59 606	72 102	132 675
326	Plastics & rubber products mfg . . . . .	-	52	24		3 787	87 776	3 038	5 929	57 991	196 970	301 892	500 538
3261	Plastics product mfg . . . . .	-	39	19	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg . . . . .	-	25	15	g	D	D	D	D	D	D	D	D
326199	All other plastics product mfg . . . . .	-	25	15	g	D	D	D	D	D	D	D	D
3262	Rubber product mfg . . . . .	-	13	5	g	D	D	D	D	D	D	D	D
32629	Other rubber product mfg . . . . .	-	8	4	g	D	D	D	D	D	D	D	D
326299	All other rubber product mfg . . . . .	-	2	2	g	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	1	31	12	g	D	D	D	D	D	D	D	D
3271	Clay product & refractory mfg . . . . .	-	9	8	f	D	D	D	D	D	D	D	D
32712	Clay building material & refractories mfg . . . . .	-	7	6	f	D	D	D	D	D	D	D	D
327122	Ceramic wall & floor tile mfg . . . . .	1	3	3	f	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	-	33	18	i	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg . . . . .	-	5	4	h	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg . . . . .	-	5	4	h	D	D	D	D	D	D	D	D
331111	Iron & steel mills . . . . .	-	4	3	h	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel . . . . .	-	7	3	g	D	D	D	D	D	D	D	D
33122	Rolling & drawing of purchased steel . . . . .	-	5	2	f	D	D	D	D	D	D	D	D
331221	Cold-rolled steel shape mfg . . . . .	-	5	2	f	D	D	D	D	D	D	D	D
3315	Foundries . . . . .	-	18	10		2 721	96 917	2 383	4 898	69 431	222 111	122 163	339 988
33151	Ferrous metal foundries . . . . .	-	10	6		1 493	47 869	1 265	2 552	36 080	88 141	43 488	131 762
331513	Steel foundries (except investment) . . . . .	-	4	2	f	D	D	D	D	D	D	D	681
33152	Nonferrous metal foundries . . . . .	-	8	4		1 228	49 048	1 118	2 346	33 351	133 970	78 675	208 226
331528	Other nonferrous foundries (except die-casting) . . . . .	-	2	1	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	-	151	66	i	D	D	D	D	D	D	D	D
3321	Forging & stamping . . . . .	-	11	10	g	D	D	D	D	D	D	D	D
33211	Forging & stamping . . . . .	-	11	10	g	D	D	D	D	D	D	D	D
332111	Iron & steel forging . . . . .	-	5	5	f	D	D	D	D	D	D	D	D
3322	Cutlery & handtool mfg . . . . .	-	6	3	f	D	D	D	D	D	D	D	D
33221	Cutlery & handtool mfg . . . . .	-	6	3	f	D	D	D	D	D	D	D	D
3324	Boiler, tank, & shipping container mfg . . . . .	-	6	4		597	19 540	479	1 014	14 034	46 997	96 137	136 645
33243	Metal can, box, & other metal container (light gauge) mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
332431	Metal can mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	-	64	22		1 655	50 770	1 207	2 420	31 975	103 365	59 944	159 435
33271	Machine shops . . . . .	-	53	16		977	29 830	716	1 318	17 998	55 758	31 865	83 318
332710	Machine shops . . . . .	-	53	16		977	29 830	716	1 318	17 998	55 758	31 865	83 318
33272	Turned product & screw, nut, & bolt mfg . . . . .	-	11	6		678	20 940	491	1 102	13 977	47 607	28 079	76 117
3328	Coating, engraving, heat treating, & allied activities . . . . .	-	25	10		939	32 001	741	1 263	22 773	43 735	159 988	194 676
33281	Coating, engraving, heat treating, & allied activities . . . . .	-	25	10		939	32 001	741	1 263	22 773	43 735	159 988	194 676

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>STARK COUNTY, OH—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
332	Fabricated metal product mfg—Con.												
3329	Other fabricated metal product mfg.....	-	17	7	2 878	120 166	2 465	5 063	94 941	223 567	177 175	401 032	D
33299	All other fabricated metal product mfg.....	-	16	6	h	D	D	D	D	D	D	D	D
332991	Ball & roller bearing mfg.....	-	1	1	g	D	D	D	D	D	D	D	D
333	Machinery mfg.....	2	82	30	2 147	73 356	1 447	2 885	41 721	163 776	132 255	298 044	8 043
3332	Industrial machinery mfg ..	5	18	9	622	22 542	371	809	10 900	44 285	38 520	82 004	2 642
3335	Metalworking machinery mfg.....	-	34	10	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery mfg.....	-	34	10	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg.....	-	22	7	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg.....	1	15	5	635	16 198	515	1 039	10 939	32 874	16 135	49 142	2 311
335	Electrical equipment, appliance, & component mfg.....	-	16	11	3 871	142 404	2 681	5 331	88 764	436 393	201 243	651 231	29 747
3352	Household appliance mfg..	-	2	2	h	D	D	D	D	D	D	D	D
33521	Small electrical appliance mfg.....	-	2	2	h	D	D	D	D	D	D	D	D
335212	Household vacuum cleaner mfg.....	-	1	1	h	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	3	10	6	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg.....	3	10	6	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg.....	-	24	13	1 524	43 904	1 110	2 002	26 173	86 708	108 251	192 762	11 430
3363	Motor vehicle parts mfg ...	-	16	10	1 268	35 534	902	1 489	20 447	72 188	75 390	145 441	10 694
337	Furniture & related product mfg.....	-	19	4	f	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) mfg.....	-	4	3	f	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) mfg.....	-	4	3	f	D	D	D	D	D	D	D	D
337215	Showcase, partition, shelving, & locker mfg.....	-	3	2	f	D	D	D	D	D	D	D	D
	<b>SUMMIT COUNTY, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>1 091</b>	<b>407</b>	<b>42 312</b>	<b>1 506 070</b>	<b>29 183</b>	<b>59 727</b>	<b>905 505</b>	<b>3 596 150</b>	<b>3 252 934</b>	<b>6 846 737</b>	<b>385 322</b>
311	Food mfg.....	-	35	8	1 674	49 011	841	1 499	19 288	112 194	130 867	242 930	D
3118	Bakeries & tortilla mfg.....	1	24	4	g	D	D	D	D	D	D	D	D
31181	Bread & bakery product mfg.....	-	22	3	f	D	D	D	D	D	D	D	D
311812	Commercial bakeries ..	-	5	2	f	D	D	D	D	D	D	D	D
312	Beverage & tobacco product mfg.....	4	6	4	f	D	D	D	D	D	D	D	D
3121	Beverage mfg.....	4	6	4	f	D	D	D	D	D	D	D	D
322	Paper mfg.....	-	13	9	1 306	51 002	843	1 838	27 782	88 912	151 935	238 631	D
3222	Converted paper product mfg.....	-	12	8	g	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg.....	-	6	4	f	D	D	D	D	D	D	D	D
322222	Coated & laminated paper mfg.....	-	4	3	f	D	D	D	D	D	D	D	D
323	Printing & related support activities.....	1	116	29	2 709	72 919	1 990	3 713	43 813	139 424	81 922	220 919	D
3231	Printing & related support activities.....	1	116	29	2 709	72 919	1 990	3 713	43 813	139 424	81 922	220 919	D
32311	Printing.....	1	101	25	g	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing ..	2	57	14	1 089	33 957	713	1 339	19 649	73 677	28 254	101 504	D
323113	Commercial screen printing.....	-	16	7	g	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>SUMMIT COUNTY, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
325	Chemical mfg .....	2	60	38	3 788	143 788	2 375	5 091	72 133	472 321	476 756	949 364	59 370
3251	Basic chemical mfg .....	4	10	8	f	D	D	D	D	D	D	D	D
3256	Soap, cleaning compound, & toilet preparation mfg ..	—	5	3	g	D	D	D	D	D	D	D	D
32561	Soap & cleaning compound mfg .....	—	4	3	g	D	D	D	D	D	D	D	D
325612	Polish & other sanitation good mfg ..	—	3	2	f	D	D	D	D	D	D	D	D
3259	Other chemical product mfg .....	—	25	15	1 129	45 442	750	1 729	25 385	106 026	148 208	252 485	D
32599	All other chemical product & preparation mfg .....	—	24	15	g	D	D	D	D	D	D	D	D
325991	Custom compounding of purchased resin ...	—	15	11	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	—	113	60	5 664	162 142	4 342	9 218	103 022	400 735	396 142	797 050	44 316
3261	Plastics product mfg .....	1	71	37	3 910	103 545	3 068	6 501	67 544	255 857	239 421	493 940	31 391
32619	Other plastics product mfg .....	—	55	27	h	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	—	53	26	h	D	D	D	D	D	D	D	D
3262	Rubber product mfg .....	—	42	23	1 754	58 597	1 274	2 717	35 478	144 878	156 721	303 110	12 925
32629	Other rubber product mfg .....	—	37	23	1 735	57 990	1 258	2 685	34 971	143 350	154 982	299 837	D
326291	Rubber product mfg for mechanical use .....	—	19	11	1 001	32 466	726	1 569	19 546	88 594	52 161	141 553	5 981
326299	All other rubber product mfg .....	—	18	12	734	25 524	532	1 116	15 425	54 756	102 821	158 284	D
331	Primary metal mfg .....	—	17	12	1 112	32 956	819	1 572	21 524	97 637	73 853	171 497	D
3315	Foundries .....	—	13	8	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	—	7	5	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	—	285	85	7 514	243 497	5 709	11 665	153 523	517 403	330 454	838 363	32 350
3321	Forging & stamping .....	—	21	8	f	D	D	D	D	D	D	D	D
33211	Forging & stamping .....	—	21	8	f	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg .....	—	38	14	967	32 605	702	1 472	19 715	65 698	73 796	139 650	3 289
33231	Plate work & fabricated structural product mfg ..	—	16	6	569	20 139	416	891	12 154	42 654	55 584	98 456	2 514
3324	Boiler, tank, & shipping container mfg .....	—	5	4	f	D	D	D	D	D	D	D	D
33242	Metal tank (heavy gauge) mfg .....	—	3	3	f	D	D	D	D	D	D	D	D
332420	Metal tank (heavy gauge) mfg .....	—	3	3	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	1	143	33	3 109	86 163	2 559	5 074	60 458	184 122	79 474	262 421	12 501
33271	Machine shops .....	—	128	28	2 779	75 132	2 315	4 545	52 988	147 489	67 421	214 893	11 075
332710	Machine shops .....	—	128	28	2 779	75 132	2 315	4 545	52 988	147 489	67 421	214 893	11 075
3328	Coating, engraving, heat treating, & allied activities ..	2	35	10	686	22 269	541	1 131	14 699	44 357	16 432	60 876	D
33281	Coating, engraving, heat treating, & allied activities .....	2	35	10	686	22 269	541	1 131	14 699	44 357	16 432	60 876	D
3329	Other fabricated metal product mfg .....	—	26	9	623	21 814	457	1 044	14 380	68 201	38 821	101 364	4 535
333	Machinery mfg .....	3	176	77	6 526	254 779	3 785	7 815	122 000	582 697	377 707	956 367	40 654
3332	Industrial machinery mfg ..	3	38	18	g	D	D	D	D	D	D	D	D
33322	Plastics & rubber industry machinery mfg .....	3	17	11	661	27 299	348	805	12 080	54 909	67 898	124 171	D
333220	Plastics & rubber industry machinery mfg .....	3	17	11	661	27 299	348	805	12 080	54 909	67 898	124 171	D
33329	Other industrial machinery mfg .....	2	19	7	f	D	D	D	D	D	D	D	D
3333	Commercial & service industry machinery mfg ..	9	3	2	g	D	D	D	D	D	D	D	D
33331	Commercial & service industry machinery mfg .....	9	3	2	g	D	D	D	D	D	D	D	D
333319	Other commercial & service industry machinery mfg .....	9	2	2	g	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>SUMMIT COUNTY, OH</b> —Con.												
<b>31-33</b>	<b>Manufacturing—</b> Con.												
333	Machinery mfg—Con.												
3335	Metalworking machinery mfg .....	—	97	41	2 805	101 569	2 209	4 467	72 438	227 321	131 298	353 149	24 162
33351	Metalworking machinery mfg .....	—	97	41	2 805	101 569	2 209	4 467	72 438	227 321	131 298	353 149	24 162
333511	Industrial mold mfg ...	—	50	26	1 684	63 950	1 347	2 897	45 475	114 101	53 059	163 825	15 876
333515	Cutting tool & machine tool accessory mfg ..	—	15	7	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg .....	1	22	8	f	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg .....	—	14	4	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	—	36	19	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg .....	—	12	9	f	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg .....	—	12	9	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	—	22	10	899	29 411	479	898	9 333	73 442	60 302	134 596	D
33451	Navigational, measuring, medical, & control instruments mfg .....	—	22	10	899	29 411	479	898	9 333	73 442	60 302	134 596	D
336	Transportation equipment mfg .....	—	32	19	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	—	26	16	h	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	—	9	5	2 844	210 351	2 555	5 624	184 769	257 356	313 060	574 139	D
336370	Motor vehicle metal stamping .....	—	9	5	2 844	210 351	2 555	5 624	184 769	257 356	313 060	574 139	D
33639	Other motor vehicle parts mfg .....	—	5	4	648	24 530	508	1 087	16 518	61 712	56 814	118 670	D
336399	All other motor vehicle parts mfg .....	—	5	4	648	24 530	508	1 087	16 518	61 712	56 814	118 670	D
3364	Aerospace product & parts mfg .....	—	4	2	g	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	—	4	2	g	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg .....	—	4	2	g	D	D	D	D	D	D	D	D
337	Furniture & related product mfg .....	—	25	3	f	D	D	D	D	D	D	D	3 358
339	Miscellaneous mfg .....	—	74	19	2 445	64 263	1 605	3 231	44 076	277 189	199 284	487 614	13 059
3399	Other miscellaneous mfg ...	—	44	12	g	D	D	D	D	D	D	D	11 302
33993	Doll, toy, & game mfg ...	—	5	1	g	D	D	D	D	D	D	D	D
339932	Game, toy, & children's vehicle mfg .....	—	4	1	g	D	D	D	D	D	D	D	D
	<b>TRUMBULL COUNTY, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>282</b>	<b>116</b>	<b>34 101</b>	<b>1 622 107</b>	<b>27 999</b>	<b>58 483</b>	<b>1 261 531</b>	<b>3 663 557</b>	<b>7 535 668</b>	<b>11 235 598</b>	<b>183 151</b>
326	Plastics & rubber products mfg .....	1	20	11	g	D	D	D	D	D	D	D	5 617
3261	Plastics product mfg .....	2	12	7	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	3	8	5	f	D	D	D	D	D	D	D	3 362
326199	All other plastics product mfg .....	3	8	5	f	D	D	D	D	D	D	D	3 362
3262	Rubber product mfg .....	—	8	4	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	2	17	7	f	D	D	D	D	D	D	D	3 559

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>TRUMBULL COUNTY, OH—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
331	Primary metal mfg .....	-	21	16	6 261	302 883	4 755	10 663	214 287	791 990	1 170 848	1 940 518	73 350
3311	Iron & steel mills & ferroalloy mfg .....	-	4	4	3 749	191 471	2 876	6 307	137 252	446 454	597 735	1 032 029	D
33111	Iron & steel mills & ferroalloy mfg .....	-	4	4	3 749	191 471	2 876	6 307	137 252	446 454	597 735	1 032 029	D
331111	Iron & steel mills .....	-	4	4	3 749	191 471	2 876	6 307	137 252	446 454	597 735	1 032 029	D
3312	Steel product mfg from purchased steel .....	-	7	5	f	D	D	D	D	D	D	D	D
33122	Rolling & drawing of purchased steel .....	-	3	2	f	D	D	D	D	D	D	D	D
331221	Cold-rolled steel shape mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
3313	Alumina & aluminum production & processing ..	-	4	4	f	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing .....	-	4	4	f	D	D	D	D	D	D	D	D
331316	Aluminum extruded product mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing .....	-	2	1	f	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying ...	-	2	1	f	D	D	D	D	D	D	D	D
331491	Other nonferrous metal rolling, drawing, & extruding .....	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	83	37	3 046	95 941	2 403	5 054	66 605	265 225	281 110	541 710	12 675
3323	Architectural & structural metals mfg .....	-	24	16	1 107	36 782	861	1 816	24 870	131 715	143 299	272 401	4 853
33231	Plate work & fabricated structural product mfg ...	-	15	10	663	22 976	530	1 100	15 479	82 652	57 150	137 299	3 316
332312	Fabricated structural metal mfg .....	-	10	8	585	20 657	469	981	13 806	77 128	53 377	128 103	2 959
3324	Boiler, tank, & shipping container mfg .....	-	6	5	571	18 021	482	1 100	13 507	41 355	61 756	104 446	2 549
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	33	7	611	18 914	501	1 028	13 168	37 484	21 568	58 839	1 971
333	Machinery mfg .....	2	30	12	f	D	D	D	D	D	D	D	3 763
335	Electrical equipment, appliance, & component mfg .....	-	6	3	718	29 626	653	1 492	26 612	165 316	57 499	223 445	D
3351	Electric lighting equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33511	Electric lamp bulb & part mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	17	13	j	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg .....	-	2	1	i	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg .....	-	1	1	i	D	D	D	D	D	D	D	D
336111	Automobile mfg .....	-	1	1	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	11	10	j	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical & electronic equipment mfg .....	-	3	3	i	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical & electronic equipment mfg .....	-	3	3	i	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	4	4	h	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	-	4	4	h	D	D	D	D	D	D	D	D

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>TUSCARAWAS COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>1</b>	<b>226</b>	<b>91</b>	<b>9 823</b>	<b>304 121</b>	<b>7 495</b>	<b>15 008</b>	<b>198 876</b>	<b>896 110</b>	<b>1 141 463</b>	<b>2 054 557</b>	<b>50 101</b>
321	Wood product mfg . . . . .	—	29	9	1 043	28 884	749	1 552	17 763	60 508	103 464	164 145	3 756
3219	Other wood product mfg . . .	—	22	6	610	17 583	521	1 064	12 484	34 370	49 950	84 800	1 847
325	Chemical mfg . . . . .	3	11	8	611	24 081	418	948	15 257	159 213	151 270	309 405	5 757
326	Plastics & rubber products mfg . . . . .	1	24	17	1 820	43 750	1 481	2 840	30 371	102 950	101 485	201 061	7 566
3261	Plastics product mfg . . . . .	—	15	12	g	D	D	D	D	D	D	D	4 289
32619	Other plastics product mfg . . . . .	—	7	5	793	15 264	678	1 317	11 325	33 831	37 141	68 487	1 961
326199	All other plastics product mfg . . . . .	—	6	5	f	D	D	D	D	D	D	D	D
3262	Rubber product mfg . . . . .	3	9	5	f	D	D	D	D	D	D	D	3 277
32629	Other rubber product mfg . . . . .	2	5	4	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	2	16	10	648	17 233	537	1 114	13 080	38 350	29 505	67 736	5 420
3271	Clay product & refractory mfg . . . . .	1	9	9	574	15 397	476	985	11 586	34 473	22 768	57 141	D
32712	Clay building material & refractories mfg . . . . .	1	9	9	574	15 397	476	985	11 586	34 473	22 768	57 141	D
331	Primary metal mfg . . . . .	—	7	5	806	30 850	652	1 510	20 191	144 420	276 207	428 901	10 880
3313	Alumina & aluminum production & processing . . . . .	—	3	3	f	D	D	D	D	D	D	D	D
33131	Alumina & aluminum production & processing . . . . .	—	3	3	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	—	38	12	1 170	35 654	968	1 914	25 375	88 841	184 216	285 133	3 330
333	Machinery mfg . . . . .	2	18	8	1 585	65 081	1 029	2 133	39 549	144 903	139 717	283 624	9 266
3331	Agriculture, construction, & mining machinery mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
33312	Construction machinery mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
333120	Construction machinery mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg . . . . .	1	15	4	598	21 286	419	780	10 405	70 808	22 980	95 059	795
<b>UNION COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>—</b>	<b>40</b>	<b>18</b>	<b>8 462</b>	<b>370 693</b>	<b>6 799</b>	<b>14 794</b>	<b>288 575</b>	<b>2 696 856</b>	<b>4 815 865</b>	<b>7 467 187</b>	<b>D</b>
325	Chemical mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
3253	Pesticide, fertilizer, & other agricultural chemical mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
32531	Fertilizer mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
325314	Fertilizer (mixing only) mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg . . . . .	4	6	2	f	D	D	D	D	D	D	D	33
3339	Other general-purpose machinery mfg . . . . .	4	3	2	f	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg . . . . .	4	3	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	—	3	3	i	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg . . . . .	—	1	1	i	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg . . . . .	—	1	1	i	D	D	D	D	D	D	D	D
336111	Automobile mfg . . . . .	—	1	1	i	D	D	D	D	D	D	D	D
3369	Other transportation equipment mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
33699	Other transportation equipment mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
336999	All other transportation equipment mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>VAN WERT COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>50</b>	<b>23</b>	<b>4 553</b>	<b>140 777</b>	<b>3 853</b>	<b>7 920</b>	<b>112 768</b>	<b>420 516</b>	<b>524 312</b>	<b>942 100</b>	<b>26 117</b>
332	Fabricated metal product mfg .....	-	10	7	1 823	59 784	1 474	2 588	44 006	203 803	180 668	380 316	14 038
3321	Forging & stamping .....	-	3	3	603	21 150	443	879	13 931	43 587	37 463	82 334	D
33211	Forging & stamping .....	-	3	3	603	21 150	443	879	13 931	43 587	37 463	82 334	D
3329	Other fabricated metal product mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33291	Metal valve mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
332912	Fluid power valve & hose fitting mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	4	1	f	D	D	D	D	D	D	D	628
3363	Motor vehicle parts mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg ..	-	2	1	f	D	D	D	D	D	D	D	D
33999	All other miscellaneous mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
339991	Gasket, packing, & sealing device mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
<b>VINTON COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>17</b>	<b>10</b>	<b>624</b>	<b>15 406</b>	<b>460</b>	<b>934</b>	<b>9 977</b>	<b>34 276</b>	<b>57 587</b>	<b>91 210</b>	<b>2 233</b>
<b>WARREN COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>198</b>	<b>92</b>	<b>12 145</b>	<b>407 289</b>	<b>8 177</b>	<b>17 009</b>	<b>225 425</b>	<b>875 124</b>	<b>1 326 147</b>	<b>2 186 399</b>	<b>145 868</b>
311	Food mfg .....	-	5	3	f	D	D	D	D	D	D	D	D
322	Paper mfg .....	-	15	10	994	31 300	805	1 791	22 479	83 853	125 501	205 667	D
3222	Converted paper product mfg .....	-	13	8	f	D	D	D	D	D	D	D	D
32221	Paperboard container mfg .....	-	6	4	f	D	D	D	D	D	D	D	D
323	Printing & related support activities.....	4	18	6	713	22 895	521	982	13 541	43 697	39 181	83 583	3 964
3231	Printing & related support activities.....	4	18	6	713	22 895	521	982	13 541	43 697	39 181	83 583	3 964
32311	Printing .....	4	16	6	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	5	15	9	1 355	37 219	945	1 868	20 341	79 277	87 174	167 008	13 545
3261	Plastics product mfg .....	5	14	9	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	7	9	5	831	19 875	684	1 328	14 144	40 737	52 595	93 191	D
326199	All other plastics product mfg .....	7	9	5	831	19 875	684	1 328	14 144	40 737	52 595	93 191	D
332	Fabricated metal product mfg .....	-	46	21	2 068	58 249	1 434	2 967	36 767	143 409	130 962	275 207	16 428
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	22	8	887	22 798	574	1 191	14 415	48 522	27 178	75 707	1 953
33272	Turned product & screw, nut, & bolt mfg .....	-	5	4	670	16 553	404	879	10 082	36 123	22 462	58 558	1 015
332721	Precision turned product mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	16	8	g	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg .....	-	5	2	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery mfg .....	-	5	2	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
<b>WARREN COUNTY, OH</b>														
<b>—Con.</b>														
<b>31-33</b>	<b>Manufacturing—</b>													
	<b>Con.</b>													
334	Computer & electronic product mfg .....	-	7	5	g	D	D	D	D	D	D	D	25 782	
3342	Communications equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D	
33422	Radio & TV broadcasting & wireless communications equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D	
334220	Radio & TV broadcasting & wireless communications equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D	
3344	Semiconductor & other electronic component mfg .....	-	1	1	f	D	D	D	D	D	D	D	D	
33441	Semiconductor & other electronic component mfg .....	-	1	1	f	D	D	D	D	D	D	D	D	
334413	Semiconductor & related device mfg ...	-	1	1	f	D	D	D	D	D	D	D	D	
335	Electrical equipment, appliance, & component mfg .....	-	2	2	f	D	D	D	D	D	D	D	D	
3353	Electrical equipment mfg ..	-	2	2	f	D	D	D	D	D	D	D	D	
33531	Electrical equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D	
335314	Relay & industrial control mfg .....	-	1	1	f	D	D	D	D	D	D	D	D	
336	Transportation equipment mfg .....	-	12	9	g	D	D	D	D	D	D	D	D	
3363	Motor vehicle parts mfg ...	-	8	7	g	D	D	D	D	D	D	D	D	
33632	Motor vehicle electrical & electronic equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D	
336322	Other motor vehicle electrical & electronic equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D	
<b>WASHINGTON COUNTY, OH</b>														
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>104</b>	<b>43</b>		<b>5 242</b>	<b>187 834</b>	<b>3 591</b>	<b>7 496</b>	<b>113 645</b>	<b>932 472</b>	<b>962 418</b>	<b>1 900 923</b>	<b>106 014</b>
325	Chemical mfg .....	-	9	8	g	D	D	D	D	D	D	D	D	
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg .....	-	4	4	f	D	D	D	D	D	D	D	D	
32521	Resin & synthetic rubber mfg .....	-	4	4	f	D	D	D	D	D	D	D	D	
325211	Plastics material & resin mfg .....	-	3	3	f	D	D	D	D	D	D	D	D	
331	Primary metal mfg .....	-	4	4	f	D	D	D	D	D	D	D	D	
3311	Iron & steel mills & ferroalloy mfg .....	-	3	3	f	D	D	D	D	D	D	D	D	
33111	Iron & steel mills & ferroalloy mfg .....	-	3	3	f	D	D	D	D	D	D	D	D	
331112	Electrometallurgical ferroalloy product mfg .....	-	3	3	f	D	D	D	D	D	D	D	D	
339	Miscellaneous mfg .....	-	11	5	f	D	D	D	D	D	D	D	D	
<b>WAYNE COUNTY, OH</b>														
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>252</b>	<b>103</b>		<b>16 172</b>	<b>521 486</b>	<b>11 720</b>	<b>24 799</b>	<b>333 202</b>	<b>1 607 780</b>	<b>1 463 498</b>	<b>3 105 047</b>	<b>122 746</b>
311	Food mfg .....	-	22	8		1 601	54 618	1 152	2 756	35 763	323 649	251 570	573 099	13 354
321	Wood product mfg .....	-	35	12		836	18 965	647	1 215	12 530	42 616	44 615	87 555	1 663
3219	Other wood product mfg ...	-	28	10		668	14 063	552	1 031	10 319	29 684	32 609	62 594	1 184
322	Paper mfg .....	-	7	6		726	28 872	575	1 283	20 245	69 960	104 053	173 388	2 788
326	Plastics & rubber products mfg .....	-	18	10		2 524	86 773	1 659	4 075	55 524	275 302	254 041	542 653	30 586
3261	Plastics product mfg .....	-	12	7		2 250	80 704	1 424	3 525	52 076	258 607	245 027	516 947	29 995
32619	Other plastics product mfg .....	-	7	4		2 049	76 482	1 304	3 316	49 808	247 860	229 560	492 304	D
326199	All other plastics product mfg .....	-	5	4	g		D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	1	12	9		704	18 829	590	1 157	13 502	42 485	25 032	67 146	3 490



**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>WAYNE COUNTY, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
331	Primary metal mfg . . . . .	—	7	5	1 038	39 473	862	2 092	30 053	114 622	109 058	226 230	7 064
3315	Foundries . . . . .	—	4	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	—	37	11	1 351	38 426	1 024	2 131	26 254	74 898	90 878	176 761	5 938
3323	Architectural & structural metals mfg . . . . .	—	8	4	764	20 778	580	1 225	14 794	21 462	48 729	81 346	D
33232	Ornamental & architectural metal products mfg . . . . .	—	6	3	f	D	D	D	D	D	D	D	D
333	Machinery mfg . . . . .	—	28	11	1 582	57 221	1 060	2 188	35 177	144 602	173 707	314 258	6 553
3339	Other general-purpose machinery mfg . . . . .	—	9	4	f	D	D	D	D	D	D	D	3 497
33399	All other general-purpose machinery mfg . . . . .	—	7	4	f	D	D	D	D	D	D	D	3 497
333996	Fluid power pump & motor mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	—	15	11	3 367	93 904	2 590	4 906	62 579	307 598	262 808	583 761	38 314
3362	Motor vehicle body & trailer mfg . . . . .	—	5	3	1 002	17 435	738	1 064	10 673	23 736	102 670	141 018	D
33621	Motor vehicle body & trailer mfg . . . . .	—	5	3	1 002	17 435	738	1 064	10 673	23 736	102 670	141 018	D
336211	Motor vehicle body mfg . . . . .	—	4	3	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . . . .	—	10	8	2 365	76 469	1 852	3 842	51 906	283 862	160 138	442 743	D
33635	Motor vehicle transmission & power train parts mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping . . . . .	—	2	2	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping . . . . .	—	2	2	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg . . . . .	—	5	3	553	15 309	461	716	11 564	37 773	23 655	60 509	D
336399	All other motor vehicle parts mfg . . . . .	—	5	3	553	15 309	461	716	11 564	37 773	23 655	60 509	D
339	Miscellaneous mfg . . . . .	—	14	4	807	26 314	502	953	13 015	63 334	40 703	103 424	2 882
3399	Other miscellaneous mfg . . . . .	—	10	3	f	D	D	D	D	D	D	D	D
33999	All other miscellaneous mfg . . . . .	—	5	3	f	D	D	D	D	D	D	D	D
339994	Broom, brush, & mop mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
	<b>WILLIAMS COUNTY, OH</b>												
<b>31-33</b>	<b>Manufacturing . . . . .</b>	—	<b>131</b>	<b>67</b>	<b>9 132</b>	<b>267 061</b>	<b>6 835</b>	<b>13 044</b>	<b>170 296</b>	<b>849 669</b>	<b>981 509</b>	<b>1 831 507</b>	<b>37 534</b>
311	Food mfg . . . . .	2	5	3	545	15 794	348	658	6 887	49 787	36 218	85 137	D
326	Plastics & rubber products mfg . . . . .	—	15	12	1 820	49 379	1 350	2 576	31 575	141 097	144 868	285 591	7 083
3261	Plastics product mfg . . . . .	—	13	10	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg . . . . .	—	11	9	g	D	D	D	D	D	D	D	5 159
326199	All other plastics product mfg . . . . .	—	11	9	g	D	D	D	D	D	D	D	5 159
332	Fabricated metal product mfg . . . . .	1	38	13	1 107	31 646	871	1 660	20 186	65 315	66 855	133 232	8 779
333	Machinery mfg . . . . .	—	21	11	1 674	55 776	1 163	2 231	34 332	159 698	120 034	283 061	2 834
3339	Other general-purpose machinery mfg . . . . .	—	3	2	f	D	D	D	D	D	D	D	D
33391	Pump & compressor mfg . . . . .	—	2	2	f	D	D	D	D	D	D	D	D
333911	Pump & pumping equipment mfg . . . . .	—	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	—	10	8	1 383	38 718	1 164	2 273	28 313	115 034	145 961	255 168	7 769
3363	Motor vehicle parts mfg . . . . .	—	9	7	g	D	D	D	D	D	D	D	D
33633	Motor vehicle steering & suspension component (except spring) mfg . . . . .	—	4	3	f	D	D	D	D	D	D	D	4 906
336330	Motor vehicle steering & suspension component (except spring) mfg . . . . .	—	4	3	f	D	D	D	D	D	D	D	4 906

**Table 3. Industry Statistics for Counties: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>WOOD COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	—	<b>192</b>	<b>98</b>	<b>13 357</b>	<b>512 718</b>	<b>10 085</b>	<b>21 345</b>	<b>357 966</b>	<b>1 182 564</b>	<b>1 433 718</b>	<b>2 602 349</b>	<b>100 518</b>
311	Food mfg . . . . .	—	12	5	g	D	D	D	D	D	D	D	D
3119	Other food mfg . . . . .	—	3	1	f	D	D	D	D	D	D	D	D
31199	All other food mfg . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
311999	All other miscellaneous food mfg . . . . .	—	1	1	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	—	18	15	3 157	99 224	2 451	4 705	67 417	259 970	173 508	425 182	18 362
3261	Plastics product mfg . . . . .	—	12	9	1 551	45 771	1 255	2 454	31 547	95 603	97 277	192 799	D
32619	Other plastics product mfg . . . . .	—	11	8	g	D	D	D	D	D	D	D	D
326199	All other plastics product mfg . . . . .	—	11	8	g	D	D	D	D	D	D	D	D
3262	Rubber product mfg . . . . .	—	6	6	1 606	53 453	1 196	2 251	35 870	164 367	76 231	232 383	D
32629	Other rubber product mfg . . . . .	—	6	6	1 606	53 453	1 196	2 251	35 870	164 367	76 231	232 383	D
326291	Rubber product mfg for mechanical use . . . . .	—	5	5	g	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg . . . . .	—	7	5	854	35 396	663	1 513	26 103	156 231	62 216	213 140	8 738
3272	Glass & glass product mfg . . . . .	—	3	3	749	32 724	562	1 348	23 784	149 185	57 440	201 306	D
32721	Glass & glass product mfg . . . . .	—	3	3	749	32 724	562	1 348	23 784	149 185	57 440	201 306	D
332	Fabricated metal product mfg . . . . .	—	40	21	1 939	66 176	1 493	3 252	47 942	195 111	188 743	384 176	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	—	15	7	f	D	D	D	D	D	D	D	D
33271	Machine shops . . . . .	—	15	7	f	D	D	D	D	D	D	D	D
332710	Machine shops . . . . .	—	15	7	f	D	D	D	D	D	D	D	D
333	Machinery mfg . . . . .	—	22	11	1 023	40 741	484	1 028	15 192	75 689	93 924	170 129	D
3339	Other general-purpose machinery mfg . . . . .	—	10	6	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	—	10	9	2 802	161 048	2 434	5 491	134 055	212 675	302 208	517 592	D
3363	Motor vehicle parts mfg . . . . .	—	10	9	2 802	161 048	2 434	5 491	134 055	212 675	302 208	517 592	D
33633	Motor vehicle steering & suspension component (except spring) mfg . . . . .	—	1	1	g	D	D	D	D	D	D	D	D
336330	Motor vehicle steering & suspension component (except spring) mfg . . . . .	—	1	1	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg . . . . .	—	4	4	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg . . . . .	—	4	4	f	D	D	D	D	D	D	D	D
<b>WYANDOT COUNTY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>1</b>	<b>53</b>	<b>25</b>	<b>4 188</b>	<b>112 125</b>	<b>3 488</b>	<b>7 193</b>	<b>83 921</b>	<b>281 652</b>	<b>297 767</b>	<b>573 070</b>	<b>23 958</b>
326	Plastics & rubber products mfg . . . . .	4	12	9	1 869	47 080	1 603	3 243	37 073	109 775	110 255	220 713	15 629
3261	Plastics product mfg . . . . .	4	9	6	1 713	42 480	1 475	3 027	34 130	105 824	100 411	207 202	D
32619	Other plastics product mfg . . . . .	4	6	5	1 575	39 538	1 355	2 798	31 655	100 120	85 100	186 171	10 476
326199	All other plastics product mfg . . . . .	4	6	5	1 575	39 538	1 355	2 798	31 655	100 120	85 100	186 171	10 476
327	Nonmetallic mineral product mfg . . . . .	—	10	2	694	21 318	528	1 243	14 867	52 579	43 693	95 819	1 705
3272	Glass & glass product mfg . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
327215	Glass product mfg made of purchased glass . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	—	3	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . . . .	—	3	2	f	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system mfg . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system mfg . . . . .	—	2	1	f	D	D	D	D	D	D	D	D

<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>Industries with 500 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 500 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: 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.

**Table 4. Industry Statistics for Places: 1997**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>AKRON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>2</b>	<b>370</b>	<b>123</b>	<b>12 822</b>	<b>451 802</b>	<b>7 762</b>	<b>16 266</b>	<b>228 291</b>	<b>1 129 973</b>	<b>890 593</b>	<b>2 020 361</b>	<b>91 664</b>
311	Food mfg .....	-	15	2	796	28 556	175	260	4 982	45 764	26 384	72 122	1 132
3118	Bakeries & tortilla mfg .....	-	10	1	f	D	D	D	D	D	D	D	D
31181	Bread & bakery product mfg .....	-	10	1	f	D	D	D	D	D	D	D	D
311812	Commercial bakeries ..	-	2	1	f	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	1	49	11	1 019	29 638	728	1 400	19 524	57 758	28 336	85 940	3 456
3231	Printing & related support activities .....	1	49	11	1 019	29 638	728	1 400	19 524	57 758	28 336	85 940	3 456
32311	Printing .....	2	40	8	852	25 765	607	1 194	17 201	51 149	26 584	77 590	2 334
325	Chemical mfg .....	3	21	15	1 248	48 990	802	1 768	28 976	159 936	184 670	346 859	12 887
3259	Other chemical product mfg .....	-	8	7	511	19 873	338	827	13 065	46 202	76 334	122 792	1 642
32599	All other chemical product & preparation mfg .....	-	7	7	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	-	32	16	1 853	54 086	1 368	2 938	33 471	138 012	153 263	290 240	26 386
3261	Plastics product mfg .....	-	20	9	1 478	40 549	1 133	2 499	26 639	109 024	111 810	218 360	D
32619	Other plastics product mfg .....	-	17	8	g	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	15	7	978	27 049	765	1 722	17 881	75 656	66 655	141 111	12 680
332	Fabricated metal product mfg .....	1	101	26	1 874	61 168	1 417	3 021	41 734	119 765	83 374	203 572	8 209
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	2	44	8	594	16 631	440	935	11 959	31 325	14 629	45 296	2 219
333	Machinery mfg .....	5	60	26	2 811	118 760	1 236	2 605	40 952	264 084	149 985	411 375	11 525
3332	Industrial machinery mfg ..	2	18	8	527	23 167	270	594	9 662	50 166	44 028	92 653	2 447
3333	Commercial & service industry machinery mfg ..	9	2	1	g	D	D	D	D	D	D	D	D
33331	Commercial & service industry machinery mfg .....	9	2	1	g	D	D	D	D	D	D	D	D
333319	Other commercial & service industry machinery mfg .....	9	1	1	g	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg .....	-	26	13	716	24 950	563	1 229	18 418	44 172	30 643	73 629	2 712
33351	Metalworking machinery mfg .....	-	26	13	716	24 950	563	1 229	18 418	44 172	30 643	73 629	2 712
333511	Industrial mold mfg ...	-	14	9	525	18 330	412	940	13 691	34 360	23 633	56 920	1 928
336	Transportation equipment mfg .....	-	10	7	1 494	65 227	927	2 008	33 881	244 779	148 106	391 280	16 049
3363	Motor vehicle parts mfg ...	-	8	6	f	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
<b>ALLIANCE, OH *</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>52</b>	<b>20</b>	<b>2 897</b>	<b>88 760</b>	<b>2 252</b>	<b>4 550</b>	<b>61 202</b>	<b>208 454</b>	<b>176 323</b>	<b>379 210</b>	<b>8 927</b>
331	Primary metal mfg .....	-	5	2	g	D	D	D	D	D	D	D	D
3315	Foundries .....	-	1	1	f	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries ..	-	1	1	f	D	D	D	D	D	D	D	D
331513	Steel foundries (except investment) .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>AMHERST, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>4</b>	<b>1</b>	<b>f</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
333	Machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
333993	Packaging machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>ARCHBOLD, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>25</b>	<b>16</b>	<b>5 061</b>	<b>161 343</b>	<b>4 152</b>	<b>8 592</b>	<b>89 508</b>	<b>523 789</b>	<b>519 739</b>	<b>1 043 982</b>	<b>42 576</b>
311	Food mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel .....	-	2	2	f	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel .....	-	2	2	f	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel .....	-	2	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	5	3	519	16 927	416	849	10 924	41 971	47 630	88 899	1 378
337	Furniture & related product mfg .....	-	3	3	h	D	D	D	D	D	D	D	D
3371	Household & institutional furniture & kitchen cabinet mfg .....	-	3	3	h	D	D	D	D	D	D	D	D
33712	Household & institutional furniture mfg .....	-	3	3	h	D	D	D	D	D	D	D	D
337122	Nonupholstered wood household furniture mfg .....	-	2	2	h	D	D	D	D	D	D	D	D
<b>ASHLAND, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>53</b>	<b>30</b>	<b>4 813</b>	<b>153 856</b>	<b>3 721</b>	<b>7 147</b>	<b>100 886</b>	<b>378 066</b>	<b>429 665</b>	<b>808 467</b>	<b>35 301</b>
322	Paper mfg .....	-	5	3	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	-	5	3	f	D	D	D	D	D	D	D	D
32221	Paperboard container mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	-	7	6	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	7	4	1 015	33 951	764	1 476	22 900	57 998	105 713	165 049	D
3339	Other general-purpose machinery mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
33391	Pump & compressor mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
333911	Pump & pumping equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	1	3	3	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg ..	1	3	3	f	D	D	D	D	D	D	D	D
33999	All other miscellaneous mfg .....	1	2	2	f	D	D	D	D	D	D	D	D
339991	Gasket, packing, & sealing device mfg...	1	2	2	f	D	D	D	D	D	D	D	D
<b>ASHTABULA, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>33</b>	<b>18</b>	<b>2 212</b>	<b>72 001</b>	<b>1 669</b>	<b>3 566</b>	<b>47 774</b>	<b>166 562</b>	<b>141 207</b>	<b>308 228</b>	<b>10 377</b>
326	Plastics & rubber products mfg .....	-	7	7	1 297	37 366	1 086	2 245	27 308	77 065	75 700	151 708	D
3261	Plastics product mfg .....	-	6	6	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	3	3	f	D	D	D	D	D	D	D	3 013
326199	All other plastics product mfg .....	-	3	3	f	D	D	D	D	D	D	D	3 013
<b>ATHENS, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>17</b>	<b>5</b>	<b>779</b>	<b>19 372</b>	<b>633</b>	<b>1 444</b>	<b>15 485</b>	<b>59 591</b>	<b>62 440</b>	<b>121 847</b>	<b>1 882</b>
<b>AURORA, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>27</b>	<b>16</b>	<b>1 669</b>	<b>64 578</b>	<b>1 126</b>	<b>2 359</b>	<b>36 167</b>	<b>157 307</b>	<b>131 410</b>	<b>301 043</b>	<b>9 193</b>
326	Plastics & rubber products mfg .....	-	8	7	546	17 666	429	889	12 538	47 209	35 396	82 752	3 266
3261	Plastics product mfg .....	-	8	7	546	17 666	429	889	12 538	47 209	35 396	82 752	3 266
<b>AVON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>17</b>	<b>8</b>	<b>778</b>	<b>30 074</b>	<b>557</b>	<b>1 108</b>	<b>17 148</b>	<b>61 391</b>	<b>53 827</b>	<b>115 062</b>	<b>D</b>

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>AVON LAKE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>24</b>	<b>17</b>	<b>4 403</b>	<b>221 750</b>	<b>3 614</b>	<b>7 129</b>	<b>175 462</b>	<b>S</b>	<b>S</b>	<b>1 821 670</b>	<b>163 276</b>
325	Chemical mfg .....	1	4	4	573	31 179	277	684	16 013	149 987	149 138	297 615	D
336	Transportation equipment mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
<b>BARBERTON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>77</b>	<b>31</b>	<b>4 140</b>	<b>122 501</b>	<b>3 241</b>	<b>6 535</b>	<b>77 945</b>	<b>233 165</b>	<b>302 839</b>	<b>535 491</b>	<b>15 619</b>
326	Plastics & rubber products mfg .....	-	14	7	559	17 783	416	897	11 698	35 252	76 396	112 209	1 750
332	Fabricated metal product mfg .....	-	23	10	2 314	69 432	1 836	3 628	43 016	129 081	81 712	209 607	9 068
3324	Boiler, tank, & shipping container mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
33242	Metal tank (heavy gauge) mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
332420	Metal tank (heavy gauge) mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	13	6	1 409	31 583	1 289	2 570	25 459	64 297	34 787	98 388	6 227
33271	Machine shops .....	-	13	6	1 409	31 583	1 289	2 570	25 459	64 297	34 787	98 388	6 227
332710	Machine shops .....	-	13	6	1 409	31 583	1 289	2 570	25 459	64 297	34 787	98 388	6 227
<b>BEAVERCREEK, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>31</b>	<b>9</b>	<b>826</b>	<b>31 396</b>	<b>446</b>	<b>982</b>	<b>12 047</b>	<b>76 333</b>	<b>91 242</b>	<b>167 723</b>	<b>8 510</b>
<b>BEDFORD, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>41</b>	<b>9</b>	<b>951</b>	<b>32 143</b>	<b>682</b>	<b>1 432</b>	<b>21 698</b>	<b>122 475</b>	<b>76 494</b>	<b>199 241</b>	<b>16 785</b>
<b>BEDFORD HEIGHTS, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>54</b>	<b>24</b>	<b>2 181</b>	<b>72 540</b>	<b>1 491</b>	<b>3 084</b>	<b>43 069</b>	<b>208 613</b>	<b>201 093</b>	<b>410 174</b>	<b>7 758</b>
331	Primary metal mfg .....	-	3	3	543	19 262	382	833	13 752	54 041	66 580	119 819	3 216
<b>BELLEFONTAINE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>17</b>	<b>9</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>17 926</b>
327	Nonmetallic mineral product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3272	Glass & glass product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
327215	Glass product mfg made of purchased glass .....	-	1	1	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335313	Switchgear & switchboard apparatus mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>BELLEVUE, OH *</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>24</b>	<b>13</b>	<b>1 823</b>	<b>59 292</b>	<b>1 395</b>	<b>2 959</b>	<b>39 334</b>	<b>182 914</b>	<b>448 074</b>	<b>640 772</b>	<b>18 369</b>
333	Machinery mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
333415	AC & warm air heating & commercial/ industrial refig equip mfg .....	-	1	1	f	D	D	D	D	D	D	D	D

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NAICS code	Geographic area and industry	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)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>BEREA, OH</b>													
31-33	Manufacturing ....	1	41	16	1 616	55 447	1 161	2 485	33 446	122 686	91 860	212 312	9 260
332	Fabricated metal product mfg .....	-	16	8	829	28 122	634	1 284	18 075	59 819	38 457	96 221	5 653
<b>BLANCHESTER, OH *</b>													
31-33	Manufacturing ....	-	11	8	904	26 850	719	1 219	13 783	66 535	169 856	234 216	D
336	Transportation equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
33633	Motor vehicle steering & suspension component (except spring) mfg ....	-	1	1	f	D	D	D	D	D	D	D	D
336330	Motor vehicle steering & suspension component (except spring) mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>BLUE ASH, OH</b>													
31-33	Manufacturing ....	-	109	44	7 045	236 717	4 622	9 482	127 517	601 809	501 714	1 101 338	35 111
323	Printing & related support activities.....	2	21	5	800	29 525	539	1 192	17 159	57 614	39 397	96 830	7 725
3231	Printing & related support activities.....	2	21	5	800	29 525	539	1 192	17 159	57 614	39 397	96 830	7 725
32311	Printing .....	2	20	5	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	20	11	2 057	74 479	1 468	3 279	45 459	200 571	98 162	296 350	10 947
3323	Architectural & structural metals mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33232	Ornamental & architectural metal products mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
332321	Metal window & door mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	1	18	9	1 002	31 624	581	1 146	15 218	75 770	55 336	133 252	5 192
335	Electrical equipment, appliance, & component mfg .....	-	6	4	778	20 823	502	949	8 509	60 998	59 037	118 611	D
3351	Electric lighting equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33512	Lighting fixture mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335129	Other lighting equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>BLUFFTON, OH *</b>													
31-33	Manufacturing ....	-	6	4	744	28 261	501	1 311	18 571	89 745	93 316	179 718	D
<b>BOWLING GREEN, OH</b>													
31-33	Manufacturing ....	-	41	20	3 107	96 612	2 296	4 319	61 993	255 711	184 144	429 770	17 307
326	Plastics & rubber products mfg .....	-	4	4	g	D	D	D	D	D	D	D	13 422
3262	Rubber product mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
32629	Other rubber product mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
326291	Rubber product mfg for mechanical use .....	-	2	2	g	D	D	D	D	D	D	D	D
<b>BRECKSVILLE, OH</b>													
31-33	Manufacturing ....	-	20	8	690	26 921	456	963	14 215	69 957	62 604	132 977	6 027
<b>BROOKLYN, OH</b>													
31-33	Manufacturing ....	-	44	22	3 136	91 322	2 250	4 874	53 726	220 033	160 000	378 437	9 513
323	Printing & related support activities.....	-	1	1	f	D	D	D	D	D	D	D	D
3231	Printing & related support activities.....	-	1	1	f	D	D	D	D	D	D	D	D
32311	Printing .....	-	1	1	f	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing ..	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	19	10	821	28 894	657	1 448	19 262	67 852	33 370	101 282	3 806

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>BROOK PARK, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>66</b>	<b>28</b>	<b>6 333</b>	<b>366 609</b>	<b>5 161</b>	<b>11 437</b>	<b>289 031</b>	<b>924 196</b>	<b>748 254</b>	<b>1 696 868</b>	<b>D</b>
331	Primary metal mfg .....	-	2	2	h	D	D	D	D	D	D	D	D
3315	Foundries .....	-	2	2	h	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	-	2	2	h	D	D	D	D	D	D	D	D
331511	Iron foundries .....	-	1	1	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	1	24	10	551	18 952	410	859	11 681	42 992	27 095	70 175	3 196
336	Transportation equipment mfg .....	-	6	5	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	5	4	g	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine & engine parts mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336312	Gasoline engine & engine parts mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>BROOKVILLE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>16</b>	<b>10</b>	<b>1 289</b>	<b>34 208</b>	<b>1 016</b>	<b>1 989</b>	<b>21 788</b>	<b>75 262</b>	<b>58 056</b>	<b>132 942</b>	<b>14 022</b>
326	Plastics & rubber products mfg .....	-	5	3	736	20 347	574	1 039	11 525	41 957	38 289	80 131	D
3261	Plastics product mfg .....	-	5	3	736	20 347	574	1 039	11 525	41 957	38 289	80 131	D
32619	Other plastics product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
<b>BRUNSWICK, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>2</b>	<b>29</b>	<b>14</b>	<b>658</b>	<b>20 997</b>	<b>485</b>	<b>1 000</b>	<b>12 638</b>	<b>48 428</b>	<b>45 913</b>	<b>93 616</b>	<b>2 850</b>
<b>BRYAN, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>39</b>	<b>23</b>	<b>3 775</b>	<b>122 126</b>	<b>2 670</b>	<b>5 141</b>	<b>74 984</b>	<b>431 900</b>	<b>321 350</b>	<b>756 068</b>	<b>14 228</b>
311	Food mfg .....	2	2	2	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	-	4	4	1 167	34 349	880	1 620	22 881	99 792	100 994	200 503	D
3261	Plastics product mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	10	5	848	31 589	604	1 116	20 806	106 322	52 226	161 316	2 080
<b>BUCYRUS, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>19</b>	<b>12</b>	<b>3 019</b>	<b>104 208</b>	<b>2 570</b>	<b>5 402</b>	<b>83 928</b>	<b>422 256</b>	<b>294 525</b>	<b>709 018</b>	<b>D</b>
326	Plastics & rubber products mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3262	Rubber product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
32622	Rubber & plastics hoses & belting mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
326220	Rubber & plastics hoses & belting mfg..	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	3	1	f	D	D	D	D	D	D	D	D
3329	Other fabricated metal product mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
332991	Ball & roller bearing mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
<b>BYESVILLE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>6</b>	<b>4</b>	<b>698</b>	<b>16 784</b>	<b>573</b>	<b>1 366</b>	<b>12 762</b>	<b>46 097</b>	<b>45 358</b>	<b>91 145</b>	<b>D</b>
326	Plastics & rubber products mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>CAMBRIDGE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>30</b>	<b>14</b>	<b>2 188</b>	<b>64 906</b>	<b>1 779</b>	<b>3 322</b>	<b>50 659</b>	<b>125 188</b>	<b>134 133</b>	<b>263 545</b>	<b>15 225</b>
333	Machinery mfg .....	-	6	2	f	D	D	D	D	D	D	D	3 389
3336	Engine, turbine, & power transmission equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33361	Engine, turbine, & power transmission equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
333618	Other engine equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>CANAL WINCHESTER, OH *</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>12</b>	<b>7</b>	<b>880</b>	<b>25 748</b>	<b>694</b>	<b>1 407</b>	<b>17 241</b>	<b>63 613</b>	<b>171 544</b>	<b>235 361</b>	<b>3 316</b>
336	Transportation equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
33636	Motor vehicle seating & interior trim mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating & interior trim mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
<b>CANTON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>182</b>	<b>70</b>	<b>13 120</b>	<b>461 881</b>	<b>10 384</b>	<b>20 979</b>	<b>334 815</b>	<b>1 745 086</b>	<b>1 497 113</b>	<b>3 233 494</b>	<b>104 482</b>
311	Food mfg .....	-	9	4	f	D	D	D	D	D	D	D	D
3116	Meat product mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
31161	Animal slaughtering & processing .....	-	2	1	f	D	D	D	D	D	D	D	D
311612	Meat processed from carcasses .....	-	1	1	f	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	-	33	8	770	23 263	588	1 376	15 332	50 713	38 566	88 916	5 418
3231	Printing & related support activities .....	-	33	8	770	23 263	588	1 376	15 332	50 713	38 566	88 916	5 418
32311	Printing .....	-	28	8	742	22 625	567	1 347	14 892	49 484	38 062	87 174	5 375
323110	Commercial lithographic printing ..	-	15	6	609	19 400	469	1 198	13 224	42 052	31 326	73 024	4 362
326	Plastics & rubber products mfg .....	-	12	6	1 649	37 725	1 317	2 724	27 697	95 671	95 398	187 282	D
3262	Rubber product mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
32629	Other rubber product mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
326299	All other rubber product mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	10	5	h	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
331111	Iron & steel mills .....	-	1	1	g	D	D	D	D	D	D	D	D
3315	Foundries .....	-	6	2	523	15 393	405	719	9 823	39 938	20 948	61 656	D
33151	Ferrous metal foundries ..	-	4	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	50	21	4 255	162 971	3 534	7 245	127 227	361 688	270 402	628 890	27 410
3321	Forging & stamping .....	-	2	2	f	D	D	D	D	D	D	D	D
33211	Forging & stamping .....	-	2	2	f	D	D	D	D	D	D	D	D
3329	Other fabricated metal product mfg .....	-	6	1	g	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg .....	-	6	1	g	D	D	D	D	D	D	D	D
332991	Ball & roller bearing mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	3	3	516	17 927	293	583	8 223	35 264	29 738	65 095	D
337	Furniture & related product mfg .....	-	7	3	721	18 995	571	1 007	13 112	40 825	48 222	88 678	D
3372	Office furniture (including fixtures) mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) mfg .....	-	2	2	f	D	D	D	D	D	D	D	D



**Table 4. Industry Statistics for Places: 1997—Con.**

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>CAREY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>12</b>	<b>4</b>	<b>874</b>	<b>24 822</b>	<b>730</b>	<b>1 512</b>	<b>19 288</b>	<b>78 035</b>	<b>49 623</b>	<b>127 250</b>	<b>D</b>
326	Plastics & rubber products mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
<b>CELINA, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>16</b>	<b>7</b>	<b>2 030</b>	<b>57 940</b>	<b>1 642</b>	<b>3 245</b>	<b>38 301</b>	<b>255 222</b>	<b>176 463</b>	<b>419 654</b>	<b>D</b>
323	Printing & related support activities .....	-	3	1	f	D	D	D	D	D	D	D	D
3231	Printing & related support activities .....	-	3	1	f	D	D	D	D	D	D	D	D
32311	Printing .....	-	3	1	f	D	D	D	D	D	D	D	D
323116	Manifold business form printing .....	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
3369	Other transportation equipment mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33699	Other transportation equipment mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336991	Motorcycle, bicycle, & parts mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>CENTERVILLE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>2</b>	<b>40</b>	<b>6</b>	<b>566</b>	<b>18 869</b>	<b>437</b>	<b>925</b>	<b>13 669</b>	<b>45 219</b>	<b>20 606</b>	<b>66 180</b>	<b>5 898</b>
<b>CHARDON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>24</b>	<b>12</b>	<b>1 730</b>	<b>57 010</b>	<b>1 219</b>	<b>2 603</b>	<b>32 795</b>	<b>120 429</b>	<b>113 441</b>	<b>233 261</b>	<b>10 638</b>
326	Plastics & rubber products mfg .....	1	5	4	692	23 209	518	1 135	13 201	51 646	44 703	96 522	4 122
<b>CHILLICOTHE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>19</b>	<b>5</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
322	Paper mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills .....	-	1	1	g	D	D	D	D	D	D	D	D
32212	Paper mills .....	-	1	1	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>CINCINNATI, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>604</b>	<b>234</b>	<b>28 917</b>	<b>1 021 808</b>	<b>18 157</b>	<b>36 495</b>	<b>554 899</b>	<b>3 778 697</b>	<b>2 841 418</b>	<b>6 540 188</b>	<b>203 327</b>
311	Food mfg .....	1	46	22	4 089	136 510	2 202	4 873	68 271	675 861	521 161	1 193 336	26 496
3116	Meat product mfg .....	-	9	5	1 160	42 338	535	1 210	16 948	90 158	146 443	235 893	D
31161	Animal slaughtering & processing .....	-	9	5	1 160	42 338	535	1 210	16 948	90 158	146 443	235 893	D
311612	Meat processed from carcasses .....	-	8	4	g	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg .....	-	19	7	g	D	D	D	D	D	D	D	D
31181	Bread & bakery product mfg .....	-	16	5	f	D	D	D	D	D	D	D	1 075
311812	Commercial bakeries .....	-	6	2	f	D	D	D	D	D	D	D	D
31182	Cookie, cracker, & pasta mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
311821	Cookie & cracker mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3119	Other food mfg .....	4	9	7	g	D	D	D	D	D	D	D	13 338
312	Beverage & tobacco product mfg .....	-	9	6	1 200	38 962	576	1 139	17 541	506 762	270 287	777 193	D
3121	Beverage mfg .....	-	9	6	1 200	38 962	576	1 139	17 541	506 762	270 287	777 193	D
31211	Soft drink & ice mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
312111	Soft drink mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
322	Paper mfg .....	1	15	10	847	28 437	676	1 475	20 855	89 002	103 563	191 899	9 790
3222	Converted paper product mfg .....	2	13	8	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CINCINNATI, OH—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
323	Printing & related support activities.....	1	132	38	2 703	94 407	1 947	3 832	58 273	197 905	100 778	298 025	10 472
3231	Printing & related support activities.....	1	132	38	2 703	94 407	1 947	3 832	58 273	197 905	100 778	298 025	10 472
32311	Printing.....	2	105	29	2 165	74 282	1 566	2 996	45 933	159 450	89 468	248 399	7 311
323110	Commercial lithographic printing ..	-	53	13	1 170	39 222	832	1 610	23 165	73 709	47 480	120 779	4 902
32312	Support activities for printing.....	1	27	9	538	20 125	381	836	12 340	38 455	11 310	49 626	3 161
324	Petroleum & coal products mfg.....	-	6	2	610	27 212	305	564	11 759	77 165	138 648	215 119	D
3241	Petroleum & coal products mfg.....	-	6	2	610	27 212	305	564	11 759	77 165	138 648	215 119	D
32419	Other petroleum & coal products mfg.....	-	3	2	f	D	D	D	D	D	D	D	D
324191	Petroleum lubricating oil & grease mfg.....	-	3	2	f	D	D	D	D	D	D	D	D
325	Chemical mfg.....	-	31	18	3 734	167 069	1 961	4 074	81 710	977 843	697 414	1 666 352	60 785
3251	Basic chemical mfg.....	1	10	7	1 889	93 796	1 221	2 534	57 836	371 109	427 533	803 036	48 665
32513	Dye & pigment mfg.....	2	3	3	f	D	D	D	D	D	D	D	D
325132	Synthetic organic dye & pigment mfg.....	2	3	3	f	D	D	D	D	D	D	D	D
32519	Other basic organic chemical mfg.....	-	3	2	f	D	D	D	D	D	D	D	D
325199	All other basic organic chemical mfg.....	-	2	2	f	D	D	D	D	D	D	D	D
3254	Pharmaceutical & medicine mfg.....	-	5	3	f	D	D	D	D	D	D	D	D
32541	Pharmaceutical & medicine mfg.....	-	5	3	f	D	D	D	D	D	D	D	D
325412	Pharmaceutical preparation mfg.....	-	4	3	f	D	D	D	D	D	D	D	D
3256	Soap, cleaning compound, & toilet preparation mfg. .	-	9	4	678	31 647	295	665	10 877	205 382	77 884	279 658	4 059
32562	Toilet preparation mfg. .	-	1	1	f	D	D	D	D	D	D	D	D
325620	Toilet preparation mfg. .	-	1	1	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg.....	4	23	8	756	20 862	604	1 102	13 426	43 147	45 402	89 284	3 735
3261	Plastics product mfg.....	4	19	7	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg.....	7	11	5	516	13 678	414	735	8 238	22 373	23 674	46 233	D
326199	All other plastics product mfg.....	7	11	5	516	13 678	414	735	8 238	22 373	23 674	46 233	D
331	Primary metal mfg.....	-	14	9	1 119	36 077	819	1 847	24 133	64 771	35 436	100 854	3 681
3315	Foundries.....	-	13	9	g	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries.....	-	10	6	f	D	D	D	D	D	D	D	D
331524	Aluminum foundries (except die-casting) ..	-	6	5	582	17 531	402	826	10 779	31 408	14 343	45 897	D
332	Fabricated metal product mfg.....	1	112	43	3 923	125 415	3 043	5 759	88 425	244 926	161 411	414 943	14 313
3323	Architectural & structural metals mfg.....	1	22	11	743	24 510	558	1 003	16 824	47 032	38 926	86 105	2 709
33232	Ornamental & architectural metal products mfg.....	1	15	8	615	19 752	449	795	13 158	37 844	23 427	61 390	2 241
332322	Sheet metal work mfg. .	-	11	6	550	17 915	405	701	12 043	34 055	19 082	53 349	2 177
3324	Boiler, tank, & shipping container mfg.....	-	3	1	f	D	D	D	D	D	D	D	D
33242	Metal tank (heavy gauge) mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
332420	Metal tank (heavy gauge) mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg.....	3	45	10	899	30 393	669	1 352	20 342	58 650	35 390	92 458	6 384
33271	Machine shops.....	1	40	8	667	22 988	511	1 035	15 943	42 929	23 643	65 001	4 520
332710	Machine shops.....	1	40	8	667	22 988	511	1 035	15 943	42 929	23 643	65 001	4 520
3328	Coating, engraving, heat treating, & allied activities .	-	20	11	678	24 299	506	1 102	14 684	55 222	15 086	69 948	2 939
33281	Coating, engraving, heat treating, & allied activities.....	-	20	11	678	24 299	506	1 102	14 684	55 222	15 086	69 948	2 939
3329	Other fabricated metal product mfg.....	-	11	5	548	14 145	398	750	8 254	43 795	31 590	77 405	994
33291	Metal valve mfg.....	-	6	5	f	D	D	D	D	D	D	D	973

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>CINCINNATI, OH—Con. Manufacturing—Con.</b>												
333	Machinery mfg .....	-	44	22	4 012	167 848	1 980	3 699	72 497	497 900	365 418	776 671	25 600
3333	Commercial & service industry machinery mfg ..	-	4	2	f	D	D	D	D	D	D	D	D
33331	Commercial & service industry machinery mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg .....	-	17	7	2 176	97 619	1 014	1 656	42 308	315 198	209 655	431 083	D
33351	Metalworking machinery mfg .....	-	17	7	2 176	97 619	1 014	1 656	42 308	315 198	209 655	431 083	D
333512	Machine tool (metal cutting types) mfg ...	-	2	2	g	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg .....	-	13	8	843	35 549	410	899	13 798	91 246	73 605	162 949	D
334	Computer & electronic product mfg .....	7	17	9	1 083	34 409	656	1 428	17 779	59 680	68 849	135 817	5 545
3342	Communications equipment mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
33422	Radio & TV broadcasting & wireless communications equipment mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
334220	Radio & TV broadcasting & wireless communications equipment mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	14	10	1 689	56 421	1 199	2 471	31 160	144 844	151 230	294 479	7 271
3352	Household appliance mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
33521	Small electrical appliance mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335211	Electric housewares & household fan mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg .....	-	6	5	671	24 019	443	932	13 443	60 233	46 669	106 352	D
33593	Wiring device mfg .....	-	5	4	f	D	D	D	D	D	D	D	D
335931	Current-carrying wiring device mfg .....	-	5	4	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	9	5	510	15 739	389	707	10 301	40 033	27 165	68 629	3 182
337	Furniture & related product mfg .....	1	24	5	577	17 715	368	685	9 406	42 781	39 118	81 993	1 547
339	Miscellaneous mfg .....	1	53	7	731	23 991	473	946	10 408	47 124	38 906	86 780	3 669
	<b>CIRCLEVILLE, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>16</b>	<b>6</b>	<b>1 284</b>	<b>46 685</b>	<b>1 104</b>	<b>2 502</b>	<b>38 579</b>	<b>171 193</b>	<b>81 619</b>	<b>252 951</b>	<b>6 787</b>
335	Electrical equipment, appliance, & component mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3351	Electric lighting equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33511	Electric lamp bulb & part mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
	<b>CLEVELAND, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>1 270</b>	<b>442</b>	<b>44 400</b>	<b>1 662 238</b>	<b>31 573</b>	<b>65 143</b>	<b>1 008 460</b>	<b>4 128 581</b>	<b>4 572 783</b>	<b>8 675 765</b>	<b>342 651</b>
311	Food mfg .....	2	53	18	1 663	47 571	998	2 050	24 138	173 292	256 933	430 714	13 632
322	Paper mfg .....	-	33	24	1 823	60 327	1 366	2 946	38 124	134 723	181 757	315 498	13 105
3222	Converted paper product mfg .....	-	33	24	1 823	60 327	1 366	2 946	38 124	134 723	181 757	315 498	13 105
32221	Paperboard container mfg .....	1	21	16	988	29 214	749	1 503	18 988	65 011	86 429	150 819	7 076
323	Printing & related support activities .....	2	158	29	2 922	102 608	2 151	4 478	57 927	222 887	106 103	329 446	20 965
3231	Printing & related support activities .....	2	158	29	2 922	102 608	2 151	4 478	57 927	222 887	106 103	329 446	20 965
32311	Printing .....	2	132	26	2 572	91 435	1 872	3 888	50 380	200 480	102 313	303 339	20 100
323110	Commercial lithographic printing ..	2	86	21	1 822	66 675	1 304	2 678	39 354	135 419	66 315	203 020	11 577
324	Petroleum & coal products mfg .....	3	15	7	624	34 563	272	495	9 957	107 744	107 817	215 957	15 072
3241	Petroleum & coal products mfg .....	3	15	7	624	34 563	272	495	9 957	107 744	107 817	215 957	15 072

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CLEVELAND, OH—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
325	Chemical mfg . . . . .	—	62	28	3 479	155 573	1 688	3 316	64 209	571 005	641 341	1 220 481	37 570
3251	Basic chemical mfg . . . . .	—	10	6	547	22 430	281	626	12 170	109 588	145 286	254 356	7 305
3255	Paint, coating, & adhesive mfg . . . . .	—	16	7	g	D	D	D	D	D	D	D	17 834
32551	Paint & coating mfg . . . . .	—	11	4	1 472	75 540	530	1 140	26 240	166 294	246 864	417 567	D
325510	Paint & coating mfg . . . . .	—	11	4	1 472	75 540	530	1 140	26 240	166 294	246 864	417 567	D
32552	Adhesive mfg . . . . .	1	5	3	f	D	D	D	D	D	D	D	D
325520	Adhesive mfg . . . . .	1	5	3	f	D	D	D	D	D	D	D	D
3259	Other chemical product mfg . . . . .	—	17	7	579	24 176	329	596	9 280	120 465	115 139	237 495	D
326	Plastics & rubber products mfg . . . . .	1	32	14	1 270	36 271	1 028	2 119	22 475	72 120	72 877	145 503	5 348
3261	Plastics product mfg . . . . .	1	25	12	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg . . . . .	1	16	10	736	19 837	606	1 271	13 399	42 870	47 952	91 460	2 485
326199	All other plastics product mfg . . . . .	1	16	10	736	19 837	606	1 271	13 399	42 870	47 952	91 460	2 485
327	Nonmetallic mineral product mfg . . . . .	3	33	10	692	20 838	541	1 133	14 360	50 682	39 539	88 458	4 580
331	Primary metal mfg . . . . .	—	35	20	5 789	314 698	4 686	10 988	244 601	742 787	1 615 192	2 351 265	D
3311	Iron & steel mills & ferroalloy mfg . . . . .	—	1	1	h	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg . . . . .	—	1	1	h	D	D	D	D	D	D	D	D
331111	Iron & steel mills . . . . .	—	1	1	h	D	D	D	D	D	D	D	D
3315	Foundries . . . . .	—	20	11	f	D	D	D	D	D	D	D	2 178
332	Fabricated metal product mfg . . . . .	1	408	125	10 142	337 771	7 460	15 146	203 956	742 027	521 365	1 273 376	52 080
3321	Forging & stamping . . . . .	—	42	21	1 803	69 543	1 347	3 032	45 021	146 295	143 976	292 497	13 608
33211	Forging & stamping . . . . .	—	42	21	1 803	69 543	1 347	3 032	45 021	146 295	143 976	292 497	13 608
332111	Iron & steel forging . . . . .	—	9	7	f	D	D	D	D	D	D	D	D
332116	Metal stamping . . . . .	1	27	12	f	D	D	D	D	D	D	D	D
3323	Architectural & structural metals mfg . . . . .	2	49	13	958	30 198	645	1 215	16 882	57 540	44 311	102 285	2 589
33232	Ornamental & architectural metal products mfg . . . . .	1	30	9	760	24 352	494	961	13 541	49 611	36 022	86 002	2 391
332322	Sheet metal work mfg . . . . .	2	19	6	585	18 718	403	785	10 689	40 801	32 183	73 468	1 993
3326	Spring & wire product mfg . . . . .	—	12	7	634	20 020	478	1 029	11 655	40 797	24 970	65 332	1 869
33261	Spring & wire product mfg . . . . .	—	12	7	634	20 020	478	1 029	11 655	40 797	24 970	65 332	1 869
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	—	145	24	2 559	86 621	2 018	4 049	59 311	192 323	89 041	286 808	12 798
33271	Machine shops . . . . .	1	114	17	1 560	52 441	1 217	2 339	35 120	102 570	36 779	140 038	6 191
332710	Machine shops . . . . .	1	114	17	1 560	52 441	1 217	2 339	35 120	102 570	36 779	140 038	6 191
33272	Turned product & screw, nut, & bolt mfg . . . . .	—	31	7	999	34 180	801	1 710	24 191	89 753	52 262	146 770	6 607
332721	Precision turned product mfg . . . . .	—	20	3	516	17 381	398	915	11 528	47 383	19 075	65 808	1 423
3328	Coating, engraving, heat treating, & allied activities . . . . .	1	104	39	2 268	66 924	1 719	3 235	39 384	171 315	75 952	247 833	13 347
33281	Coating, engraving, heat treating, & allied activities . . . . .	1	104	39	2 268	66 924	1 719	3 235	39 384	171 315	75 952	247 833	13 347
332812	Metal coating/engraving (exc jewelry/silverware)/allied services . . . . .	2	19	7	591	17 656	414	802	7 494	39 820	18 929	59 107	4 755
332813	Electroplating, plating, polishing, anodizing, & coloring . . . . .	1	64	26	1 313	37 421	1 040	1 976	24 147	96 064	48 540	144 908	4 513
3329	Other fabricated metal product mfg . . . . .	1	30	11	1 153	40 272	710	1 463	16 750	80 161	86 762	170 228	3 872
33299	All other fabricated metal product mfg . . . . .	—	19	5	664	25 733	372	778	8 738	47 943	58 416	108 950	D
333	Machinery mfg . . . . .	1	156	61	4 765	174 347	3 103	6 314	98 747	363 442	305 769	659 096	13 851
3335	Metalworking machinery mfg . . . . .	—	90	29	2 069	77 334	1 460	2 964	50 539	127 344	77 877	201 462	5 597
33351	Metalworking machinery mfg . . . . .	—	90	29	2 069	77 334	1 460	2 964	50 539	127 344	77 877	201 462	5 597
333514	Special die & tool, die set, jig, & fixture mfg . . . . .	—	42	11	932	35 237	638	1 189	20 904	63 353	35 690	99 684	2 757

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>CLEVELAND, OH—Con.</b>												
<b>31-33</b>	<b>Manufacturing—Con.</b>												
333	Machinery mfg—Con.												
3336	Engine, turbine, & power transmission equipment mfg .....	4	9	7	757	27 861	500	996	16 103	50 033	47 359	98 166	3 652
33361	Engine, turbine, & power transmission equipment mfg .....	4	9	7	757	27 861	500	996	16 103	50 033	47 359	98 166	3 652
333612	Speed changer, industrial high-speed drive, & gear mfg .....	5	5	3	555	21 481	349	687	11 701	34 254	35 692	70 637	3 382
3339	Other general-purpose machinery mfg .....	—	25	8	565	19 261	299	649	8 387	40 922	46 409	87 079	1 339
334	Computer & electronic product mfg .....	—	32	14	1 079	30 685	734	1 322	14 720	82 255	45 412	127 446	D
3345	Navigational, measuring, medical, & control instruments mfg .....	—	11	7	650	18 936	438	737	8 731	53 012	22 819	76 275	1 653
33451	Navigational, measuring, medical, & control instruments mfg .....	—	11	7	650	18 936	438	737	8 731	53 012	22 819	76 275	1 653
335	Electrical equipment, appliance, & component mfg .....	—	33	19	2 757	87 988	1 974	3 770	52 599	253 081	191 923	445 292	7 212
3351	Electric lighting equipment mfg .....	1	10	2	f	D	D	D	D	D	D	D	D
3352	Household appliance mfg ..	—	3	3	f	D	D	D	D	D	D	D	D
33521	Small electrical appliance mfg .....	—	3	3	f	D	D	D	D	D	D	D	D
335212	Household vacuum cleaner mfg .....	—	2	2	f	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	—	8	4	652	18 194	490	962	12 386	36 719	43 836	80 069	1 160
33531	Electrical equipment mfg .....	—	8	4	652	18 194	490	962	12 386	36 719	43 836	80 069	1 160
3359	Other electrical equipment & component mfg .....	—	12	10	838	23 865	591	1 059	13 633	59 459	54 447	114 738	2 521
336	Transportation equipment mfg .....	—	54	32	4 513	181 743	3 404	6 903	117 825	409 371	339 863	723 646	39 569
3363	Motor vehicle parts mfg ...	—	41	27	3 531	140 116	2 760	5 557	93 672	284 724	266 056	541 543	31 815
33631	Motor vehicle gasoline engine & engine parts mfg .....	—	6	4	f	D	D	D	D	D	D	D	D
336311	Carburetor, piston, piston ring, & valve mfg .....	—	4	3	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	—	17	13	1 855	67 171	1 461	3 276	43 935	154 915	153 284	304 583	14 672
336370	Motor vehicle metal stamping .....	—	17	13	1 855	67 171	1 461	3 276	43 935	154 915	153 284	304 583	14 672
3364	Aerospace product & parts mfg .....	—	5	3	f	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	—	5	3	f	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg .....	—	3	1	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	1	60	18	1 413	39 597	1 053	2 050	22 318	96 236	71 018	166 129	4 004
3391	Medical equipment & supplies mfg .....	1	17	6	617	15 425	503	955	9 630	34 368	26 555	59 470	D
33911	Medical equipment & supplies mfg .....	1	17	6	617	15 425	503	955	9 630	34 368	26 555	59 470	D
3399	Other miscellaneous mfg ..	1	43	12	796	24 172	550	1 095	12 688	61 868	44 463	106 659	D
	<b>CLYDE, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	—	<b>6</b>	<b>4</b>	<b>h</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
335	Electrical equipment, appliance, & component mfg .....	—	1	1	h	D	D	D	D	D	D	D	D
3352	Household appliance mfg ..	—	1	1	h	D	D	D	D	D	D	D	D
33522	Major appliance mfg ....	—	1	1	h	D	D	D	D	D	D	D	D
335224	Household laundry equipment mfg .....	—	1	1	h	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>COLDWATER, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>9</b>	<b>5</b>	<b>856</b>	<b>28 122</b>	<b>740</b>	<b>1 667</b>	<b>23 206</b>	<b>52 025</b>	<b>66 389</b>	<b>115 028</b>	<b>6 089</b>
333	Machinery mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
3331	Agriculture, construction, & mining machinery mfg. ....	-	1	1	f	D	D	D	D	D	D	D	D
33311	Agricultural implement mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
333111	Farm machinery & equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>COLUMBIANA, OH *</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>29</b>	<b>12</b>	<b>980</b>	<b>31 553</b>	<b>768</b>	<b>1 534</b>	<b>18 237</b>	<b>64 011</b>	<b>67 403</b>	<b>130 307</b>	<b>6 176</b>
<b>COLUMBUS, OH *</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>685</b>	<b>242</b>	<b>32 243</b>	<b>1 173 265</b>	<b>22 784</b>	<b>44 505</b>	<b>725 125</b>	<b>4 498 713</b>	<b>3 957 141</b>	<b>8 409 312</b>	<b>315 222</b>
311	Food mfg .....	-	43	20	4 052	142 868	2 772	5 568	86 858	1 301 853	721 734	2 043 082	21 275
3115	Dairy product mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
31151	Dairy product (except frozen) mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
311514	Dry, condensed, & evaporated dairy product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3116	Meat product mfg .....	-	8	7	521	10 338	437	773	7 387	31 685	113 718	145 816	1 296
31161	Animal slaughtering & processing .....	-	8	7	521	10 338	437	773	7 387	31 685	113 718	145 816	1 296
3118	Bakeries & tortilla mfg .....	-	19	4	1 494	48 828	857	1 364	25 521	121 121	80 288	200 699	D
31181	Bread & bakery product mfg .....	-	19	4	1 494	48 828	857	1 364	25 521	121 121	80 288	200 699	D
311812	Commercial bakeries .....	-	4	2	g	D	D	D	D	D	D	D	D
312	Beverage & tobacco product mfg .....	-	7	5	g	D	D	D	D	D	D	D	D
3121	Beverage mfg .....	-	7	5	g	D	D	D	D	D	D	D	D
31211	Soft drink & ice mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
312111	Soft drink mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
31212	Breweries .....	-	2	1	f	D	D	D	D	D	D	D	D
312120	Breweries .....	-	2	1	f	D	D	D	D	D	D	D	D
315	Apparel mfg .....	8	14	4	f	D	D	D	D	D	D	D	D
3152	Cut & sew apparel mfg ....	8	10	4	f	D	D	D	D	D	D	D	D
322	Paper mfg .....	-	13	9	603	18 466	463	937	11 185	48 661	52 661	99 870	D
3222	Converted paper product mfg .....	-	12	8	f	D	D	D	D	D	D	D	D
32221	Paperboard container mfg .....	-	8	7	f	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	1	128	32	2 432	74 671	1 767	3 209	46 728	161 099	110 157	271 270	12 182
3231	Printing & related support activities .....	1	128	32	2 432	74 671	1 767	3 209	46 728	161 099	110 157	271 270	12 182
32311	Printing .....	1	112	28	2 129	62 266	1 541	2 739	39 458	139 281	104 078	243 374	11 006
323110	Commercial lithographic printing ..	1	56	25	1 711	51 173	1 266	2 282	32 632	118 510	91 385	209 916	10 229
325	Chemical mfg .....	1	32	16	1 686	69 102	841	1 771	26 247	188 255	236 157	423 003	D
3255	Paint, coating, & adhesive mfg .....	1	10	7	1 174	48 343	570	1 223	17 105	136 274	161 177	295 343	D
32551	Paint & coating mfg .....	-	5	3	600	25 235	331	745	10 545	66 626	91 270	155 673	19 178
325510	Paint & coating mfg .....	-	5	3	600	25 235	331	745	10 545	66 626	91 270	155 673	19 178
32552	Adhesive mfg .....	2	5	4	574	23 108	239	478	6 560	69 648	69 907	139 670	D
325520	Adhesive mfg .....	2	5	4	574	23 108	239	478	6 560	69 648	69 907	139 670	D
326	Plastics & rubber products mfg .....	2	35	17	2 623	89 127	2 108	4 136	59 972	228 465	213 164	440 689	17 872
3261	Plastics product mfg .....	2	28	16	h	D	D	D	D	D	D	D	D
32611	Unsupported plastics film, sheet, & bag mfg ..	-	4	3	f	D	D	D	D	D	D	D	D
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	-	5	3	f	D	D	D	D	D	D	D	D
326121	Unsupported plastics profile shape mfg ....	-	2	2	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	3	13	8	1 363	42 631	1 111	2 271	31 442	105 423	109 976	215 366	D
326199	All other plastics product mfg .....	3	11	7	g	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	-	32	15	2 259	78 477	1 814	3 841	57 593	290 347	147 159	419 236	48 279
3272	Glass & glass product mfg ..	-	7	3	g	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg .....	-	7	3	g	D	D	D	D	D	D	D	D
327212	Other pressed & blown glass & glassware mfg .....	-	4	2	g	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>COLUMBUS, OH *— Con. Manufacturing— Con.</b>												
331	Primary metal mfg . . . . .	—	11	3	g	D	D	D	D	D	D	D	D
3315	Foundries . . . . .	—	7	1	g	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries . . . . .	—	3	1	g	D	D	D	D	D	D	D	D
331512	Steel investment foundries . . . . .	—	2	1	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	—	116	40	3 650	132 058	2 724	5 365	83 878	372 607	414 875	780 224	20 468
3323	Architectural & structural metals mfg . . . . .	1	32	14	838	28 056	601	1 150	16 344	95 451	45 790	140 000	1 996
33232	Ornamental & architectural metal products mfg . . . . .	2	21	9	510	17 418	362	731	10 000	34 319	19 510	53 705	881
3324	Boiler, tank, & shipping container mfg . . . . .	—	6	4	671	29 405	543	1 138	20 937	63 958	187 464	246 584	8 213
333	Machinery mfg . . . . .	—	52	28	3 007	119 211	1 697	3 661	60 723	352 881	246 552	591 668	21 810
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	—	3	3	g	D	D	D	D	D	D	D	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	—	3	3	g	D	D	D	D	D	D	D	D
333415	AC & warm air heating & commercial/ industrial refig equip mfg . . . . .	—	2	2	g	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg . . . . .	1	19	8	f	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg . . . . .	1	13	7	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg . . . . .	—	27	10	3 409	177 757	2 355	4 135	122 060	559 028	784 974	1 313 277	32 735
3342	Communications equipment mfg . . . . .	—	5	2	g	D	D	D	D	D	D	D	D
33421	Telephone apparatus mfg . . . . .	—	3	1	g	D	D	D	D	D	D	D	D
334210	Telephone apparatus mfg . . . . .	—	3	1	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	—	11	4	f	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	—	11	4	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	—	24	10	1 330	37 612	1 061	2 317	25 771	102 718	175 817	279 029	21 695
3363	Motor vehicle parts mfg . . . . .	1	17	7	g	D	D	D	D	D	D	D	21 058
33639	Other motor vehicle parts mfg . . . . .	—	9	5	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg . . . . .	—	9	5	f	D	D	D	D	D	D	D	D
337	Furniture & related product mfg . . . . .	—	26	7	710	21 858	526	1 030	13 019	41 083	38 990	80 577	1 313
3372	Office furniture (including fixtures) mfg . . . . .	—	11	5	545	17 665	406	799	10 400	30 499	20 121	50 740	D
33721	Office furniture (including fixtures) mfg . . . . .	—	11	5	545	17 665	406	799	10 400	30 499	20 121	50 740	D
339	Miscellaneous mfg . . . . .	2	73	13	1 204	35 298	778	1 508	17 444	62 483	81 978	145 045	3 852
3391	Medical equipment & supplies mfg . . . . .	2	36	5	524	14 068	323	581	6 891	27 291	24 082	51 553	1 330
33911	Medical equipment & supplies mfg . . . . .	2	36	5	524	14 068	323	581	6 891	27 291	24 082	51 553	1 330
3399	Other miscellaneous mfg . . . . .	2	37	8	680	21 230	455	927	10 553	35 192	57 896	93 492	2 522
<b>31-33</b>	<b>CONNEAUT, OH Manufacturing . . . . .</b>	<b>1</b>	<b>33</b>	<b>13</b>	<b>1 755</b>	<b>42 401</b>	<b>1 507</b>	<b>2 483</b>	<b>33 016</b>	<b>126 726</b>	<b>121 878</b>	<b>246 398</b>	<b>20 178</b>
326	Plastics & rubber products mfg . . . . .	—	4	3	548	11 680	484	440	9 615	31 315	34 414	65 664	D
3261	Plastics product mfg . . . . .	—	4	3	548	11 680	484	440	9 615	31 315	34 414	65 664	D
<b>31-33</b>	<b>COSHOCTON, OH Manufacturing . . . . .</b>	<b>—</b>	<b>27</b>	<b>20</b>	<b>3 793</b>	<b>122 138</b>	<b>2 730</b>	<b>5 936</b>	<b>75 954</b>	<b>407 354</b>	<b>509 544</b>	<b>910 209</b>	<b>30 532</b>
326	Plastics & rubber products mfg . . . . .	—	3	2	g	D	D	D	D	D	D	D	D
3262	Rubber product mfg . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
32629	Other rubber product mfg . . . . .	—	2	1	f	D	D	D	D	D	D	D	D
326299	All other rubber product mfg . . . . .	—	2	1	f	D	D	D	D	D	D	D	D

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[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>CRESTLINE, OH *</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>8</b>	<b>3</b>	<b>f</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
327	Nonmetallic mineral product mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3272	Glass & glass product mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
327215	Glass product mfg made of purchased glass . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
<b>CUYAHOGA FALLS, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>1</b>	<b>88</b>	<b>35</b>	<b>3 220</b>	<b>111 431</b>	<b>2 263</b>	<b>4 433</b>	<b>60 326</b>	<b>315 078</b>	<b>219 007</b>	<b>531 882</b>	<b>26 976</b>
325	Chemical mfg . . . . .	1	6	6	1 077	42 588	636	1 459	16 282	131 920	94 024	224 221	9 779
3256	Soap, cleaning compound, & toilet preparation mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
32561	Soap & cleaning compound mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
325612	Polish & other sanitation good mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg . . . . .	-	15	10	753	26 780	542	955	17 231	64 128	30 737	93 781	11 458
<b>DAYTON, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	<b>1</b>	<b>350</b>	<b>138</b>	<b>20 112</b>	<b>811 184</b>	<b>15 082</b>	<b>32 626</b>	<b>564 428</b>	<b>1 599 319</b>	<b>1 986 134</b>	<b>3 579 404</b>	<b>128 455</b>
311	Food mfg . . . . .	-	12	4	f	D	D	D	D	D	D	D	10 588
323	Printing & related support activities . . . . .	-	53	12	1 197	44 556	804	1 566	26 423	103 091	53 683	156 329	4 841
3231	Printing & related support activities . . . . .	-	53	12	1 197	44 556	804	1 566	26 423	103 091	53 683	156 329	4 841
32311	Printing . . . . .	-	48	12	1 161	43 654	782	1 519	25 774	101 110	53 130	153 749	D
325	Chemical mfg . . . . .	3	11	8	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg . . . . .	1	11	4	1 410	52 680	1 172	2 226	38 388	44 978	62 881	109 246	4 324
3262	Rubber product mfg . . . . .	-	3	1	g	D	D	D	D	D	D	D	D
32629	Other rubber product mfg . . . . .	-	2	1	g	D	D	D	D	D	D	D	D
326291	Rubber product mfg for mechanical use . . . . .	-	2	1	g	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	4	7	5	f	D	D	D	D	D	D	D	2 342
3315	Foundries . . . . .	4	6	4	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	2	113	44	2 922	106 636	2 111	4 244	63 077	226 662	111 168	337 193	13 272
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	2	49	18	1 067	37 647	835	1 744	25 548	66 018	33 634	98 829	5 829
33271	Machine shops . . . . .	-	36	11	702	27 680	548	1 208	18 624	46 062	21 672	67 123	4 410
332710	Machine shops . . . . .	-	36	11	702	27 680	548	1 208	18 624	46 062	21 672	67 123	4 410
3328	Coating, engraving, heat treating, & allied activities . . . . .	-	23	9	538	15 898	391	687	9 568	41 052	11 652	52 676	2 012
33281	Coating, engraving, heat treating, & allied activities . . . . .	-	23	9	538	15 898	391	687	9 568	41 052	11 652	52 676	2 012
333	Machinery mfg . . . . .	3	53	23	2 978	125 872	2 176	5 239	85 390	236 569	166 408	393 634	13 060
3332	Industrial machinery mfg . . . . .	9	4	2	f	D	D	D	D	D	D	D	D
33329	Other industrial machinery mfg . . . . .	9	4	2	f	D	D	D	D	D	D	D	D
333298	All other industrial machinery mfg . . . . .	9	3	2	f	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg . . . . .	3	38	17	1 263	55 957	960	2 037	41 590	95 173	39 484	140 062	4 847
33351	Metalworking machinery mfg . . . . .	3	38	17	1 263	55 957	960	2 037	41 590	95 173	39 484	140 062	4 847
3339	Other general-purpose machinery mfg . . . . .	-	5	3	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
335312	Motor & generator mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D



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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>DAYTON, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
336	Transportation equipment mfg .....	-	15	10	6 873	335 629	5 722	13 276	269 075	474 420	1 038 860	1 513 956	D
3363	Motor vehicle parts mfg ...	-	11	7	i	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system mfg .....	-	2	1	h	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system mfg .....	-	2	1	h	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	2	2	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	-	2	2	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg .....	-	3	2	g	D	D	D	D	D	D	D	D
336391	Motor vehicle air-conditioning mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
	<b>DEFIANCE, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>23</b>	<b>13</b>	<b>5 607</b>	<b>278 144</b>	<b>4 833</b>	<b>10 684</b>	<b>231 745</b>	<b>493 455</b>	<b>595 719</b>	<b>1 087 601</b>	<b>21 782</b>
327	Nonmetallic mineral product mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3279	Other nonmetallic mineral product mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
32799	All other nonmetallic mineral product mfg ...	-	2	2	f	D	D	D	D	D	D	D	D
327993	Mineral wool mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
3315	Foundries .....	-	1	1	h	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	-	1	1	h	D	D	D	D	D	D	D	D
331511	Iron foundries .....	-	1	1	h	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	5	4	559	21 194	411	927	12 950	41 420	33 142	73 665	6 159
3363	Motor vehicle parts mfg ...	-	5	4	559	21 194	411	927	12 950	41 420	33 142	73 665	6 159
	<b>DELAWARE, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>38</b>	<b>17</b>	<b>2 370</b>	<b>99 678</b>	<b>1 242</b>	<b>2 623</b>	<b>43 114</b>	<b>497 673</b>	<b>343 727</b>	<b>832 081</b>	<b>15 997</b>
325	Chemical mfg .....	-	7	3	g	D	D	D	D	D	D	D	D
3255	Paint, coating, & adhesive mfg .....	-	4	1	g	D	D	D	D	D	D	D	D
32551	Paint & coating mfg .....	-	3	1	g	D	D	D	D	D	D	D	D
325510	Paint & coating mfg ...	-	3	1	g	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	4	4	f	D	D	D	D	D	D	D	D
	<b>DOVER, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>38</b>	<b>21</b>	<b>2 403</b>	<b>83 344</b>	<b>1 695</b>	<b>3 635</b>	<b>51 389</b>	<b>256 287</b>	<b>401 232</b>	<b>668 525</b>	<b>10 482</b>
	<b>DUBLIN, OH *</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>24</b>	<b>5</b>	<b>1 142</b>	<b>36 802</b>	<b>609</b>	<b>1 099</b>	<b>16 786</b>	<b>100 764</b>	<b>55 251</b>	<b>157 618</b>	<b>21 635</b>
334	Computer & electronic product mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
	<b>EASTLAKE, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>101</b>	<b>24</b>	<b>2 667</b>	<b>77 738</b>	<b>2 163</b>	<b>4 297</b>	<b>54 707</b>	<b>143 013</b>	<b>124 444</b>	<b>273 159</b>	<b>12 365</b>
331	Primary metal mfg .....	-	5	2	635	15 138	587	1 188	12 824	26 561	30 173	56 519	D
3315	Foundries .....	-	3	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	47	10	798	25 733	670	1 277	18 551	45 108	37 224	82 187	5 494
	<b>EAST LIVERPOOL, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>20</b>	<b>7</b>	<b>719</b>	<b>19 439</b>	<b>596</b>	<b>1 061</b>	<b>13 510</b>	<b>46 553</b>	<b>19 391</b>	<b>66 325</b>	<b>3 926</b>
327	Nonmetallic mineral product mfg .....	-	6	5	561	14 465	472	921	10 650	33 494	8 393	42 385	D
3271	Clay product & refractory mfg .....	-	4	4	f	D	D	D	D	D	D	D	D
	<b>EAST PALESTINE, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>19</b>	<b>9</b>	<b>783</b>	<b>15 976</b>	<b>677</b>	<b>1 281</b>	<b>11 967</b>	<b>42 104</b>	<b>23 194</b>	<b>64 872</b>	<b>891</b>
327	Nonmetallic mineral product mfg .....	-	8	5	f	D	D	D	D	D	D	D	300
3271	Clay product & refractory mfg .....	-	6	4	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>EATON, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>14</b>	<b>8</b>	<b>2 021</b>	<b>65 467</b>	<b>1 507</b>	<b>3 307</b>	<b>38 969</b>	<b>176 441</b>	<b>167 990</b>	<b>345 458</b>	<b>37 921</b>
326	Plastics & rubber products mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	-	2	1	f	D	D	D	D	D	D	D	D
3329	Other fabricated metal product mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33291	Metal valve mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
332912	Fluid power valve & hose fitting mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
<b>ELYRIA, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>132</b>	<b>58</b>	<b>7 704</b>	<b>260 233</b>	<b>5 644</b>	<b>12 298</b>	<b>162 051</b>	<b>858 688</b>	<b>747 211</b>	<b>1 610 790</b>	<b>46 698</b>
326	Plastics & rubber products mfg . . . . .	1	14	10	791	23 043	605	1 212	15 287	60 916	72 430	131 557	5 813
3261	Plastics product mfg . . . . .	1	13	9	f	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	-	4	4	f	D	D	D	D	D	D	D	D
3315	Foundries . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	-	49	23	2 800	99 221	1 869	3 742	55 815	303 013	184 752	489 246	12 573
3322	Cutlery & handtool mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33221	Cutlery & handtool mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
332212	Hand & edge tool mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	-	22	8	773	27 138	498	908	14 056	68 024	28 978	97 450	3 208
33272	Turned product & screw, nut, & bolt mfg . . . . .	-	9	6	591	22 805	352	696	11 110	60 524	25 746	86 750	2 447
333	Machinery mfg . . . . .	-	18	6	1 367	44 072	1 103	2 524	29 120	143 492	213 746	365 643	6 569
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
333415	AC & warm air heating & commercial/ industrial refig equip mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg . . . . .	-	12	4	f	D	D	D	D	D	D	D	D
3391	Medical equipment & supplies mfg . . . . .	-	5	3	f	D	D	D	D	D	D	D	D
33911	Medical equipment & supplies mfg . . . . .	-	5	3	f	D	D	D	D	D	D	D	D
339113	Surgical appliance & supplies mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
<b>EUCLID, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>108</b>	<b>42</b>	<b>8 223</b>	<b>325 981</b>	<b>4 778</b>	<b>10 435</b>	<b>166 492</b>	<b>725 724</b>	<b>945 014</b>	<b>1 627 612</b>	<b>50 206</b>
331	Primary metal mfg . . . . .	-	8	7	773	35 626	610	1 474	25 204	72 750	48 501	121 222	11 161
3314	Nonferrous metal (except aluminum) production & processing . . . . .	-	5	5	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	1	40	13	849	28 431	614	1 264	18 666	58 168	34 712	92 548	3 620
333	Machinery mfg . . . . .	-	22	11	4 345	172 774	2 358	5 024	82 300	302 933	701 834	969 415	26 784
3339	Other general-purpose machinery mfg . . . . .	-	4	3	h	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg . . . . .	-	4	3	h	D	D	D	D	D	D	D	D
333992	Welding & soldering equipment mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg . . . . .	-	3	3	985	39 458	522	1 205	19 172	185 283	66 894	248 150	4 449
3353	Electrical equipment mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)					
	<b>EUCLID, OH—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>													
336	Transportation equipment mfg .....	-	4	3	f	D	D	D	D	D	D	D	D	
3364	Aerospace product & parts mfg .....	-	2	2	f	D	D	D	D	D	D	D	D	
33641	Aerospace product & parts mfg .....	-	2	2	f	D	D	D	D	D	D	D	D	
336412	Aircraft engine & engine parts mfg ....	-	2	2	f	D	D	D	D	D	D	D	D	
	<b>EVENDALE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>25</b>	<b>17</b>	<b>i</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>97 318</b>	
326	Plastics & rubber products mfg .....	-	1	1	f	D	D	D	D	D	D	D	D	
3261	Plastics product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D	
32613	Laminated plastics plate, sheet, & shape mfg ....	-	1	1	f	D	D	D	D	D	D	D	D	
326130	Laminated plastics plate, sheet, & shape mfg .....	-	1	1	f	D	D	D	D	D	D	D	D	
336	Transportation equipment mfg .....	-	3	2	i	D	D	D	D	D	D	D	D	
3364	Aerospace product & parts mfg .....	-	3	2	i	D	D	D	D	D	D	D	D	
33641	Aerospace product & parts mfg .....	-	3	2	i	D	D	D	D	D	D	D	D	
336412	Aircraft engine & engine parts mfg ....	-	3	2	i	D	D	D	D	D	D	D	D	
	<b>FAIRBORN, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>14</b>	<b>8</b>		<b>779</b>	<b>27 004</b>	<b>574</b>	<b>1 272</b>	<b>16 944</b>	<b>83 286</b>	<b>55 807</b>	<b>139 518</b>	<b>14 969</b>
	<b>FAIRFIELD, OH *</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	1	<b>84</b>	<b>33</b>		<b>3 096</b>	<b>95 928</b>	<b>2 232</b>	<b>5 030</b>	<b>59 066</b>	<b>245 037</b>	<b>244 780</b>	<b>492 793</b>	<b>16 846</b>
332	Fabricated metal product mfg .....	-	21	7		797	28 395	575	1 418	18 477	79 971	60 920	142 903	7 362
	<b>FINDLAY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>66</b>	<b>30</b>		<b>7 559</b>	<b>271 541</b>	<b>5 475</b>	<b>11 327</b>	<b>172 177</b>	<b>696 898</b>	<b>701 111</b>	<b>1 397 274</b>	<b>88 799</b>
326	Plastics & rubber products mfg .....	-	10	10		3 538	148 167	2 302	5 258	88 526	257 580	304 185	557 193	D
3261	Plastics product mfg .....	2	7	7		g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	3	5	5		g	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	3	5	5		g	D	D	D	D	D	D	D	D
3262	Rubber product mfg .....	-	3	3		g	D	D	D	D	D	D	D	D
32621	Tire mfg .....	-	2	2		g	D	D	D	D	D	D	D	D
326211	Tire mfg (except retreading) .....	-	2	2		g	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	-	2	1		f	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg .....	-	1	1		f	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg .....	-	1	1		f	D	D	D	D	D	D	D	D
334413	Semiconductor & related device mfg .....	-	1	1		f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	15	12		h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	13	10		2 430	67 498	1 958	3 602	46 886	166 506	256 983	421 188	30 025
33634	Motor vehicle brake system mfg .....	-	2	2		f	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system mfg .....	-	2	2		f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg .....	-	3	3		684	17 350	543	1 065	11 462	30 976	42 456	73 971	5 048
336399	All other motor vehicle parts mfg .....	-	3	3		684	17 350	543	1 065	11 462	30 976	42 456	73 971	5 048
	<b>FOREST PARK, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>27</b>	<b>11</b>		<b>966</b>	<b>38 197</b>	<b>706</b>	<b>1 480</b>	<b>24 532</b>	<b>94 856</b>	<b>62 125</b>	<b>156 566</b>	<b>6 101</b>
333	Machinery mfg .....	-	5	4		524	23 513	377	761	14 887	59 694	43 370	102 566	2 999

**Table 4. Industry Statistics for Places: 1997—Con.**

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NAICS code	Geographic area and industry	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)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
	<b>FOSTORIA, OH *</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>3</b>	<b>39</b>	<b>22</b>	<b>3 528</b>	<b>126 656</b>	<b>2 775</b>	<b>5 546</b>	<b>90 008</b>	<b>304 931</b>	<b>406 339</b>	<b>713 840</b>	<b>39 634</b>
326	Plastics & rubber products mfg .....	3	3	3	543	18 919	409	891	11 484	64 783	42 790	106 349	D
332	Fabricated metal product mfg .....	-	8	5	685	16 357	560	1 094	12 063	21 388	8 650	28 922	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	6	4	f	D	D	D	D	D	D	D	D
33271	Machine shops .....	-	5	3	f	D	D	D	D	D	D	D	D
332710	Machine shops .....	-	5	3	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical & electronic equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical & electronic equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
	<b>FRANKLIN, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>39</b>	<b>21</b>	<b>1 822</b>	<b>59 908</b>	<b>1 393</b>	<b>3 020</b>	<b>40 051</b>	<b>134 979</b>	<b>183 846</b>	<b>312 579</b>	<b>15 653</b>
322	Paper mfg .....	-	8	7	712	23 490	576	1 290	16 705	66 598	93 648	155 269	11 156
3222	Converted paper product mfg .....	-	6	5	f	D	D	D	D	D	D	D	D
	<b>FREMONT, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>54</b>	<b>28</b>	<b>4 027</b>	<b>116 674</b>	<b>3 163</b>	<b>5 637</b>	<b>79 470</b>	<b>573 001</b>	<b>517 426</b>	<b>1 084 462</b>	<b>50 836</b>
311	Food mfg .....	-	7	4	f	D	D	D	D	D	D	D	8 760
326	Plastics & rubber products mfg .....	-	6	5	g	D	D	D	D	D	D	D	9 402
3261	Plastics product mfg .....	-	5	5	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	9	6	553	20 749	433	848	14 556	66 850	97 765	161 247	D
335	Electrical equipment, appliance, & component mfg .....	-	5	3	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
33591	Battery mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
	<b>GAHANNA, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>28</b>	<b>7</b>	<b>517</b>	<b>16 075</b>	<b>305</b>	<b>519</b>	<b>7 050</b>	<b>36 513</b>	<b>38 995</b>	<b>74 440</b>	<b>1 955</b>
	<b>GALION, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>35</b>	<b>17</b>	<b>1 580</b>	<b>48 732</b>	<b>1 114</b>	<b>2 148</b>	<b>31 624</b>	<b>95 618</b>	<b>121 976</b>	<b>214 334</b>	<b>6 241</b>
333	Machinery mfg .....	-	7	4	579	22 006	391	822	13 716	45 332	76 165	119 377	2 484
	<b>GARFIELD HEIGHTS, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>2</b>	<b>48</b>	<b>18</b>	<b>1 502</b>	<b>48 093</b>	<b>1 050</b>	<b>2 210</b>	<b>28 055</b>	<b>102 517</b>	<b>87 527</b>	<b>189 260</b>	<b>7 558</b>
	<b>GENEVA, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>16</b>	<b>6</b>	<b>570</b>	<b>16 541</b>	<b>422</b>	<b>983</b>	<b>11 209</b>	<b>24 647</b>	<b>71 356</b>	<b>97 376</b>	<b>1 598</b>
	<b>GIRARD, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>15</b>	<b>8</b>	<b>962</b>	<b>30 157</b>	<b>784</b>	<b>1 474</b>	<b>20 525</b>	<b>114 135</b>	<b>112 609</b>	<b>221 971</b>	<b>3 407</b>
	<b>GREEN, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>33</b>	<b>12</b>	<b>977</b>	<b>29 954</b>	<b>754</b>	<b>1 598</b>	<b>18 759</b>	<b>60 735</b>	<b>51 947</b>	<b>110 022</b>	<b>3 907</b>
	<b>GREENFIELD, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>13</b>	<b>7</b>	<b>951</b>	<b>25 166</b>	<b>776</b>	<b>1 614</b>	<b>18 572</b>	<b>57 558</b>	<b>53 428</b>	<b>111 158</b>	<b>D</b>

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>GREENVILLE, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>28</b>	<b>12</b>	<b>2 830</b>	<b>88 633</b>	<b>2 261</b>	<b>4 559</b>	<b>61 559</b>	<b>398 008</b>	<b>406 775</b>	<b>807 115</b>	<b>16 266</b>
327	Nonmetallic mineral product mfg . . . . .	-	3	2	f	D	D	D	D	D	D	D	D
3272	Glass & glass product mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg . . . . .	-	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . .	-	1	1	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
<b>GROVE CITY, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>20</b>	<b>10</b>	<b>1 165</b>	<b>42 060</b>	<b>856</b>	<b>1 648</b>	<b>26 718</b>	<b>127 827</b>	<b>94 814</b>	<b>221 097</b>	<b>5 754</b>
<b>HAMILTON, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>86</b>	<b>34</b>	<b>3 717</b>	<b>136 924</b>	<b>2 659</b>	<b>5 446</b>	<b>89 295</b>	<b>363 002</b>	<b>335 589</b>	<b>692 200</b>	<b>31 580</b>
322	Paper mfg . . . . .	-	2	2	g	D	D	D	D	D	D	D	D
3221	Pulp, paper, & paperboard mills . . . . .	-	2	2	g	D	D	D	D	D	D	D	D
32212	Paper mills . . . . .	-	2	2	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills . . . . .	-	2	2	g	D	D	D	D	D	D	D	D
333	Machinery mfg . . . . .	-	11	6	535	20 157	299	650	11 843	32 587	31 052	61 585	1 422
<b>HARRISON, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>21</b>	<b>11</b>	<b>1 592</b>	<b>40 531</b>	<b>1 033</b>	<b>2 073</b>	<b>19 918</b>	<b>81 211</b>	<b>116 303</b>	<b>198 470</b>	<b>6 730</b>
333	Machinery mfg . . . . .	-	2	1	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33391	Pump & compressor mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
333912	Air & gas compressor mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
<b>HEATH, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>11</b>	<b>5</b>	<b>1 405</b>	<b>64 370</b>	<b>1 149</b>	<b>2 579</b>	<b>49 560</b>	<b>205 508</b>	<b>322 777</b>	<b>525 319</b>	<b>4 440</b>
336	Transportation equipment mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . .	-	1	1	f	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
<b>HICKSVILLE, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>10</b>	<b>6</b>	<b>646</b>	<b>17 797</b>	<b>521</b>	<b>1 067</b>	<b>13 316</b>	<b>67 561</b>	<b>60 709</b>	<b>122 579</b>	<b>2 470</b>
<b>HIGHLAND HEIGHTS, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . .</b>	-	<b>31</b>	<b>18</b>	<b>1 948</b>	<b>90 603</b>	<b>828</b>	<b>1 704</b>	<b>26 446</b>	<b>266 889</b>	<b>302 357</b>	<b>578 487</b>	<b>18 249</b>
332	Fabricated metal product mfg . . . . .	-	8	7	546	21 732	402	873	14 637	56 962	81 595	148 855	D
334	Computer & electronic product mfg . . . . .	-	6	4	f	D	D	D	D	D	D	D	2 783
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	-	3	3	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>HILLIARD, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>35</b>	<b>22</b>	<b>2 188</b>	<b>73 622</b>	<b>1 563</b>	<b>2 815</b>	<b>37 311</b>	<b>203 687</b>	<b>298 590</b>	<b>499 855</b>	<b>15 046</b>
326	Plastics & rubber products mfg .....	4	4	4	768	25 388	581	767	9 292	72 633	27 674	99 089	6 226
3261	Plastics product mfg .....	4	4	4	768	25 388	581	767	9 292	72 633	27 674	99 089	6 226
32619	Other plastics product mfg .....	4	4	4	768	25 388	581	767	9 292	72 633	27 674	99 089	6 226
326199	All other plastics product mfg .....	4	4	4	768	25 388	581	767	9 292	72 633	27 674	99 089	6 226
<b>HILLSBORO, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>13</b>	<b>4</b>	<b>1 185</b>	<b>29 870</b>	<b>1 054</b>	<b>2 016</b>	<b>23 676</b>	<b>98 024</b>	<b>128 112</b>	<b>225 741</b>	<b>11 290</b>
336	Transportation equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical & electronic equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical & electronic equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>HUBER HEIGHTS, OH *</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>34</b>	<b>12</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>9 155</b>
334	Computer & electronic product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
334519	Other measuring & controlling device mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>HUDSON VILLAGE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>36</b>	<b>12</b>	<b>2 315</b>	<b>67 008</b>	<b>1 473</b>	<b>2 958</b>	<b>45 385</b>	<b>295 090</b>	<b>192 390</b>	<b>483 585</b>	<b>17 998</b>
332	Fabricated metal product mfg .....	-	10	4	504	18 719	322	661	10 243	74 076	38 787	106 443	5 099
339	Miscellaneous mfg .....	-	3	1	g	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg ..	-	2	1	g	D	D	D	D	D	D	D	D
33993	Doll, toy, & game mfg ...	-	1	1	g	D	D	D	D	D	D	D	D
339932	Game, toy, & children's vehicle mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>HURON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>10</b>	<b>7</b>	<b>614</b>	<b>18 028</b>	<b>462</b>	<b>1 002</b>	<b>12 399</b>	<b>45 256</b>	<b>102 297</b>	<b>146 771</b>	<b>11 140</b>
<b>INDEPENDENCE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>28</b>	<b>13</b>	<b>1 248</b>	<b>50 626</b>	<b>814</b>	<b>1 593</b>	<b>28 302</b>	<b>113 066</b>	<b>72 742</b>	<b>190 210</b>	<b>5 446</b>
<b>IRONTON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>15</b>	<b>5</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
<b>JACKSON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>14</b>	<b>5</b>	<b>1 650</b>	<b>35 580</b>	<b>1 398</b>	<b>2 814</b>	<b>25 274</b>	<b>166 954</b>	<b>145 747</b>	<b>310 582</b>	<b>14 588</b>
311	Food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	8	2	2	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	8	2	2	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	8	2	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	8	2	2	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
31-33	<b>JEFFERSON, OH (ASHTABULA COUNTY)</b> Manufacturing ....	-	8	5	586	16 267	413	870	10 482	42 306	60 179	101 961	3 603
31-33	<b>JEFFERSON, OH (MADISON COUNTY)</b> Manufacturing ....	-	8	6	749	23 244	658	1 225	19 316	72 898	89 354	162 265	D
31-33	<b>JOHNSTOWN, OH</b> Manufacturing ....	-	10	3	645	14 175	536	990	10 165	30 068	27 618	57 593	D
31-33	<b>KENT, OH</b> Manufacturing ....	-	72	31	2 412	70 201	1 807	3 512	42 154	155 054	187 053	343 001	7 761
326	Plastics & rubber products mfg .....	-	10	8	568	14 754	423	857	8 871	34 942	21 914	55 480	1 782
333	Machinery mfg .....	1	17	9	554	20 291	376	736	12 038	42 612	25 098	67 445	2 607
31-33	<b>KENTON, OH</b> Manufacturing ....	-	10	6	f	D	D	D	D	D	D	D	D
31-33	<b>KETTERING, OH *</b> Manufacturing ....	-	51	17	5 025	269 936	3 781	7 526	167 735	457 138	379 956	831 892	54 301
334	Computer & electronic product mfg .....	-	7	4	830	37 990	489	968	12 444	124 022	41 798	159 728	D
3341	Computer & peripheral equipment mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
33411	Computer & peripheral equipment mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
334119	Other computer peripheral equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	h	D	D	D	D	D	D	D	D
33633	Motor vehicle steering & suspension component (except spring) mfg ....	-	1	1	h	D	D	D	D	D	D	D	D
336330	Motor vehicle steering & suspension component (except spring) mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
31-33	<b>LAKEWOOD, OH</b> Manufacturing ....	-	41	10	1 128	44 132	777	1 744	27 380	103 812	81 379	182 108	9 998
31-33	<b>LANCASTER, OH</b> Manufacturing ....	-	78	22	4 282	134 020	3 313	6 617	90 557	366 487	262 098	625 070	24 451
327	Nonmetallic mineral product mfg .....	-	8	4	1 590	53 067	1 292	2 601	36 658	102 203	67 986	169 727	D
3272	Glass & glass product mfg .	-	4	3	1 547	51 918	1 263	2 553	35 934	99 784	65 632	164 916	D
32721	Glass & glass product mfg .....	-	4	3	1 547	51 918	1 263	2 553	35 934	99 784	65 632	164 916	D
327212	Other pressed & blown glass & glassware mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	21	5	1 005	31 752	718	1 433	19 226	74 295	48 828	121 722	1 354
31-33	<b>LEBANON, OH</b> Manufacturing ....	1	36	16	1 871	68 989	1 212	2 342	38 459	141 571	166 247	308 725	37 495
336	Transportation equipment mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	2	2	f	D	D	D	D	D	D	D	D

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>LEXINGTON, OH</b>													
31-33	<b>Manufacturing ....</b>	-	11	8	1 488	32 940	1 087	1 348	18 557	98 995	52 498	150 403	6 886
334	Computer & electronic product mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
334512	Automatic environmental control mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>LIMA, OH</b>													
31-33	<b>Manufacturing ....</b>	-	48	18	3 856	209 267	3 110	7 002	161 160	623 253	1 105 616	1 743 714	D
336	Transportation equipment mfg .....	-	3	3	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	g	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine & engine parts mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336312	Gasoline engine & engine parts mfg ....	-	1	1	g	D	D	D	D	D	D	D	D
<b>LOCKLAND, OH</b>													
31-33	<b>Manufacturing ....</b>	-	22	12	898	25 808	689	1 359	17 278	74 863	90 684	168 148	21 971
<b>LOGAN, OH</b>													
31-33	<b>Manufacturing ....</b>	-	13	10	1 943	56 794	1 664	3 215	44 372	165 451	155 642	322 232	D
326	Plastics & rubber products mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
32615	Urethane & other foam product (except polystyrene) mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
326150	Urethane & other foam product (except polystyrene) mfg ....	-	1	1	f	D	D	D	D	D	D	D	D
<b>LONDON, OH</b>													
31-33	<b>Manufacturing ....</b>	-	13	7	999	26 036	798	1 646	17 819	64 948	54 312	120 277	7 301
<b>LORAIN, OH</b>													
31-33	<b>Manufacturing ....</b>	-	64	21	7 745	340 374	6 496	12 824	256 751	3 215 673	3 431 750	6 669 531	102 675
331	Primary metal mfg .....	-	5	2	h	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
331111	Iron & steel mills .....	-	1	1	h	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	3	1	g	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
33599	All other electrical equipment & component mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment & component mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	3	3	h	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D



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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>LORDSTOWN, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>9</b>	<b>3</b>	<b>i</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
336	Transportation equipment mfg .....	-	2	2	i	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg .....	-	1	1	i	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg .....	-	1	1	i	D	D	D	D	D	D	D	D
336111	Automobile mfg .....	-	1	1	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	h	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	1	1	h	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	-	1	1	h	D	D	D	D	D	D	D	D
<b>LOUDONVILLE, OH *</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>10</b>	<b>4</b>	<b>779</b>	<b>18 454</b>	<b>703</b>	<b>1 399</b>	<b>15 397</b>	<b>44 876</b>	<b>76 443</b>	<b>126 512</b>	<b>D</b>
337	Furniture & related product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3371	Household & institutional furniture & kitchen cabinet mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33711	Wood kitchen cabinet & counter top mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
337110	Wood kitchen cabinet & counter top mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
<b>LOUISVILLE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>9</b>	<b>4</b>	<b>898</b>	<b>39 258</b>	<b>604</b>	<b>1 339</b>	<b>23 975</b>	<b>81 832</b>	<b>224 834</b>	<b>306 267</b>	<b>10 877</b>
<b>LOVELAND, OH *</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>21</b>	<b>10</b>	<b>574</b>	<b>16 208</b>	<b>375</b>	<b>710</b>	<b>8 168</b>	<b>35 357</b>	<b>39 738</b>	<b>75 418</b>	<b>1 864</b>
<b>MACEDONIA, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>46</b>	<b>19</b>	<b>1 899</b>	<b>56 378</b>	<b>1 289</b>	<b>2 362</b>	<b>29 124</b>	<b>175 063</b>	<b>204 865</b>	<b>388 576</b>	<b>23 976</b>
<b>MANSFIELD, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>126</b>	<b>55</b>	<b>7 844</b>	<b>265 361</b>	<b>5 962</b>	<b>13 078</b>	<b>181 131</b>	<b>643 978</b>	<b>613 309</b>	<b>1 256 467</b>	<b>84 708</b>
331	Primary metal mfg .....	-	3	3	g	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
331111	Iron & steel mills .....	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	1	35	17	1 185	30 921	965	2 097	20 087	60 341	59 019	119 850	4 172
333	Machinery mfg .....	-	13	6	988	36 783	605	1 113	19 018	95 149	76 680	169 672	5 530
3339	Other general-purpose machinery mfg .....	-	5	3	735	29 500	406	725	14 166	78 116	65 624	141 717	D
33391	Pump & compressor mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
333911	Pump & pumping equipment mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	-	5	2	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	-	4	1	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg .....	-	4	1	g	D	D	D	D	D	D	D	D
334512	Automatic environmental control mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	10	8	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	8	7	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	5	5	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	-	5	5	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg .....	-	2	2	f	D	D	D	D	D	D	D	D

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>MAPLE HEIGHTS, OH</b>													
31-33	Manufacturing ....	3	31	7	576	19 028	464	880	12 489	31 367	46 207	77 934	1 747
<b>MARIETTA, OH</b>													
31-33	Manufacturing ....	-	36	12	1 624	53 775	1 102	2 230	31 552	151 178	230 749	398 506	13 252
<b>MARION, OH</b>													
31-33	Manufacturing ....	-	48	23	2 723	92 581	1 877	4 072	54 520	300 441	479 777	784 864	22 967
322	Paper mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	8	4	654	27 717	309	772	11 552	45 043	60 065	111 094	D
<b>MARTINS FERRY, OH</b>													
31-33	Manufacturing ....	-	13	4	f	D	D	D	D	D	D	D	D
<b>MARYSVILLE, OH</b>													
31-33	Manufacturing ....	5	15	8	f	D	D	D	D	D	D	D	D
<b>MASON, OH</b>													
31-33	Manufacturing ....	-	39	23	4 108	133 546	2 578	5 296	68 385	327 943	580 722	894 684	49 598
332	Fabricated metal product mfg .....	-	10	7	1 177	31 288	799	1 601	20 366	90 139	78 451	168 976	8 764
333	Machinery mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	2	2	f	D	D	D	D	D	D	D	D
<b>MASSILLON, OH</b>													
31-33	Manufacturing ....	-	64	32	4 737	144 695	3 732	7 285	93 678	273 150	705 365	975 636	41 847
311	Food mfg .....	-	4	1	f	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	16	8	1 600	55 256	1 246	2 506	37 389	113 987	268 656	367 222	13 164
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	8	3	599	18 360	421	980	11 725	41 664	20 636	61 708	1 829
33272	Turned product & screw, nut, & bolt mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
<b>MAUMEE, OH</b>													
31-33	Manufacturing ....	1	40	15	2 118	103 324	1 627	3 366	74 232	283 703	316 439	596 848	40 149
336	Transportation equipment mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	3	3	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	2	2	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	-	2	2	f	D	D	D	D	D	D	D	D
<b>MAYFIELD, OH</b>													
31-33	Manufacturing ....	-	12	7	988	40 895	460	957	17 570	68 617	51 002	121 542	5 787
333	Machinery mfg .....	-	3	3	610	28 464	360	782	15 106	61 362	44 416	107 397	D
3339	Other general-purpose machinery mfg .....	-	3	3	610	28 464	360	782	15 106	61 362	44 416	107 397	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>MAYFIELD HEIGHTS, OH</b>													
31-33	Manufacturing ....	-	8	1	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	-	1	1	g	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
335314	Relay & industrial control mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>MEDINA, OH</b>													
31-33	Manufacturing ....	-	87	36	3 813	123 914	2 694	7 957	69 696	348 114	412 943	759 501	41 730
<b>MENTOR, OH</b>													
31-33	Manufacturing ....	1	244	98	8 617	274 822	6 225	11 888	155 979	870 739	599 492	1 450 412	46 151
326	Plastics & rubber products mfg .....	-	15	10	736	23 634	558	1 141	13 220	61 255	61 209	122 261	6 395
3261	Plastics product mfg .....	-	12	8	625	20 975	462	900	11 204	57 369	53 529	110 685	5 789
332	Fabricated metal product mfg .....	-	98	28	1 903	57 375	1 500	2 863	38 698	111 559	81 803	193 633	10 803
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	1	74	14	1 051	32 842	869	1 647	24 130	62 531	36 724	99 324	7 613
33271	Machine shops .....	1	63	9	602	18 509	473	868	12 443	35 281	14 367	49 638	4 680
332710	Machine shops .....	1	63	9	602	18 509	473	868	12 443	35 281	14 367	49 638	4 680
333	Machinery mfg .....	-	36	15	1 272	46 383	1 019	2 072	29 995	208 575	139 660	350 252	5 356
3339	Other general-purpose machinery mfg .....	-	8	4	663	23 754	563	1 131	15 712	166 750	113 279	282 202	2 333
33399	All other general-purpose machinery mfg .....	-	5	2	f	D	D	D	D	D	D	D	D
333992	Welding & soldering equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	13	10	1 224	33 412	896	1 687	17 891	83 078	78 033	159 526	1 997
3353	Electrical equipment mfg ..	-	4	1	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg .....	-	4	1	f	D	D	D	D	D	D	D	D
335314	Relay & industrial control mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	-	17	11	1 569	49 209	1 008	1 732	18 787	199 421	70 394	248 603	7 024
3391	Medical equipment & supplies mfg .....	-	10	6	937	32 497	476	763	10 369	165 653	56 487	203 723	6 175
33911	Medical equipment & supplies mfg .....	-	10	6	937	32 497	476	763	10 369	165 653	56 487	203 723	6 175
339113	Surgical appliance & supplies mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg ..	-	7	5	632	16 712	532	969	8 418	33 768	13 907	44 880	849
<b>MIAMISBURG, OH</b>													
31-33	Manufacturing ....	2	41	23	2 138	80 424	908	1 853	25 541	146 966	97 205	248 662	4 896
332	Fabricated metal product mfg .....	-	7	4	990	40 148	235	524	8 675	60 459	7 809	68 255	1 063
3329	Other fabricated metal product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
332995	Other ordnance & accessories mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>MIDDLEBURG HEIGHTS, OH</b>													
31-33	Manufacturing ....	4	29	11	642	19 008	484	948	11 701	39 752	33 867	73 326	1 962

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>MIDDLETOWN, OH *</b>													
31-33	<b>Manufacturing ....</b>	-	71	38	7 187	353 017	5 542	12 393	269 384	2 807 989	866 330	3 662 892	85 242
322	Paper mfg .....	-	12	10	1 409	56 086	1 012	2 422	39 926	169 471	178 312	343 258	11 909
3221	Pulp, paper, & paperboard mills .....	-	4	4	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	-	8	6	f	D	D	D	D	D	D	D	D
32221	Paperboard container mfg .....	-	6	5	f	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	-	3	3	h	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
331111	Iron & steel mills .....	-	1	1	h	D	D	D	D	D	D	D	D
<b>MILFORD, OH *</b>													
31-33	<b>Manufacturing ....</b>	-	16	7	512	13 802	232	290	3 289	25 004	31 108	57 004	D
<b>MINERVA, OH *</b>													
31-33	<b>Manufacturing ....</b>	-	13	7	1 630	53 936	1 423	2 688	36 892	146 899	91 644	234 123	5 974
331	Primary metal mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3315	Foundries .....	-	1	1	g	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	-	1	1	g	D	D	D	D	D	D	D	D
331528	Other nonferrous foundries (except die-casting) .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>MINSTER, OH</b>													
31-33	<b>Manufacturing ....</b>	6	13	7	1 553	62 223	969	2 246	39 569	331 152	231 477	561 280	9 581
333	Machinery mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
333513	Machine tool (metal forming types) mfg....	-	2	2	f	D	D	D	D	D	D	D	D
<b>MOGADORE, OH *</b>													
31-33	<b>Manufacturing ....</b>	-	21	11	933	28 165	669	1 451	17 242	91 707	107 589	198 681	3 216
<b>MONROE, OH *</b>													
31-33	<b>Manufacturing ....</b>	-	19	8	978	35 990	651	1 390	22 014	103 421	138 429	240 778	13 097
<b>MONTPELIER, OH</b>													
31-33	<b>Manufacturing ....</b>	-	19	10	1 929	61 555	1 468	2 934	40 473	177 898	379 949	554 805	9 613
333	Machinery mfg .....	-	6	4	704	20 152	498	998	11 863	48 260	65 036	113 030	D
3339	Other general-purpose machinery mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
33391	Pump & compressor mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
333911	Pump & pumping equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>MORAINE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>70</b>	<b>32</b>	<b>j</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
333	Machinery mfg .....	-	11	6	f	D	D	D	D	D	D	D	D
3336	Engine, turbine, & power transmission equipment mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
33361	Engine, turbine, & power transmission equipment mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
333618	Other engine equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	7	6	i	D	D	D	D	D	D	D	D
3361	Motor vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	6	5	h	D	D	D	D	D	D	D	7 072
33639	Other motor vehicle parts mfg .....	-	4	3	h	D	D	D	D	D	D	D	D
336391	Motor vehicle air-conditioning mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
<b>MOUNT GILEAD, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>5</b>	<b>3</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
333	Machinery mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
3332	Industrial machinery mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
33322	Plastics & rubber industry machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
333220	Plastics & rubber industry machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>MOUNT VERNON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>25</b>	<b>16</b>	<b>3 580</b>	<b>136 461</b>	<b>2 510</b>	<b>5 472</b>	<b>78 686</b>	<b>285 930</b>	<b>419 795</b>	<b>704 829</b>	<b>18 810</b>
333	Machinery mfg .....	-	4	3	g	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
33391	Pump & compressor mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
333912	Air & gas compressor mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	3	3	f	D	D	D	D	D	D	D	D
<b>NAPOLEON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>28</b>	<b>13</b>	<b>2 972</b>	<b>125 234</b>	<b>2 500</b>	<b>5 441</b>	<b>98 141</b>	<b>1 083 369</b>	<b>508 478</b>	<b>1 591 993</b>	<b>51 722</b>
311	Food mfg .....	-	3	2	g	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
31142	Fruit & vegetable canning, pickling, & drying .....	-	2	2	g	D	D	D	D	D	D	D	D
311422	Specialty canning .....	-	1	1	g	D	D	D	D	D	D	D	D

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<b>NEWARK, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>49</b>	<b>18</b>	<b>4 017</b>	<b>133 350</b>	<b>3 276</b>	<b>6 504</b>	<b>99 635</b>	<b>441 871</b>	<b>326 998</b>	<b>770 247</b>	<b>17 657</b>
327	Nonmetallic mineral product mfg .....	-	3	1	g	D	D	D	D	D	D	D	D
3279	Other nonmetallic mineral product mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
32799	All other nonmetallic mineral product mfg ...	-	2	1	g	D	D	D	D	D	D	D	D
327993	Mineral wool mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	13	6	802	18 349	690	1 346	12 883	39 514	28 718	67 527	3 090
3328	Coating, engraving, heat treating, & allied activities .....	-	2	2	f	D	D	D	D	D	D	D	D
33281	Coating, engraving, heat treating, & allied activities .....	-	2	2	f	D	D	D	D	D	D	D	D
332813	Electroplating, plating, polishing, anodizing, & coloring .....	-	2	2	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3351	Electric lighting equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33512	Lighting fixture mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335122	Commercial/industrial/institutional electric lighting fixture mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
<b>NEW BREMEN, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>9</b>	<b>3</b>	<b>h</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
333	Machinery mfg .....	-	3	3	h	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33392	Material handling equipment mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
333924	Industrial truck, tractor, trailer, & stacker machinery mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>NEWCOMERSTOWN, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>18</b>	<b>7</b>	<b>721</b>	<b>19 917</b>	<b>601</b>	<b>1 145</b>	<b>14 029</b>	<b>53 308</b>	<b>34 078</b>	<b>86 266</b>	<b>2 782</b>
<b>NEW LEXINGTON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>6</b>	<b>3</b>	<b>907</b>	<b>24 094</b>	<b>800</b>	<b>1 630</b>	<b>19 609</b>	<b>61 143</b>	<b>56 894</b>	<b>117 809</b>	<b>D</b>
331	Primary metal mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel .....	-	1	1	f	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel .....	-	1	1	f	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>NEW LONDON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>13</b>	<b>5</b>	<b>522</b>	<b>10 419</b>	<b>421</b>	<b>726</b>	<b>7 187</b>	<b>22 253</b>	<b>14 682</b>	<b>37 189</b>	<b>1 367</b>
<b>NEW PHILADELPHIA, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>3</b>	<b>29</b>	<b>12</b>	<b>2 105</b>	<b>81 257</b>	<b>1 509</b>	<b>3 092</b>	<b>52 401</b>	<b>239 302</b>	<b>222 893</b>	<b>459 316</b>	<b>13 979</b>
333	Machinery mfg .....	2	3	3	g	D	D	D	D	D	D	D	D
3331	Agriculture, construction, & mining machinery mfg ....	-	1	1	f	D	D	D	D	D	D	D	D
33312	Construction machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
333120	Construction machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D

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<b>NILES, OH</b>													
31-33	Manufacturing ....	-	37	20	2 275	95 316	1 766	4 215	68 828	294 789	326 185	628 183	14 024
331	Primary metal mfg .....	-	6	5	1 063	54 598	772	2 040	38 710	175 705	230 557	412 539	7 656
3314	Nonferrous metal (except aluminum) production & processing .....	-	2	1	f	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying ...	-	2	1	f	D	D	D	D	D	D	D	D
331491	Other nonferrous metal rolling, drawing, & extruding .....	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	2	16	10	f	D	D	D	D	D	D	D	3 104
<b>NORTH BALTIMORE, OH</b>													
31-33	Manufacturing ....	-	10	6	975	30 672	813	1 735	21 347	95 164	219 246	316 822	6 587
326	Plastics & rubber products mfg .....	1	3	3	578	20 387	465	961	14 407	53 467	34 272	87 600	D
<b>NORTH CANTON, OH</b>													
31-33	Manufacturing ....	-	19	9	3 415	125 274	2 341	4 445	80 312	426 388	167 958	604 575	37 149
335	Electrical equipment, appliance, & component mfg .....	-	2	2	h	D	D	D	D	D	D	D	D
3352	Household appliance mfg...	-	1	1	h	D	D	D	D	D	D	D	D
33521	Small electrical appliance mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
335212	Household vacuum cleaner mfg .....	-	1	1	h	D	D	D	D	D	D	D	D
<b>NORTH KINGSVILLE, OH</b>													
31-33	Manufacturing ....	-	2	2	f	D	D	D	D	D	D	D	D
325	Chemical mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3259	Other chemical product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
32599	All other chemical product & preparation mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
325991	Custom compounding of purchased resin...	-	1	1	f	D	D	D	D	D	D	D	D
<b>NORTH RIDGEVILLE, OH</b>													
31-33	Manufacturing ....	1	49	15	1 495	37 883	1 183	2 375	25 880	103 959	94 362	199 897	5 847
332	Fabricated metal product mfg .....	-	21	7	548	14 348	440	913	9 918	28 952	20 070	49 743	2 119
<b>NORTH ROYALTON, OH</b>													
31-33	Manufacturing ....	2	84	20	1 111	37 445	905	1 805	25 337	80 988	54 167	135 232	4 953
<b>NORTHWOOD, OH</b>													
31-33	Manufacturing ....	2	14	8	697	21 078	564	1 275	13 671	51 401	46 841	96 868	7 019
<b>NORTON, OH *</b>													
31-33	Manufacturing ....	-	33	8	779	25 078	540	1 075	13 707	86 602	72 601	160 417	4 398

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>NORWALK, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>42</b>	<b>22</b>	<b>3 363</b>	<b>106 668</b>	<b>2 596</b>	<b>5 283</b>	<b>71 998</b>	<b>262 564</b>	<b>201 417</b>	<b>458 819</b>	<b>12 784</b>
332	Fabricated metal product mfg .....	-	7	3	685	16 853	557	1 071	11 980	31 837	14 042	45 859	D
3328	Coating, engraving, heat treating, & allied activities ..	-	1	1	f	D	D	D	D	D	D	D	D
33281	Coating, engraving, heat treating, & allied activities .....	-	1	1	f	D	D	D	D	D	D	D	D
332812	Metal coating/engraving (exc jewelry/silverware)/allied services .....	-	1	1	f	D	D	D	D	D	D	D	D
337	Furniture & related product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3371	Household & institutional furniture & kitchen cabinet mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33712	Household & institutional furniture mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
337121	Upholstered household furniture mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>NORWOOD, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>2</b>	<b>48</b>	<b>20</b>	<b>2 932</b>	<b>108 352</b>	<b>2 037</b>	<b>4 391</b>	<b>59 574</b>	<b>300 597</b>	<b>249 304</b>	<b>555 033</b>	<b>25 954</b>
323	Printing & related support activities .....	-	9	5	945	34 627	720	1 468	19 697	114 511	49 116	164 448	7 461
3231	Printing & related support activities .....	-	9	5	945	34 627	720	1 468	19 697	114 511	49 116	164 448	7 461
32311	Printing .....	-	9	5	945	34 627	720	1 468	19 697	114 511	49 116	164 448	7 461
323110	Commercial lithographic printing ..	-	5	1	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335312	Motor & generator mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>OAKWOOD, OH (CUYAHOGA COUNTY)</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>31</b>	<b>11</b>	<b>855</b>	<b>30 919</b>	<b>581</b>	<b>1 183</b>	<b>16 147</b>	<b>60 656</b>	<b>139 851</b>	<b>201 694</b>	<b>4 027</b>
<b>OBERLIN, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>11</b>	<b>5</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>8 493</b>
<b>ONTARIO, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>12</b>	<b>9</b>	<b>3 599</b>	<b>195 147</b>	<b>3 067</b>	<b>6 523</b>	<b>165 359</b>	<b>222 232</b>	<b>358 789</b>	<b>580 893</b>	<b>26 152</b>
336	Transportation equipment mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	1	1	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>OREGON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>12</b>	<b>4</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
324	Petroleum & coal products mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
3241	Petroleum & coal products mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
32411	Petroleum refineries ....	-	1	1	f	D	D	D	D	D	D	D	D
324110	Petroleum refineries ..	-	1	1	f	D	D	D	D	D	D	D	D
<b>ORRVILLE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>35</b>	<b>20</b>	<b>3 726</b>	<b>116 410</b>	<b>2 660</b>	<b>5 433</b>	<b>72 713</b>	<b>317 708</b>	<b>359 026</b>	<b>705 065</b>	<b>19 245</b>
311	Food mfg .....	-	6	2	829	29 097	545	1 312	20 282	173 319	139 492	311 098	9 387
331	Primary metal mfg .....	-	5	3	f	D	D	D	D	D	D	D	D
3315	Foundries .....	-	4	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	3	3	886	17 716	691	808	12 473	22 148	81 306	120 067	D



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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>OTTAWA, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>9</b>	<b>6</b>	<b>2 412</b>	<b>83 628</b>	<b>2 102</b>	<b>4 318</b>	<b>67 495</b>	<b>211 997</b>	<b>442 533</b>	<b>638 231</b>	<b>23 019</b>
334	Computer & electronic product mfg.....	-	1	1	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg.....	-	1	1	g	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg.....	-	1	1	g	D	D	D	D	D	D	D	D
334411	Electron tube mfg.....	-	1	1	g	D	D	D	D	D	D	D	D
<b>OXFORD, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>10</b>	<b>1</b>	<b>f</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
335	Electrical equipment, appliance, & component mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
3353	Electrical equipment mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
33531	Electrical equipment mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
335313	Switchgear & switchboard apparatus mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
<b>PAINESVILLE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>51</b>	<b>19</b>	<b>2 499</b>	<b>108 824</b>	<b>1 822</b>	<b>4 337</b>	<b>62 294</b>	<b>431 320</b>	<b>243 304</b>	<b>710 032</b>	<b>25 388</b>
322	Paper mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
322222	Coated & laminated paper mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
<b>PARMA, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>58</b>	<b>13</b>	<b>5 002</b>	<b>278 778</b>	<b>4 327</b>	<b>10 342</b>	<b>232 950</b>	<b>388 141</b>	<b>584 554</b>	<b>972 801</b>	<b>D</b>
332	Fabricated metal product mfg.....	-	13	6	556	20 339	429	963	13 312	41 333	32 727	73 758	D
336	Transportation equipment mfg.....	-	3	2	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	2	2	h	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping.....	-	2	2	h	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping.....	-	2	2	h	D	D	D	D	D	D	D	D
<b>PERRYSBURG, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>29</b>	<b>15</b>	<b>3 597</b>	<b>194 673</b>	<b>2 646</b>	<b>6 063</b>	<b>143 425</b>	<b>339 240</b>	<b>395 930</b>	<b>737 272</b>	<b>39 537</b>
332	Fabricated metal product mfg.....	-	6	4	617	19 645	395	884	12 639	92 847	62 801	153 967	D
336	Transportation equipment mfg.....	-	1	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	g	D	D	D	D	D	D	D	D
33633	Motor vehicle steering & suspension component (except spring) mfg.....	-	1	1	g	D	D	D	D	D	D	D	D
336330	Motor vehicle steering & suspension component (except spring) mfg.....	-	1	1	g	D	D	D	D	D	D	D	D
<b>PIQUA, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>61</b>	<b>24</b>	<b>3 861</b>	<b>120 337</b>	<b>2 762</b>	<b>5 908</b>	<b>68 154</b>	<b>313 018</b>	<b>307 157</b>	<b>616 723</b>	<b>27 968</b>
326	Plastics & rubber products mfg.....	-	8	5	569	15 191	461	984	9 887	38 974	45 816	84 007	2 938
3261	Plastics product mfg.....	-	7	5	f	D	D	D	D	D	D	D	D
333	Machinery mfg.....	2	9	6	1 035	35 004	592	1 365	17 944	79 627	65 134	149 088	5 733
3339	Other general-purpose machinery mfg.....	-	2	2	f	D	D	D	D	D	D	D	D
337	Furniture & related product mfg.....	-	2	1	f	D	D	D	D	D	D	D	D
3371	Household & institutional furniture & kitchen cabinet mfg.....	-	2	1	f	D	D	D	D	D	D	D	D
33712	Household & institutional furniture mfg.....	-	1	1	f	D	D	D	D	D	D	D	D
337124	Metal household furniture mfg.....	-	1	1	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>PORT CLINTON, OH</b>													
31-33	Manufacturing ....	-	11	6	f	D	D	D	D	D	D	D	5 703
<b>PORTSMOUTH, OH</b>													
31-33	Manufacturing ....	1	28	9	842	22 854	673	1 414	15 794	46 428	43 706	89 319	3 689
<b>RAVENNA, OH</b>													
31-33	Manufacturing ....	-	35	18	2 095	71 244	1 661	3 615	51 305	213 918	132 321	343 471	13 229
326	Plastics & rubber products mfg .....	-	11	7	690	23 045	490	1 096	13 548	60 963	44 724	103 868	3 852
3262	Rubber product mfg .....	-	6	5	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3351	Electric lighting equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33511	Electric lamp bulb & part mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>READING, OH</b>													
31-33	Manufacturing ....	-	36	15	1 499	61 276	899	1 969	32 318	141 597	131 184	276 585	12 803
<b>REYNOLDSBURG, OH *</b>													
31-33	Manufacturing ....	-	15	4	591	15 978	488	965	11 876	95 827	117 574	213 038	D
<b>RITTMAN, OH *</b>													
31-33	Manufacturing ....	-	10	6	779	30 435	577	1 275	21 524	96 717	63 197	158 719	5 125
<b>ROSSFORD, OH</b>													
31-33	Manufacturing ....	-	4	3	f	D	D	D	D	D	D	D	D
<b>SABINA, OH</b>													
31-33	Manufacturing ....	-	9	4	751	20 959	550	1 076	12 467	60 853	103 281	164 278	3 028
<b>ST. BERNARD, OH</b>													
31-33	Manufacturing ....	-	25	12	g	D	D	D	D	D	D	D	D
325	Chemical mfg .....	-	5	3	g	D	D	D	D	D	D	D	D
3256	Soap, cleaning compound, & toilet preparation mfg ..	-	2	2	f	D	D	D	D	D	D	D	D
32561	Soap & cleaning compound mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
325611	Soap & other detergent mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
<b>ST. MARYS, OH</b>													
31-33	Manufacturing ....	-	22	9	1 856	66 749	1 484	3 044	49 441	166 357	285 853	451 965	22 576
326	Plastics & rubber products mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3262	Rubber product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
32629	Other rubber product mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
326291	Rubber product mfg for mechanical use .....	-	1	1	f	D	D	D	D	D	D	D	D

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<b>SALEM, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>2</b>	<b>53</b>	<b>25</b>	<b>3 821</b>	<b>119 266</b>	<b>3 049</b>	<b>6 448</b>	<b>84 752</b>	<b>297 446</b>	<b>211 506</b>	<b>505 616</b>	<b>19 086</b>
326	Plastics & rubber products mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	1	14	7	1 320	43 274	1 110	2 349	34 448	115 248	73 518	187 924	5 543
3329	Other fabricated metal product mfg .....	-	4	3	g	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
332998	Enameled iron & metal sanitary ware mfg ...	-	2	2	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	17	12	g	D	D	D	D	D	D	D	6 148
<b>SANDUSKY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>66</b>	<b>35</b>	<b>5 206</b>	<b>223 405</b>	<b>4 000</b>	<b>8 631</b>	<b>162 633</b>	<b>303 519</b>	<b>494 270</b>	<b>798 992</b>	<b>24 144</b>
332	Fabricated metal product mfg .....	-	11	5	2 020	119 268	1 623	3 844	93 291	60 835	197 452	257 072	D
3329	Other fabricated metal product mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
33299	All other fabricated metal product mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
332991	Ball & roller bearing mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	8	6	f	D	D	D	D	D	D	D	D
<b>SEBRING, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>5</b>	<b>16</b>	<b>11</b>	<b>949</b>	<b>24 508</b>	<b>701</b>	<b>1 427</b>	<b>14 655</b>	<b>48 952</b>	<b>43 774</b>	<b>91 986</b>	<b>3 370</b>
<b>SHARONVILLE, OH *</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>57</b>	<b>17</b>	<b>3 944</b>	<b>237 003</b>	<b>2 811</b>	<b>6 976</b>	<b>171 158</b>	<b>801 708</b>	<b>812 563</b>	<b>1 620 734</b>	<b>D</b>
336	Transportation equipment mfg .....	-	3	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	2	1	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>SHELBY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>13</b>	<b>6</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>5 862</b>
331	Primary metal mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3312	Steel product mfg from purchased steel .....	-	1	1	f	D	D	D	D	D	D	D	D
33121	Iron & steel pipes & tubes mfg from purchased steel .....	-	1	1	f	D	D	D	D	D	D	D	D
331210	Iron & steel pipes & tubes mfg from purchased steel .....	-	1	1	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>SIDNEY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>62</b>	<b>43</b>	<b>7 441</b>	<b>243 486</b>	<b>5 251</b>	<b>10 761</b>	<b>132 414</b>	<b>530 186</b>	<b>1 205 112</b>	<b>1 752 489</b>	<b>52 663</b>
311	Food mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
331	Primary metal mfg .....	1	5	5	741	17 893	552	1 033	11 183	31 493	23 746	56 580	1 605
3315	Foundries .....	1	4	4	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	1	4	4	f	D	D	D	D	D	D	D	D
331524	Aluminum foundries (except die-casting) ..	1	4	4	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	18	11	994	34 128	808	1 686	25 010	91 453	172 102	270 561	4 891
333	Machinery mfg .....	-	14	11	3 243	122 086	1 918	4 163	51 766	238 230	335 572	579 818	21 735
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg ..	-	2	2	g	D	D	D	D	D	D	D	D
333415	AC & warm air heating & commercial/ industrial refig equip mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
3352	Household appliance mfg ..	-	2	2	f	D	D	D	D	D	D	D	D
33522	Major appliance mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
335222	Household refrigerator & home freezer mfg ..	-	2	2	f	D	D	D	D	D	D	D	D
<b>SOLON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>114</b>	<b>68</b>	<b>11 173</b>	<b>417 574</b>	<b>6 675</b>	<b>14 383</b>	<b>209 788</b>	<b>1 347 999</b>	<b>1 056 745</b>	<b>2 398 733</b>	<b>90 684</b>
311	Food mfg .....	-	6	3	g	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
325	Chemical mfg .....	-	5	3	1 196	42 830	578	1 337	17 825	194 442	141 321	342 565	D
3256	Soap, cleaning compound, & toilet preparation mfg ..	-	2	2	g	D	D	D	D	D	D	D	D
32562	Toilet preparation mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
325620	Toilet preparation mfg ..	-	1	1	g	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	1	19	15	1 909	72 420	1 036	2 285	36 340	168 063	166 390	334 213	6 767
3325	Hardware mfg .....	9	2	1	f	D	D	D	D	D	D	D	D
33251	Hardware mfg .....	9	2	1	f	D	D	D	D	D	D	D	D
332510	Hardware mfg .....	9	2	1	f	D	D	D	D	D	D	D	D
3329	Other fabricated metal product mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
33291	Metal valve mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
332912	Fluid power valve & hose fitting mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	1	23	15	1 980	83 296	1 306	2 759	48 605	186 742	164 944	342 218	8 786
3335	Metalworking machinery mfg .....	-	8	6	1 056	44 813	781	1 656	30 420	64 330	30 816	95 149	6 665
33351	Metalworking machinery mfg .....	-	8	6	1 056	44 813	781	1 656	30 420	64 330	30 816	95 149	6 665
333515	Cutting tool & machine tool accessory mfg ..	-	3	3	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	-	14	9	2 259	83 875	1 016	2 491	26 231	183 328	163 385	349 609	17 193
3342	Communications equipment mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
33422	Radio & TV broadcasting & wireless communications equipment mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
334220	Radio & TV broadcasting & wireless communications equipment mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	-	7	4	1 013	47 387	395	1 205	16 789	99 987	96 628	199 293	10 496
33451	Navigational, measuring, medical, & control instruments mfg .....	-	7	4	1 013	47 387	395	1 205	16 789	99 987	96 628	199 293	10 496
334515	Electricity measuring & testing instrument mfg .....	-	2	1	f	D	D	D	D	D	D	D	D

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>31-33</b>	<b>SOLON, OH—Con.</b>												
	<b>Manufacturing—Con.</b>												
335	Electrical equipment, appliance, & component mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
	<b>SOUTH EUCLID, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>23</b>	<b>4</b>	<b>596</b>	<b>23 133</b>	<b>389</b>	<b>844</b>	<b>12 675</b>	<b>57 292</b>	<b>32 477</b>	<b>88 356</b>	<b>2 613</b>
	<b>SPRINGBORO, OH *</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>20</b>	<b>13</b>	<b>1 614</b>	<b>56 090</b>	<b>1 077</b>	<b>2 263</b>	<b>27 805</b>	<b>100 190</b>	<b>161 639</b>	<b>257 987</b>	<b>13 153</b>
	<b>SPRINGDALE, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>46</b>	<b>20</b>	<b>3 980</b>	<b>151 683</b>	<b>2 746</b>	<b>5 571</b>	<b>81 426</b>	<b>823 722</b>	<b>577 120</b>	<b>1 390 058</b>	<b>76 868</b>
311	Food mfg .....	9	4	2	g	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	-	6	4	572	20 276	429	912	10 739	41 631	31 691	73 240	3 533
3261	Plastics product mfg .....	-	6	4	572	20 276	429	912	10 739	41 631	31 691	73 240	3 533
333	Machinery mfg .....	-	4	2	f	D	D	D	D	D	D	D	2 154
3339	Other general-purpose machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33392	Material handling equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
333922	Conveyor & conveying equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
	<b>SPRINGFIELD, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>115</b>	<b>54</b>	<b>h</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>32 933</b>
332	Fabricated metal product mfg .....	1	30	13	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	19	10	g	D	D	D	D	D	D	D	13 517
3339	Other general-purpose machinery mfg .....	-	6	6	f	D	D	D	D	D	D	D	10 997
339	Miscellaneous mfg .....	-	12	5	f	D	D	D	D	D	D	D	D
	<b>STEUBENVILLE, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>15</b>	<b>4</b>	<b>f</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>338</b>
331	Primary metal mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
3311	Iron & steel mills & ferroalloy mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33111	Iron & steel mills & ferroalloy mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
331111	Iron & steel mills .....	-	1	1	f	D	D	D	D	D	D	D	D
	<b>STOW, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>72</b>	<b>28</b>	<b>2 527</b>	<b>89 381</b>	<b>1 694</b>	<b>3 519</b>	<b>49 417</b>	<b>179 497</b>	<b>165 763</b>	<b>342 539</b>	<b>25 487</b>
322	Paper mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
322222	Coated & laminated paper mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
	<b>STREETSBORO, OH</b>												
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>32</b>	<b>20</b>	<b>2 184</b>	<b>65 850</b>	<b>1 544</b>	<b>3 267</b>	<b>38 974</b>	<b>222 657</b>	<b>118 609</b>	<b>341 015</b>	<b>18 107</b>
326	Plastics & rubber products mfg .....	-	5	4	840	22 128	702	1 516	15 544	53 874	41 451	95 453	5 506
3261	Plastics product mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	3	2	f	D	D	D	D	D	D	D	D

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[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>STRONGSVILLE, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>76</b>	<b>35</b>	<b>3 286</b>	<b>122 671</b>	<b>2 178</b>	<b>4 550</b>	<b>68 283</b>	<b>340 221</b>	<b>330 245</b>	<b>650 934</b>	<b>20 245</b>
332	Fabricated metal product mfg .....	-	19	11	856	30 319	618	1 379	19 005	96 116	53 518	149 191	D
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	14	8	536	18 151	445	1 016	13 582	64 288	26 938	90 430	D
333	Machinery mfg .....	-	17	5	759	34 042	396	661	14 351	130 319	74 855	190 185	D
3332	Industrial machinery mfg ..	-	4	3	f	D	D	D	D	D	D	D	D
33322	Plastics & rubber industry machinery mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
333220	Plastics & rubber industry machinery mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	4	2	f	D	D	D	D	D	D	D	D
<b>STRUTHERS, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>21</b>	<b>9</b>	<b>643</b>	<b>15 117</b>	<b>567</b>	<b>947</b>	<b>9 949</b>	<b>45 399</b>	<b>86 948</b>	<b>131 852</b>	<b>2 745</b>
<b>TALLMADGE, OH *</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>52</b>	<b>24</b>	<b>1 661</b>	<b>55 276</b>	<b>1 259</b>	<b>2 406</b>	<b>33 819</b>	<b>117 103</b>	<b>83 096</b>	<b>198 435</b>	<b>11 358</b>
<b>TIFFIN, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>40</b>	<b>16</b>	<b>2 967</b>	<b>96 253</b>	<b>2 374</b>	<b>4 864</b>	<b>70 803</b>	<b>271 920</b>	<b>184 877</b>	<b>461 356</b>	<b>D</b>
327	Nonmetallic mineral product mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
3271	Clay product & refractory mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
32711	Pottery, ceramics, & plumbing fixture mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
327111	Vitreous china plumbing fixture & bathroom accessories mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	3	2	f	D	D	D	D	D	D	D	D
3335	Metalworking machinery mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
333513	Machine tool (metal forming types) mfg...	-	1	1	f	D	D	D	D	D	D	D	D
<b>TIPP CITY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>35</b>	<b>15</b>	<b>1 940</b>	<b>62 357</b>	<b>1 328</b>	<b>2 895</b>	<b>33 403</b>	<b>153 113</b>	<b>106 662</b>	<b>257 963</b>	<b>10 356</b>
<b>TOLEDO, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>462</b>	<b>167</b>	<b>25 446</b>	<b>1 100 980</b>	<b>20 604</b>	<b>42 651</b>	<b>848 432</b>	<b>2 764 850</b>	<b>6 461 904</b>	<b>9 282 316</b>	<b>171 073</b>
311	Food mfg .....	-	19	7	1 175	54 277	880	1 934	40 167	515 947	337 847	857 533	D
3112	Grain & oilseed milling ....	-	2	2	f	D	D	D	D	D	D	D	D
31123	Breakfast cereal mfg ....	-	1	1	f	D	D	D	D	D	D	D	D
311230	Breakfast cereal mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
313	Textile mills .....	2	2	2	f	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	2	73	17	1 367	43 987	896	1 870	27 887	91 391	64 203	155 388	9 094
3231	Printing & related support activities .....	2	73	17	1 367	43 987	896	1 870	27 887	91 391	64 203	155 388	9 094
32311	Printing .....	2	63	14	g	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing ..	2	30	8	659	22 569	452	982	14 872	46 711	35 547	82 086	3 680
324	Petroleum & coal products mfg .....	-	4	1	f	D	D	D	D	D	D	D	D
3241	Petroleum & coal products mfg .....	-	4	1	f	D	D	D	D	D	D	D	D
32411	Petroleum refineries ..	-	1	1	f	D	D	D	D	D	D	D	D
324110	Petroleum refineries ..	-	1	1	f	D	D	D	D	D	D	D	D
326	Plastics & rubber products mfg .....	2	22	12	603	13 263	433	832	8 732	31 837	32 560	64 562	1 929

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>TOLEDO, OH—Con.</b>													
<b>31-33</b>	<b>Manufacturing—Con.</b>												
327	Nonmetallic mineral product mfg . . . . .	-	12	4	1 410	48 054	1 237	2 495	39 148	168 340	114 416	282 982	6 374
3272	Glass & glass product mfg . . . . .	-	4	2	g	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg . . . . .	-	4	2	g	D	D	D	D	D	D	D	D
327212	Other pressed & blown glass & glassware mfg . . . . .	-	2	1	g	D	D	D	D	D	D	D	D
331	Primary metal mfg . . . . .	-	10	6	1 039	45 840	836	1 891	34 946	101 633	197 356	297 483	D
3315	Foundries . . . . .	-	5	2	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries . . . . .	-	5	2	f	D	D	D	D	D	D	D	D
331521	Aluminum die-casting foundries . . . . .	-	3	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg . . . . .	-	121	41	3 070	104 661	2 328	4 702	66 827	196 455	254 395	468 919	11 766
3321	Forging & stamping . . . . .	1	11	9	590	19 428	448	828	12 477	31 962	35 004	67 771	1 789
33211	Forging & stamping . . . . .	1	11	9	590	19 428	448	828	12 477	31 962	35 004	67 771	1 789
3327	Machine shops, turned product, & screw, nut, & bolt mfg . . . . .	-	49	12	f	D	D	D	D	D	D	D	D
33271	Machine shops . . . . .	-	41	8	580	22 072	456	945	15 037	38 585	20 956	60 625	2 901
332710	Machine shops . . . . .	-	41	8	580	22 072	456	945	15 037	38 585	20 956	60 625	2 901
3328	Coating, engraving, heat treating, & allied activities . . . . .	-	21	9	772	25 306	592	1 237	16 670	48 034	141 604	205 800	D
33281	Coating, engraving, heat treating, & allied activities . . . . .	-	21	9	772	25 306	592	1 237	16 670	48 034	141 604	205 800	D
333	Machinery mfg . . . . .	1	51	22	1 442	59 009	1 049	2 183	40 377	95 334	78 578	183 116	8 452
3335	Metalworking machinery mfg . . . . .	2	32	15	973	41 999	788	1 700	32 356	52 897	22 260	84 411	7 042
33351	Metalworking machinery mfg . . . . .	2	32	15	973	41 999	788	1 700	32 356	52 897	22 260	84 411	7 042
336	Transportation equipment mfg . . . . .	-	25	17	11 372	591 734	10 388	21 854	515 926	1 088 055	4 031 983	5 146 060	54 835
3361	Motor vehicle mfg . . . . .	-	1	1	i	D	D	D	D	D	D	D	D
33611	Automobile & light duty motor vehicle mfg . . . . .	-	1	1	i	D	D	D	D	D	D	D	D
336112	Light truck & utility vehicle mfg . . . . .	-	1	1	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg . . . . .	-	19	13	i	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg . . . . .	-	1	1	h	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg . . . . .	3	9	7	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg . . . . .	3	9	7	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg . . . . .	4	41	10	952	26 137	607	1 001	11 697	65 995	37 016	102 710	2 676
3391	Medical equipment & supplies mfg . . . . .	4	18	5	621	16 402	381	553	6 858	44 925	19 633	64 882	1 765
33911	Medical equipment & supplies mfg . . . . .	4	18	5	621	16 402	381	553	6 858	44 925	19 633	64 882	1 765
<b>TORONTO, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . . .</b>	-	<b>6</b>	<b>3</b>	<b>f</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
331	Primary metal mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production & processing . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
33149	Other nonferrous metal rolling, drawing, extruding, & alloying . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
331491	Other nonferrous metal rolling, drawing, & extruding . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
<b>TRENTON, OH</b>													
<b>31-33</b>	<b>Manufacturing . . . . .</b>	-	<b>7</b>	<b>3</b>	<b>f</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
312	Beverage & tobacco product mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
3121	Beverage mfg . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
31212	Breweries . . . . .	-	1	1	f	D	D	D	D	D	D	D	D
312120	Breweries . . . . .	-	1	1	f	D	D	D	D	D	D	D	D

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>TROTWOOD, OH</b>													
31-33	Manufacturing ....	-	22	8	601	19 061	429	816	11 154	43 093	26 427	69 639	7 177
<b>TROY, OH</b>													
31-33	Manufacturing ....	-	65	30	5 694	198 929	3 945	7 942	115 298	718 818	703 288	1 389 386	68 640
322	Paper mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
3222	Converted paper product mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
32222	Paper bag & coated & treated paper mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
322222	Coated & laminated paper mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	18	9	1 286	42 392	824	1 734	25 436	195 982	150 275	351 046	D
3339	Other general-purpose machinery mfg .....	-	5	3	f	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg .....	-	5	3	f	D	D	D	D	D	D	D	D
333992	Welding & soldering equipment mfg .....	-	4	3	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	-	2	1	g	D	D	D	D	D	D	D	D
3344	Semiconductor & other electronic component mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33441	Semiconductor & other electronic component mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
334411	Electron tube mfg ....	-	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	1	5	5	g	D	D	D	D	D	D	D	9 416
3363	Motor vehicle parts mfg ...	5	4	4	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
3364	Aerospace product & parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33641	Aerospace product & parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336413	Other aircraft part & auxiliary equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>TWINSBURG, OH</b>													
31-33	Manufacturing ....	-	83	45	6 179	317 756	4 704	10 191	240 805	556 580	582 221	1 141 514	109 905
326	Plastics & rubber products mfg .....	-	9	6	656	20 404	509	1 158	13 007	52 576	36 594	90 399	3 330
3261	Plastics product mfg .....	-	8	5	f	D	D	D	D	D	D	D	D
334	Computer & electronic product mfg .....	-	10	8	672	21 273	475	954	10 347	85 542	83 283	168 368	3 406
336	Transportation equipment mfg .....	-	4	3	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	4	3	h	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	2	1	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	-	2	1	g	D	D	D	D	D	D	D	D
<b>UHRICHSVILLE, OH</b>													
31-33	Manufacturing ....	-	11	5	554	15 754	372	731	11 262	46 426	9 855	56 541	D



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NAICS code	Geographic area and industry	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)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>UPPER SANDUSKY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>2</b>	<b>20</b>	<b>13</b>	<b>2 563</b>	<b>68 233</b>	<b>2 107</b>	<b>4 298</b>	<b>49 803</b>	<b>146 658</b>	<b>175 927</b>	<b>315 436</b>	<b>15 564</b>
326	Plastics & rubber products mfg .....	7	5	4	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	8	3	2	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	9	1	1	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product mfg .....	-	3	1	f	D	D	D	D	D	D	D	D
3272	Glass & glass product mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
32721	Glass & glass product mfg .....	-	2	1	f	D	D	D	D	D	D	D	D
327215	Glass product mfg made of purchased glass .....	-	2	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>URBANA, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>3</b>	<b>27</b>	<b>17</b>	<b>2 284</b>	<b>64 601</b>	<b>1 814</b>	<b>3 526</b>	<b>42 318</b>	<b>343 686</b>	<b>179 200</b>	<b>520 372</b>	<b>D</b>
<b>VANDALIA, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>44</b>	<b>26</b>	<b>4 998</b>	<b>156 205</b>	<b>3 809</b>	<b>7 931</b>	<b>104 729</b>	<b>527 650</b>	<b>512 139</b>	<b>1 035 799</b>	<b>30 686</b>
333	Machinery mfg .....	1	12	6	509	19 712	342	750	11 391	39 019	27 176	66 903	2 059
336	Transportation equipment mfg .....	-	5	4	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	4	3	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg .....	-	3	2	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg .....	-	3	2	g	D	D	D	D	D	D	D	D
<b>VAN WERT, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>22</b>	<b>13</b>	<b>3 725</b>	<b>119 528</b>	<b>3 157</b>	<b>6 435</b>	<b>95 652</b>	<b>367 109</b>	<b>325 009</b>	<b>688 529</b>	<b>20 064</b>
332	Fabricated metal product mfg .....	-	5	5	g	D	D	D	D	D	D	D	D
3321	Forging & stamping .....	-	3	3	603	21 150	443	879	13 931	43 587	37 463	82 334	D
33211	Forging & stamping .....	-	3	3	603	21 150	443	879	13 931	43 587	37 463	82 334	D
3329	Other fabricated metal product mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33291	Metal valve mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
332912	Fluid power valve & hose fitting mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
33999	All other miscellaneous mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
339991	Gasket, packing, & sealing device mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
<b>WADSWORTH, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>64</b>	<b>31</b>	<b>2 044</b>	<b>66 174</b>	<b>1 496</b>	<b>2 902</b>	<b>39 021</b>	<b>160 305</b>	<b>131 964</b>	<b>292 322</b>	<b>18 011</b>
<b>WAPAKONETA, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>-</b>	<b>22</b>	<b>11</b>	<b>1 431</b>	<b>38 972</b>	<b>1 128</b>	<b>2 122</b>	<b>25 029</b>	<b>95 343</b>	<b>77 392</b>	<b>173 940</b>	<b>7 788</b>
332	Fabricated metal product mfg .....	-	5	2	f	D	D	D	D	D	D	D	D

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NAICS code	Geographic area and industry	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 <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>WARREN, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>69</b>	<b>29</b>	<b>12 471</b>	<b>629 742</b>	<b>9 738</b>	<b>19 473</b>	<b>467 205</b>	<b>1 097 861</b>	<b>2 107 498</b>	<b>3 247 441</b>	<b>77 693</b>
331	Primary metal mfg .....	-	7	6	1 075	50 887	770	1 639	33 366	135 415	345 414	473 904	17 612
3312	Steel product mfg from purchased steel .....	-	2	2	f	D	D	D	D	D	D	D	D
33122	Rolling & drawing of purchased steel .....	-	2	2	f	D	D	D	D	D	D	D	D
331221	Cold-rolled steel shape mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, & component mfg .....	-	5	2	f	D	D	D	D	D	D	D	D
3351	Electric lighting equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33511	Electric lamp bulb & part mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335110	Electric lamp bulb & part mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	3	3	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	3	3	i	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical & electronic equipment mfg .....	-	2	2	i	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical & electronic equipment mfg .....	-	2	2	i	D	D	D	D	D	D	D	D
<b>WARRENSVILLE HEIGHTS, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>54</b>	<b>21</b>	<b>1 873</b>	<b>63 119</b>	<b>1 306</b>	<b>2 339</b>	<b>35 767</b>	<b>152 248</b>	<b>116 195</b>	<b>269 097</b>	<b>7 381</b>
<b>WASHINGTON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	<b>1</b>	<b>31</b>	<b>15</b>	<b>1 638</b>	<b>42 856</b>	<b>1 263</b>	<b>2 606</b>	<b>31 109</b>	<b>141 006</b>	<b>187 077</b>	<b>326 156</b>	<b>12 488</b>
326	Plastics & rubber products mfg .....	-	6	4	f	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	-	5	4	f	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	4	4	f	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	4	4	f	D	D	D	D	D	D	D	D
<b>WAUSEON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>34</b>	<b>21</b>	<b>1 782</b>	<b>47 408</b>	<b>1 400</b>	<b>3 010</b>	<b>32 140</b>	<b>97 497</b>	<b>110 735</b>	<b>206 153</b>	<b>14 815</b>
<b>WAVERLY CITY, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>8</b>	<b>3</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
337	Furniture & related product mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3371	Household & institutional furniture & kitchen cabinet mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33711	Wood kitchen cabinet & counter top mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
337110	Wood kitchen cabinet & counter top mfg ...	-	1	1	g	D	D	D	D	D	D	D	D
<b>WELLINGTON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>11</b>	<b>7</b>	<b>786</b>	<b>21 786</b>	<b>653</b>	<b>1 208</b>	<b>18 021</b>	<b>48 016</b>	<b>27 029</b>	<b>74 866</b>	<b>7 845</b>
<b>WELLSTON, OH</b>													
<b>31-33</b>	<b>Manufacturing ....</b>	-	<b>5</b>	<b>2</b>	<b>g</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
311	Food mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3114	Fruit & vegetable preserving & specialty food mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
31141	Frozen food mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
311412	Frozen specialty food mfg .....	-	1	1	g	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>WEST CARROLLTON CITY, OH</b>													
31-33	<b>Manufacturing ....</b>	-	42	23	3 052	135 276	2 237	5 098	91 864	389 177	490 627	880 319	55 412
322	Paper mfg .....	-	4	4	945	46 705	699	1 590	31 788	189 972	168 274	358 635	D
3221	Pulp, paper, & paperboard mills .....	-	2	2	f	D	D	D	D	D	D	D	D
32212	Paper mills .....	-	2	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product mfg .....	-	15	7	f	D	D	D	D	D	D	D	1 495
333	Machinery mfg .....	-	10	7	1 131	52 973	772	1 896	33 667	106 921	42 530	148 096	D
3335	Metalworking machinery mfg .....	-	6	5	f	D	D	D	D	D	D	D	2 847
33351	Metalworking machinery mfg .....	-	6	5	f	D	D	D	D	D	D	D	2 847
333514	Special die & tool, die set, jig, & fixture mfg ..	-	6	5	f	D	D	D	D	D	D	D	2 847
<b>WESTERVILLE, OH *</b>													
31-33	<b>Manufacturing ....</b>	-	37	10	1 206	49 828	745	1 500	20 275	99 567	94 805	191 471	6 334
<b>WESTLAKE, OH</b>													
31-33	<b>Manufacturing ....</b>	2	55	19	1 662	54 793	1 141	2 104	32 956	145 672	166 192	308 665	6 501
<b>WHITEHALL, OH</b>													
31-33	<b>Manufacturing ....</b>	-	11	2	f	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
333415	AC & warm air heating & commercial/ industrial refrig equip mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>WICKLIFFE, OH</b>													
31-33	<b>Manufacturing ....</b>	-	65	19	3 432	133 314	1 874	3 680	55 271	350 486	209 981	562 061	25 340
332	Fabricated metal product mfg .....	-	25	7	904	34 723	670	1 526	22 828	81 214	48 041	130 927	5 751
334	Computer & electronic product mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, medical, & control instruments mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, medical, & control instruments mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
334513	Industrial process control instrument mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>WILLARD, OH</b>													
31-33	<b>Manufacturing ....</b>	-	6	5	3 798	118 015	3 443	7 224	98 877	443 490	412 778	858 664	17 271
311	Food mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3118	Bakeries & tortilla mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
31182	Cookie, cracker, & pasta mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
311821	Cookie & cracker mfg ..	-	1	1	f	D	D	D	D	D	D	D	D
323	Printing & related support activities .....	-	2	1	g	D	D	D	D	D	D	D	D
3231	Printing & related support activities .....	-	2	1	g	D	D	D	D	D	D	D	D
32311	Printing .....	-	2	1	g	D	D	D	D	D	D	D	D
323117	Book printing .....	-	1	1	g	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
3331	Agriculture, construction, & mining machinery mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
33311	Agricultural implement mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
333112	Lawn & garden tractor & home lawn & garden equipment mfg .....	-	1	1	g	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>WILLOUGHBY, OH</b>													
<b>31-33</b>	<b>Manufacturing .....</b>	-	<b>197</b>	<b>63</b>	<b>5 179</b>	<b>187 819</b>	<b>3 834</b>	<b>8 299</b>	<b>117 970</b>	<b>583 386</b>	<b>251 361</b>	<b>842 315</b>	<b>38 304</b>
332	Fabricated metal product mfg .....	-	108	33	2 879	102 435	2 212	4 829	69 149	323 331	129 620	458 880	17 709
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	-	71	15	1 320	47 675	1 029	2 237	32 793	95 919	40 388	136 677	6 777
33271	Machine shops .....	1	56	8	656	21 784	493	961	14 656	38 640	15 734	54 306	2 336
332710	Machine shops .....	1	56	8	656	21 784	493	961	14 656	38 640	15 734	54 306	2 336
33272	Turned product & screw, nut, & bolt mfg .....	-	15	7	664	25 891	536	1 276	18 137	57 279	24 654	82 371	4 441
332721	Precision turned product mfg .....	-	14	7	f	D	D	D	D	D	D	D	4 441
3329	Other fabricated metal product mfg .....	-	14	8	900	34 953	691	1 499	23 925	168 923	61 446	236 438	9 188
33291	Metal valve mfg .....	-	11	7	f	D	D	D	D	D	D	D	8 903
333	Machinery mfg .....	1	31	13	792	34 390	487	1 040	15 881	62 421	40 781	104 440	6 766
3335	Metalworking machinery mfg .....	2	18	7	507	21 789	322	683	11 064	37 959	21 827	60 329	5 496
33351	Metalworking machinery mfg .....	2	18	7	507	21 789	322	683	11 064	37 959	21 827	60 329	5 496
<b>WILMINGTON, OH</b>													
<b>31-33</b>	<b>Manufacturing .....</b>	<b>1</b>	<b>17</b>	<b>8</b>	<b>2 456</b>	<b>61 078</b>	<b>2 046</b>	<b>4 410</b>	<b>46 017</b>	<b>172 792</b>	<b>141 236</b>	<b>306 117</b>	<b>D</b>
336	Transportation equipment mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>WOODLAWN, OH</b>													
<b>31-33</b>	<b>Manufacturing .....</b>	<b>2</b>	<b>50</b>	<b>24</b>	<b>1 829</b>	<b>64 002</b>	<b>1 094</b>	<b>2 081</b>	<b>29 056</b>	<b>132 602</b>	<b>133 911</b>	<b>266 876</b>	<b>30 053</b>
<b>WOOSTER, OH</b>													
<b>31-33</b>	<b>Manufacturing .....</b>	<b>-</b>	<b>43</b>	<b>21</b>	<b>6 426</b>	<b>243 264</b>	<b>4 517</b>	<b>10 577</b>	<b>154 476</b>	<b>856 510</b>	<b>711 416</b>	<b>1 583 584</b>	<b>79 551</b>
326	Plastics & rubber products mfg .....	-	6	4	g	D	D	D	D	D	D	D	D
3261	Plastics product mfg .....	-	4	3	g	D	D	D	D	D	D	D	D
32619	Other plastics product mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
326199	All other plastics product mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
333	Machinery mfg .....	-	4	2	f	D	D	D	D	D	D	D	D
3339	Other general-purpose machinery mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg .....	-	2	2	f	D	D	D	D	D	D	D	D
333996	Fluid power pump & motor mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	-	2	2	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission & power train parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission & power train parts mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	1	1	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	-	1	1	g	D	D	D	D	D	D	D	D
339	Miscellaneous mfg .....	-	6	1	f	D	D	D	D	D	D	D	D
3399	Other miscellaneous mfg ..	-	4	1	f	D	D	D	D	D	D	D	D
33999	All other miscellaneous mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
339994	Broom, brush, & mop mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
<b>WORTHINGTON, OH</b>													
<b>31-33</b>	<b>Manufacturing .....</b>	<b>2</b>	<b>46</b>	<b>13</b>	<b>1 943</b>	<b>82 679</b>	<b>1 322</b>	<b>2 460</b>	<b>40 133</b>	<b>291 279</b>	<b>167 133</b>	<b>467 687</b>	<b>19 560</b>
327	Nonmetallic mineral product mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
3279	Other nonmetallic mineral product mfg .....	-	3	3	f	D	D	D	D	D	D	D	D
32791	Abrasive product mfg ...	-	1	1	f	D	D	D	D	D	D	D	D
327910	Abrasive product mfg .	-	1	1	f	D	D	D	D	D	D	D	D

**Table 4. Industry Statistics for Places: 1997—Con.**

[Includes data for industry groups and industries with 500 employees or more. For information on geographic areas followed by \* and explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	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)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>2</sup>	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)				
<b>XENIA, OH</b>													
31-33	Manufacturing ....	1	40	14	773	20 064	594	1 128	14 134	45 847	29 420	75 726	6 556
<b>YELLOW SPRINGS, OH</b>													
31-33	Manufacturing ....	-	7	3	856	29 137	592	1 258	15 078	57 114	14 803	71 101	2 477
<b>YOUNGSTOWN, OH *</b>													
31-33	Manufacturing ....	-	148	49	4 658	166 457	3 392	6 931	108 149	413 577	539 465	953 978	20 822
331	Primary metal mfg .....	-	9	7	975	47 409	714	1 584	33 052	189 699	303 420	498 281	4 181
332	Fabricated metal product mfg .....	1	41	16	976	32 797	681	1 318	19 620	44 766	69 685	115 735	2 738
3323	Architectural & structural metals mfg .....	1	17	7	531	19 055	361	678	10 674	18 685	42 738	61 839	1 311
333	Machinery mfg .....	-	12	5	1 275	52 428	929	1 888	33 796	111 780	61 806	172 870	D
3339	Other general-purpose machinery mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
33399	All other general-purpose machinery mfg .....	-	2	2	g	D	D	D	D	D	D	D	D
333996	Fluid power pump & motor mfg .....	-	1	1	g	D	D	D	D	D	D	D	D
<b>ZANESVILLE, OH</b>													
31-33	Manufacturing ....	1	53	21	4 194	112 193	3 507	6 986	83 723	356 455	243 722	598 993	21 015
327	Nonmetallic mineral product mfg .....	-	8	5	692	20 335	605	1 062	16 621	52 283	39 201	92 495	D
335	Electrical equipment, appliance, & component mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment & component mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
33593	Wiring device mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
335931	Current-carrying wiring device mfg .....	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment mfg .....	5	2	2	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts mfg ...	5	2	2	g	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical & electronic equipment mfg .....	5	2	2	g	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical & electronic equipment mfg .....	5	2	2	g	D	D	D	D	D	D	D	D

<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>Industries with 500 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 500 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: 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.

**Table 5. Detailed Statistics for the State: 1997**

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

Item	Value	Item	Value
<b>OHIO</b>		<b>OHIO—Con.</b>	
Companies <sup>1</sup> .....	number.. 16 186	Quantity of electricity purchased for heat and power .....	1,000 kWh.. 65 476 243
		Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. 687 720
All establishments .....	number.. 17 974	Total value of shipments .....	\$1,000.. 241 902 924
Establishments with 1 to 19 employees .....	number.. 11 077	Value of resales .....	\$1,000.. 8 606 858
Establishments with 20 to 99 employees .....	number.. 4 813	Value added .....	\$1,000.. 112 491 355
Establishments with 100 employees or more .....	number.. 2 084	Total inventories, beginning of year .....	\$1,000.. 22 280 617
All employees .....	number.. 984 201	Finished goods inventories, beginning of year .....	\$1,000.. 7 957 676
Total compensation <sup>2</sup> .....	\$1,000.. 46 364 207	Work-in-process inventories, beginning of year .....	\$1,000.. 6 230 785
Annual payroll .....	\$1,000.. 35 950 500	Materials and supplies inventories, beginning of year .....	\$1,000.. 8 072 156
Total fringe benefits .....	\$1,000.. 10 413 707	Total inventories, end of year .....	\$1,000.. 22 605 641
Production workers, average for year .....	number.. 730 170	Finished goods inventories, end of year .....	\$1,000.. 8 181 781
Production workers on March 12 .....	number.. 727 354	Work-in-process inventories, end of year .....	\$1,000.. 6 306 645
Production workers on May 12 .....	number.. 727 880	Materials and supplies inventories, end of year .....	\$1,000.. 8 117 215
Production workers on August 12 .....	number.. 732 970	Gross book value of total assets at beginning of year .....	\$1,000.. 86 211 989
Production workers on November 12 .....	number.. 732 476	Total capital expenditures (new and used) .....	\$1,000.. 8 989 209
Production-worker hours .....	1,000.. 1 501 585	Capital expenditures for buildings and other structures (new and used) .....	\$1,000.. 1 248 853
Production-worker wages .....	\$1,000.. 23 560 975	Capital expenditures for machinery and equipment (new and used) .....	\$1,000.. 7 740 356
Total cost of materials .....	\$1,000.. 129 709 277	Total retirements <sup>2</sup> .....	\$1,000.. 2 912 683
Cost of materials, parts, containers, etc., consumed .....	\$1,000.. 115 907 046	Gross book value of total assets at end of year .....	\$1,000.. 92 288 565
Cost of resales .....	\$1,000.. 6 231 100	Total depreciation during year <sup>2</sup> .....	\$1,000.. 5 698 639
Cost of fuels .....	\$1,000.. 1 564 599	Total rental payments <sup>2</sup> .....	\$1,000.. 1 702 330
Cost of purchased electricity .....	\$1,000.. 2 817 246	Buildings and other structures rental payments <sup>2</sup> .....	\$1,000.. 721 547
Cost of contract work .....	\$1,000.. 3 189 286	Machinery and equipment rental payments <sup>2</sup> .....	\$1,000.. 980 763

<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.

# 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.

### **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

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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.

### **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



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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).

### **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.

### **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

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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.

### **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.

# Appendix B.

## NAICS Codes, Titles, and Descriptions

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### SECTOR 31-33 MANUFACTURING

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

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

The materials, substances, or components transformed by manufacturing establishments are raw materials that are products of agriculture, forestry, fishing, mining, or quarrying as well as products of other manufacturing establishments. The materials used may be purchased directly from producers, obtained through customary trade channels, or secured without recourse to the market by transferring the product from one establishment to another, under the same ownership.

The new product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become an input for an establishment engaged in further manufacturing. For example, the product of the alumina refinery is the input used in the primary production of aluminum; primary aluminum is the input to an aluminum wire drawing plant; and aluminum wire is the input for a fabricated wire product manufacturing establishment.

The subsectors in the Manufacturing sector generally reflect distinct production processes related to material inputs, production equipment, and employee skills. In the machinery area, where assembling is a key activity, parts and accessories for manufactured products are classified in the industry of the finished manufactured item when they are made for separate sale. For example, a replacement refrigerator door would be classified with refrigerators and an attachment for a piece of metal working

machinery would be classified with metal working machinery. However, components, input from other manufacturing establishments, are classified based on the production function of the component manufacturer. For example, electronic components are classified in Subsector 334, Computer and Electronic Product Manufacturing and stampings are classified in Subsector 332, Fabricated Metal Product Manufacturing.

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

The boundaries of manufacturing and the other sectors of the classification system can be somewhat blurry. The establishments in the manufacturing sector are engaged in the transformation of materials into new products. Their output is a new product. However, the definition of what constitutes a new product can be somewhat subjective. As clarification, the following activities are considered manufacturing in NAICS: milk bottling and pasteurizing; water bottling and processing; fresh fish packaging (oyster shucking, fish filleting); apparel jobbing (assigning of materials to contract factories or shops for fabrication or other contract operations) as well as contracting on materials owned by others; printing and related activities; ready-mixed concrete production; leather converting; grinding of lenses to prescription; wood preserving; electroplating, plating, metal heat treating, and polishing for the trade; lapidary work for the trade; fabricating signs and advertising displays; rebuilding or remanufacturing machinery (i.e., automotive parts); ship repair and renovation; machine shops; and tire retreading.

Conversely, there are activities that are sometimes considered manufacturing, but which for NAICS are classified in another sector (i.e., not classified as manufacturing). They include:

1. Logging, classified in Sector 11, Agriculture, Forestry, Fishing and Hunting, is considered a harvesting operation;
2. The beneficiating of ores and other minerals, classified in Sector 21, Mining, is considered part of the activity of mining;

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

### **311 Food Manufacturing**

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

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

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

#### **3111 Animal Food Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 31111, Animal Food Manufacturing.

##### **31111 Animal Food Manufacturing**

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

##### **311111 Dog and Cat Food Manufacturing**

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

The data published with NAICS code 311111 include the following SIC industry:

2047 Dog and cat food

#### **311119 Other Animal Food Manufacturing**

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

The data published with NAICS code 311119 include the following SIC industry:

2048 Prepared feeds and feed ingredients for animals and fowls, except dogs and cats (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311119 do not include establishments primarily engaged in the custom grinding of grain. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **3112 Grain and Oilseed Milling**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31121, Flour Milling and Malt Manufacturing; 31122, Starch and Vegetable Fats and Oils Manufacturing; and 31123, Breakfast Cereal Manufacturing.

##### **31121 Flour Milling and Malt Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) milling flour or meal from grains or vegetables; (2) preparing flour mixes or doughs from flour milled in the same establishment; (3) milling, cleaning, and polishing rice; and (4) manufacturing malt from barley, rye, or other grains.

##### **311211 Flour Milling**

This U.S. industry comprises establishments primarily engaged in (1) milling flour or meal from grains (except rice) or vegetables and/or (2) milling flour and preparing flour mixes or doughs.

The data published with NAICS code 311211 include the following SIC industries:

2034 Dehydrated fruits, vegetables, and soup mixes (pt)

2041 Flour and other grain mill products

##### **311212 Rice Milling**

This U.S. industry comprises establishments primarily engaged in one of the following: (1) milling rice; (2) cleaning and polishing rice; or (3) milling, cleaning, and polishing rice. The establishments in this industry may package the rice they mill with other ingredients.

The data published with NAICS code 311212 include the following SIC industry:

2044 Rice milling

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This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311212 do not include rice mills primarily engaged in packaging uncooked rice with other ingredients. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **311213 Malt Manufacturing**

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

The data published with NAICS code 311213 include the following SIC industry:

2083 Malt

### **31122 Starch and Vegetable Fats and Oils Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) wet milling corn and vegetables; (2) crushing oilseeds and tree nuts; (3) refining and/or blending vegetable oils; (4) manufacturing shortening and margarine; and (5) blending purchased animal fats with vegetable fats.

#### **311221 Wet Corn Milling**

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

The data published with NAICS code 311221 include the following SIC industry:

2046 Wet corn milling

#### **311222 Soybean Processing**

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

The data published with NAICS code 311222 include the following SIC industry:

2075 Soybean oil mills (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311222 do not include establishments primarily engaged in the processing of

soybean oil from soybeans crushed in the same establishment. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **311223 Other Oilseed Processing**

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

The data published with NAICS code 311223 include the following SIC industries:

2074 Cottonseed oil mills (pt)

2076 Vegetable oil mills, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311223 do not include establishments primarily engaged in the processing of vegetable oils, except soybean oil, from oilseeds crushed in the same establishment. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **311225 Fats and Oils Refining and Blending**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing shortening and margarine from purchased fats and oils; (2) refining and/or blending vegetable, oilseed, and tree nut oils from purchased oils; and (3) blending purchased animal fats with purchased vegetable fats.

The data published with NAICS code 311225 include the following SIC industries:

2074 Cottonseed oil mills (pt)

2075 Soybean oil mills (pt)

2076 Vegetable oil mills, n.e.c. (pt)

2077 Animal and marine fats and oil (pt)

2079 Shortening and cooking oils

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311225 do not include establishments primarily engaged in refining and/or blending corn oil from purchased oil. The data include establishments primarily engaged in the manufacture of vegetable oil foots. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **31123 Breakfast Cereal Manufacturing**

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

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### **311230 Breakfast Cereal Manufacturing**

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

The data published with NAICS code 311230 include the following SIC industry:

2043 Cereal breakfast foods (pt)

### **3113 Sugar and Confectionery Product Manufacturing**

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

#### **31131 Sugar Manufacturing**

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

##### **311311 Sugarcane Mills**

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

The data published with NAICS code 311312 include the following SIC industry:

2061 Raw cane sugar

##### **311312 Cane Sugar Refining**

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

The data published with NAICS code 311312 include the following SIC industry:

2062 Cane sugar refining

##### **311313 Beet Sugar Manufacturing**

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

The data published with NAICS code 311313 include the following SIC industry:

2063 Beet sugar

### **31132 Chocolate and Confectionery Manufacturing From Cacao Beans**

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

### **311320 Chocolate and Confectionery Manufacturing From Cacao Beans**

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

The data published with NAICS code 311320 include the following SIC industries:

2066 Chocolate and cocoa products

#### **31133 Confectionery Manufacturing From Purchased Chocolate**

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

##### **311330 Confectionery Manufacturing From Purchased Chocolate**

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

The data published with NAICS code 311330 include the following SIC industries:

2064 Candy and other confectionery products and chewing gum (pt)

5441 Candy, nut, and confectionery stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311330 do not include establishments primarily engaged in the manufacture of chocolate products made from purchased chocolate. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **3113301 Chocolate and Chocolate-type Confectionery Retail – Manufacturer**

Establishments primarily engaged in the manufacture of consumer-type chocolate and chocolate-type confectionery products not for immediate consumption made on the premises from chocolate produced elsewhere.

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### **3113302 Chocolate and Chocolate-type Confectionery – Manufacturer**

Establishments primarily engaged in the manufacture of consumer-type chocolate and chocolate-type confectionery products from chocolate produced elsewhere.

### **31134 Nonchocolate Confectionery Manufacturing**

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

### **311340 Nonchocolate Confectionery Manufacturing**

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

The data published with NAICS code 311340 include the following SIC industries:

2064 Candy and other confectionery products and chewing gum (pt)

2099 Food preparations, n.e.c. (pt)

5441 Candy, nut, and confectionery stores (pt)

### **3113401 Nonchocolate-Type Confectionery Products Retail – Manufacturer**

Establishments primarily engaged in the manufacture of consumer-type nonchocolate confectionery products, excluding cough drops, medicated candy, roasted peanuts, unsweetened popcorn and fountain syrup, not for immediate consumption made on the premises.

### **3113402 Nonchocolate-Type Confectionery Products – Manufacturer**

Establishments primarily engaged in the manufacture of consumer-type nonchocolate confectionery products, excluding cough drops, medicated candy, roasted peanuts, unsweetened popcorn and fountain syrup.

### **3114 Fruit and Vegetable Preserving and Specialty Food Manufacturing**

This industry group includes (1) establishments that freeze food and (2) those that use preservation processes, such as pickling, canning, and dehydrating. Both types begin their production process with inputs of vegetable or animal origin.

### **31141 Frozen Food Manufacturing**

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

### **311411 Frozen Fruit, Juice, and Vegetable Manufacturing**

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

The data published with NAICS code 311411 include the following SIC industry:

2037 Frozen fruits and vegetables

### **311412 Frozen Specialty Food Manufacturing**

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

The data published with NAICS code 311412 include the following SIC industry:

2038 Frozen specialties, n.e.c.

### **31142 Fruit and Vegetable Canning, Pickling, and Drying**

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

### **311421 Fruit and Vegetable Canning**

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

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The data published with NAICS code 311421 include the following SIC industries:

2033 Canned fruits and vegetables

2035 Pickles, sauces, and salad dressings (pt)

### **311422 Specialty Canning**

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

The data published with NAICS code 311422 include the following SIC industry:

2032 Canned specialties (pt)

### **311423 Dried and Dehydrated Food Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) drying (including freeze-dried) and/or dehydrating fruits, vegetables, and soup mixes and bouillon and/or (2) drying and/or dehydrating ingredients and packaging them with other purchased ingredients, such as rice and dry pasta.

The data published with NAICS code 311423 include the following SIC industries:

2034 Dehydrated fruits, vegetables, and soups (pt)

2099 Food preparations, n.e.c. (pt)

### **3115 Dairy Product Manufacturing**

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

31151 Dairy Product (Except Frozen) Manufacturing

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing dairy products (except frozen) from raw milk and/or processed milk products; (2) manufacturing dairy substitutes (except frozen) from soybeans and other nondairy substances; and (3) manufacturing dry, condensed, concentrated, and evaporated dairy and dairy substitute products.

#### **311511 Fluid Milk Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing processed milk products, such as pasteurized milk or cream and sour cream and/or (2) manufacturing fluid milk dairy substitutes from soybeans and other nondairy substances.

The data published with NAICS code 311511 include the following SIC industry:

2026 Fluid milk

#### **311512 Creamery Butter Manufacturing**

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

The data published with NAICS code 311512 include the following SIC industry:

2021 Creamery butter

#### **311513 Cheese Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing cheese products (except cottage cheese) from raw milk and/or processed milk products and/or (2) manufacturing cheese substitutes from soybean and other nondairy substances.

The data published with NAICS code 311513 include the following SIC industry:

2022 Cheese, natural and processed

#### **311514 Dry, Condensed, and Evaporated Dairy Product Manufacturing**

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

The data published with NAICS code 311514 include the following SIC industry:

2023 Dry, condensed and evaporated milk

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311514 do not include establishments primarily engaged in the manufacture of fluid milk processed with ultra-high temperature. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **31152 Ice Cream and Frozen Dessert Manufacturing**

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

#### **311520 Ice Cream and Frozen Dessert Manufacturing**

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

The data published with NAICS code 311520 include the following SIC industry:

2024 Ice cream and frozen desserts



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## **3116 Meat Product Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 31161, Animal Slaughtering and Processing.

### **31161 Animal Slaughtering and Processing**

This industry comprises establishments primarily engaged in one or more of the following: (1) slaughtering animals; (2) preparing processed meats and meat byproducts; and (3) rendering and/or refining animal fat, bones, and meat scraps. This industry includes establishments primarily engaged in assembly cutting and packing of meats (i.e., boxed meats) from purchased carcasses.

#### **311611 Animal (Except Poultry) Slaughtering**

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

The data published with NAICS code 311611 include the following SIC industries:

2011 Meat packing plants

2048 Prepared feeds, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311611 do not include establishments primarily engaged in custom slaughtering. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **311612 Meat Processed From Carcasses**

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

The data published with NAICS code 311612 include the following SIC industries:

2013 Sausages and other prepared meats

5147 Meat and meat products (pt)

#### **311613 Rendering and Meat Byproduct Processing**

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

The data published with NAICS code 311613 include the following SIC industry:

2077 Animal and marine fats and oil (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311613 do not include establishments primarily engaged in manufacturing lard from purchased materials. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **311615 Poultry Processing**

This U.S. industry comprises establishments primarily engaged in (1) slaughtering poultry and small game and/or (2) preparing processed poultry and small game meat and meat byproducts.

The data published with NAICS code 311615 include the following SIC industry:

2015 Poultry and egg processing (pt)

#### **3117 Seafood Product Preparation and Packaging**

This NAICS industry group includes establishments classified in NAICS Industry 31171, Seafood Product Preparation and Packaging.

#### **31171 Seafood Product Preparation and Packaging**

This industry comprises establishments primarily engaged in one or more of the following: (1) canning seafood (including soup); (2) smoking, salting, and drying seafoods; (3) eviscerating fresh fish by removing heads, fins, scales, bones, and entrails; (4) shucking and packing fresh shellfish; (5) processing marine fats and oils; and (6) freezing seafood. Establishments known as “floating factory ships” that are engaged in the gathering and processing of seafood into canned seafood products are included in this industry.

##### **311711 Seafood Canning**

This U.S. industry comprises establishments primarily engaged in (1) canning seafood (including soup) and marine fats and oils and/or (2) smoking, salting, and drying seafoods. Establishments known as “floating factory ships” that are engaged in the gathering and processing of seafood into canned seafood products are included in this industry.

The data published with NAICS code 311711 include the following SIC industries:

2077 Animal and marine fats and oil (pt)

2091 Canned and cured seafood

##### **311712 Fresh and Frozen Seafood Processing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) eviscerating fresh fish by removing heads, fins, scales, bones, and

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entrails; (2) shucking and packing fresh shellfish; (3) manufacturing frozen seafood; and (4) processing fresh and frozen marine fats and oils.

The data published with NAICS code 311712 include the following SIC industries:

2077 Animal and marine fats and oil (pt)

2092 Prepared fresh or frozen fish and seafood

### **3118 Bakeries and Tortilla Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31181, Bread and Bakery Product Manufacturing; 31182, Cookie, Cracker, and Pasta Manufacturing; and 31183, Tortilla Manufacturing.

#### **31181 Bread and Bakery Product Manufacturing**

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

##### **311811 Retail Bakeries**

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

The data published with NAICS code 311811 include the following SIC industry:

5461 Retail bakeries (pt)

##### **311812 Commercial Bakeries**

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

The data published with NAICS code 311812 include the following SIC industries:

2051 Bread, cake, and related products

2052 Cookies and crackers (pt)

##### **311813 Frozen Cakes, Pies, and Other Pastries Manufacturing**

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

The data published with NAICS code 311813 include the following SIC industry:

2053 Frozen bakery products, except bread

##### **31182 Cookie, Cracker, and Pasta Manufacturing**

This industry comprises establishments primarily engaged in one of the following: (1) manufacturing cookies and crackers; (2) preparing flour and dough mixes and

dough from flour ground elsewhere; and (3) manufacturing dry pasta. The establishments in this industry may package the dry pasta they manufacture with other ingredients.

##### **311821 Cookie and Cracker Manufacturing**

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

The data published with NAICS code 311821 include the following SIC industry:

2052 Cookies and crackers (pt)

##### **311822 Flour Mixes and Dough Manufacturing From Purchased Flour**

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

The data published with NAICS code 311822 include the following SIC industries:

2045 Blended and prepared flour

##### **311823 Dry Pasta Manufacturing**

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

The data published with NAICS code 311823 include the following SIC industry:

2098 Macaroni and spaghetti

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311823 do not include dry pasta plants primarily engaged in packaging dry pasta with other ingredients. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **31183 Tortilla Manufacturing**

This industry comprises establishments primarily engaged in manufacturing tortillas.

##### **311830 Tortilla Manufacturing**

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

The data published with NAICS code 311830 include the following SIC industry:

2099 Food preparations, n.e.c. (pt)

### **3119 Other Food Manufacturing**

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

#### **31191 Snack Food Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) salting, roasting, drying, cooking, or canning nuts; (2) processing grains or seeds into snacks; (3) manufacturing peanut butter; and (4) manufacturing potato chips, corn chips, popped popcorn, pretzels (except soft), pork rinds, and similar snacks.

##### **311911 Roasted Nuts and Peanut Butter Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) salting, roasting, drying, cooking, or canning nuts; (2) processing grains or seeds into snacks; and (3) manufacturing peanut butter.

The data published with NAICS code 311911 include the following SIC industries:

2068 Salted and roasted nuts and seeds

2099 Food preparations, n.e.c. (pt)

##### **311919 Other Snack Food Manufacturing**

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

The data published with NAICS code 311919 include the following SIC industries:

2052 Cookies and crackers (pt)

2096 Potato chips and similar snacks

#### **31192 Coffee and Tea Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) roasting coffee; (2) manufacturing coffee and tea concentrates (including instant and freeze-dried); (3) blending tea; (4) manufacturing herbal tea; and (5) manufacturing coffee extracts, flavorings, and syrups.

#### **311920 Coffee and Tea Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) roasting coffee; (2) manufacturing coffee and tea concentrates (including instant and freeze-dried); (3) blending tea; (4) manufacturing herbal tea; and (5) manufacturing coffee extracts, flavorings, and syrups.

The data published with NAICS code 311920 include the following SIC industries:

2043 Cereal breakfast foods (pt)

2095 Roasted coffee (pt)

2099 Food preparations, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311920 do not include establishments primarily engaged in the manufacture of coffee flavorings and syrups. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **31193 Flavoring Syrup and Concentrate Manufacturing**

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

##### **311930 Flavoring Syrup and Concentrate Manufacturing**

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

The data published with NAICS code 311930 include the following SIC industry:

2087 Flavoring extracts and syrups, n.e.c. (pt)

##### **31194 Seasoning and Dressing Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing dressings and sauces, such as mayonnaise, salad dressing, vinegar, mustard, horseradish, soy sauce, tarter sauce, Worcestershire sauce, and other prepared sauces (except tomato-based and gravies); (2) manufacturing spices, table salt, seasoning, and flavoring extracts (except coffee and meat), and natural food colorings; and (3) manufacturing dry mix food preparations, such as salad dressing mixes, gravy and sauce mixes, frosting mixes, and other dry mix preparations.

### **311941 Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing**

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

The data published with NAICS code 311941 include the following SIC industries:

2035 Pickles, sauces, and salad dressings (pt)

2099 Food preparations, n.e.c.(pt)

### **311942 Spice and Extract Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing spices, table salt, seasonings, flavoring extracts (except coffee and meat), and natural food colorings and/or (2) manufacturing dry mix food preparations, such as salad dressing mixes, gravy and sauce mixes, frosting mixes, and other dry mix preparations.

The data published with NAICS code 311942 include the following SIC industries:

2087 Flavoring extracts and syrups, n.e.c. (pt)

2095 Roasted coffee (pt)

2099 Food preparations, n.e.c. (pt)

2899 Chemical preparations, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311942 include establishments primarily engaged in the manufacture of coffee extracts but do not include establishments primarily engaged in the manufacture of malt extract. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **31199 All Other Food Manufacturing**

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

### **311991 Perishable Prepared Food Manufacturing**

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

The data published with NAICS code 311991 include the following SIC industry:

2099 Food preparations, n.e.c. (pt)

### **311999 All Other Miscellaneous Food Manufacturing**

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

The data published with NAICS code 311999 include the following SIC industries:

2015 Poultry slaughtering and processing (pt)

2032 Canned specialties (pt)

2087 Flavoring extracts and syrups, n.e.c. (pt)

2099 Food preparations, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 311999 do not include establishments primarily engaged in the manufacture of soup mixes from purchased dehydrated ingredients. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **312 Beverage and Tobacco Product Manufacturing**

Industries in the Beverage and Tobacco Product Manufacturing subsector manufacture beverages and tobacco products. The industry group, Beverage Manufacturing, includes three types of establishments: (1) those that manufacture nonalcoholic beverages; (2) those that manufacture alcoholic beverages through the fermentation process; and (3) those that produce distilled alcoholic beverages. Ice manufacturing, while not a beverage, is included with nonalcoholic beverage manufacturing because it uses the same production process as water purification.

In the case of activities related to the manufacture of beverages, the structure follows the defined productive processes. Brandy, a distilled beverage, was not placed

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under distillery product manufacturing, but rather under the NAICS class for winery product manufacturing since the productive process used in the manufacturing of alcoholic grape-based beverages produces both wines (fermented beverage) and brandies (distilled beverage).

The industry group, Tobacco Manufacturing, includes two types of establishments: (1) those engaged in redrying and stemming tobacco and (2) those that manufacture tobacco products, such as cigarettes and cigars.

### **3121 Beverage Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31211, Soft Drink and Ice Manufacturing; 31212, Breweries; 31213, Wineries; and 31214, Distilleries.

#### **31211 Soft Drink and Ice Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing soft drinks; (2) manufacturing ice; and (3) purifying and bottling water.

##### **312111 Soft Drink Manufacturing**

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

The data published with NAICS code 312111 include the following SIC industry:

2086 Bottled and canned soft drinks (pt)

##### **312112 Bottled Water Manufacturing**

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

The data published with NAICS code 312112 include the following SIC industry:

2086 Bottled and canned soft drinks (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 312112 do not include establishments primarily engaged in the bottling of mineral or spring water. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **312113 Ice Manufacturing**

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

The data published with NAICS code 312113 include the following SIC industry:

2097 Manufactured ice

### **31212 Breweries**

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

#### **312120 Breweries**

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

The data published with NAICS code 312120 include the following SIC industry:

2082 Malt beverages

#### **31213 Wineries**

This industry comprises establishments primarily engaged in one or more of the following: (1) growing grapes and manufacturing wine and brandies; (2) manufacturing wine and brandies from grapes and other fruits grown elsewhere; and (3) blending wines and brandies.

##### **312130 Wineries**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) growing grapes and manufacturing wine and brandies; (2) manufacturing wine and brandies from grapes and other fruits grown elsewhere; and (3) blending wines and brandies.

The data published with NAICS code 312130 include the following SIC industry:

2084 Wines, brandy, and brandy spirits

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 312130 do not include establishments primarily engaged in the manufacture of applejack. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **31214 Distilleries**

This industry comprises establishments primarily engaged in one or more of the following: (1) distilling potable liquors (except brandies); (2) distilling and blending liquors; and (3) blending and mixing liquors and other ingredients.

##### **312140 Distilleries**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) distilling potable liquors (except brandies); (2) distilling and blending liquors; and (3) blending and mixing liquors and other ingredients.

The data published with NAICS code 312140 include the following SIC industry:

2085 Distilled liquor, except brandy

## **3122 Tobacco Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31221, Tobacco Stemming and Redrying; and 31222, Tobacco Product Manufacturing.

### **31221 Tobacco Stemming and Redrying**

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

### **312210 Tobacco Stemming and Redrying**

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

The data published with NAICS code 312210 include the following SIC industry:

2141 Tobacco stemming and redrying (pt)

### **31222 Tobacco Product Manufacturing**

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

#### **312221 Cigarette Manufacturing**

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

The data published with NAICS code 312221 include the following SIC industries:

2111 Cigarettes

#### **312229 Other Tobacco Product Manufacturing**

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

The data published with NAICS code 312229 include the following SIC industries:

2121 Cigars

2131 Chewing and smoking tobacco

2141 Tobacco stemming and redrying (pt)

## **313 Textile Mills**

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

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

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

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

## **3131 Fiber, Yarn, and Thread Mills**

This NAICS industry group includes establishments classified in NAICS Industry 31311, Fiber, Yarn, and Thread Mills.

### **31311 Fiber, Yarn, and Thread Mills**

This industry comprises establishments primarily engaged in one or more of the following: (1) spinning yarn; (2) manufacturing thread of any fiber; (3) texturizing, throwing, twisting, and winding purchased yarn or manmade fiber filaments; and (4) producing hemp yarn and further processing into rope or bags.

#### **313111 Yarn Spinning Mills**

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

The data published with NAICS code 313111 include the following SIC industries:

2281 Yarn spinning mills

2299 Textile goods, n.e.c. (pt)

#### **313112 Yarn Texturizing, Throwing, and Twisting Mills**

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

The data published with NAICS code 313112 include the following SIC industry:

2282 Yarn throwing and winding mills (pt)

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### **3131121 Yarn Texturing, Throwing, and Twisting Mills – Manufacturer**

Establishments primarily engaged in texturing, throwing, twisting, spooling, or winding purchased yarns or manmade filaments.

### **3131122 Yarn Texturing, Throwing, and Twisting Mills – Commission Finisher**

Establishments primarily engaged in throwing, twisting, spooling, or winding yarns or manmade filaments on a commission basis.

### **313113 Thread Mills**

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

The data published with NAICS code 313113 include the following SIC industries:

2284 Thread mills (pt)

2299 Textile goods, n.e.c. (pt)

### **3132 Fabric Mills**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31321, Broadwoven Fabric Mills; 31322, Narrow Fabric Mills and Schiffli Machine Embroidery; 31323, Nonwoven Fabric Mills; and 31324, Knit Fabric Mills.

### **31321 Broadwoven Fabric Mills**

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

### **313210 Broadwoven Fabric Mills**

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

The data published with NAICS code 313210 include the following SIC industries:

2211 Weaving mills, cotton

2221 Weaving mills, synthetics

2231 Weaving and finishing mills, wool (pt)

2299 Textile goods, n.e.c. (pt)

### **31322 Narrow Fabric Mills and Schiffli Machine Embroidery**

This industry comprises establishments primarily engaged in one or more of the following: (1) weaving or braiding narrow fabrics; (2) manufacturing Schiffli machine embroideries; and (3) making fabric-covered elastic yarn and thread.

### **313221 Narrow Fabric Mills**

This U.S. industry comprises establishments primarily engaged in (1) weaving or braiding narrow fabrics in their final form or initially made in wider widths that are specially constructed for narrower widths and/or (2) making fabric-covered elastic yarn and thread. Establishments in this industry may weave only; weave and finish; or weave, finish, and further fabricate fabric products

The data published with NAICS code 313221 include the following SIC industries:

2241 Narrow fabric mills

2299 Textile goods, n.e.c. (pt)

### **313222 Schiffli Machine Embroidery**

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

The data published with NAICS code 313222 include the following SIC industry:

2397 Schiffli machine embroideries

### **31323 Nonwoven Fabric Mills**

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

### **313230 Nonwoven Fabric Mills**

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

The data published with NAICS code 313230 include the following SIC industries:

2297 Nonwoven fabrics

2299 Textile goods, n.e.c. (pt)

### **31324 Knit Fabric Mills**

This industry comprises establishments primarily engaged in one of the following: (1) knitting weft (i.e., circular) and warp (i.e., flat) fabric; (2) knitting and finishing

weft and warp fabric; (3) manufacturing lace; or (4) manufacturing, dyeing, and finishing lace and lace goods. Establishments in this industry may knit only; knit and finish; or knit, finish, and further fabricate fabric products (except apparel).

### **313241 Weft Knit Fabric Mills**

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

The data published with NAICS code 313241 include the following SIC industry:

2257 Circular knit fabric mills (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 313241 do not include establishments primarily engaged in the manufacture of articles of weft knit fabric. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3132411 Weft Knit Fabric Mills – Manufacturer**

Establishments primarily engaged in knitting weft (i.e., circular) fabric; knitting and finishing weft fabric; or knitting, finishing, and further fabricating weft fabric products (except apparel).

### **3132412 Weft Knit Fabric Mills – Jobber**

Establishments engaged as weft knit fabric jobbers, who perform entrepreneurial functions of a manufacturer, including buying raw materials, designing and preparing samples, arranging for fabric to be made from their materials, and marketing finished fabric or fabricated products (except apparel).

### **3132413 Weft Knit Fabric Mills – Contractor**

Establishments primarily engaged in knitting or finishing weft knit fabric or further fabricating weft knit fabric into products (except apparel) on a commission basis.

### **313249 Other Knit Fabric and Lace Mills**

This U.S. industry comprises establishments primarily engaged in one of the following: (1) knitting warp (i.e., flat) fabric; (2) knitting and finishing warp fabric; (3) manufacturing lace; or (4) manufacturing, dyeing, or finishing lace and lace goods. Establishments in this industry may knit only; knit and finish; or knit, finish, and further fabricate fabric products (except apparel).

The data published with NAICS code 313249 include the following SIC industries:

2258 Lace and warp knit fabric mills (pt)

2259 Knitting mills, n.e.c. (pt)

### **3132491 Other Knit Fabric and Lace Mills – Manufacturer**

Establishments primarily engaged in knitting warp (i.e., flat) fabric; knitting and finishing warp fabric; knitting, finishing, and further fabricating warp fabric products (except apparel); manufacturing lace; or manufacturing, dyeing, or finishing lace and lace goods.

### **3132492 Other Knit Fabric and Lace Mills – Jobber**

Establishments engaged as other knit fabric and lace jobbers, who perform entrepreneurial functions of a manufacturer, including buying raw materials, designing and preparing samples, arranging for fabric to be made from their materials, and marketing finished fabric.

### **3132493 Other Knit Fabric and Lace Mills – Contractor**

Establishments primarily engaged in knitting or finishing lace and other knit fabric or further fabricating lace and other knit fabric into products (except apparel) on a commission basis.

### **3133 Textile and Fabric Finishing and Fabric Coating Mills**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31331, Textile and Fabric Finishing Mills; and 31332, Fabric Coating Mills.

### **31331 Textile and Fabric Finishing Mills**

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

### **313311 Broadwoven Fabric Finishing Mills**

This U.S. industry comprises (1) establishments primarily engaged in finishing broadwoven fabrics and (2) establishments of converters who buy broadwoven fabrics in the grey, have them finished on contract, and sell at wholesale. Finishing operations include bleaching, dyeing, printing (e.g., roller, screen, flock, plisse), and other mechanical finishing, such as preshrinking, shrinking, sponging, calendering, mercerizing and napping.



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The data published with NAICS code 313311 include the following SIC industries:

- 2231 Weaving and finishing mills, wool (pt)
- 2261 Finishing plants, cotton
- 2262 Finishing plants, synthetics
- 5131 Piece goods, notions and other dry goods (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 313311 do not include establishments primarily engaged in the sponging of fabric for tailors and dressmakers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3133111 Broadwoven Fabric Finishing Mills – Manufacturer**

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of purchased broadwoven fabrics.

### **3133112 Broadwoven Fabric Finishing Mills – Converter**

Establishments engaged as converters who buy broadwoven fabrics in the grey, have them finished on contract, and sell at wholesale.

### **3133113 Broadwoven Fabric Finishing Mills – Commission Finisher**

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of broadwoven fabrics on a commission basis.

### **313312 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills**

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

The data published with NAICS code 313312 include the following SIC industries:

- 2231 Weaving and finishing mills, wool (pt)
- 2257 Circular knit fabric mills (pt)
- 2258 Lace and warp knit fabric mills (pt)

2269 Finishing plants, n.e.c.

2282 Yarn throwing and winding mills (pt)

2284 Thread mills (pt)

2299 Textile goods, n.e.c. (pt)

5131 Piece goods, notions and other dry goods (pt)

### **3133121 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills – Manufacturer**

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of purchased textiles, apparel, and fabrics (except broadwoven).

### **3133122 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills – Converter**

Establishments engaged as converters who buy fabrics (except broadwoven) in the grey, have them finished on contract, and sell at wholesale.

### **3133123 Textile and Fabric Finishing (Except Broadwoven Fabric) Mills – Commission Finisher**

Establishments primarily engaged in dyeing, bleaching, printing, and other finishing of textiles, apparel, and fabrics (except broadwoven) on a commission basis.

### **31332 Fabric Coating Mills**

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

### **313320 Fabric Coating Mills**

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

The data published with NAICS code 313320 include the following SIC industries:

- 2295 Coated fabrics, not rubberized
- 3069 Fabricated rubber products, n.e.c. (pt)

### **314 Textile Product Mills**

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

### **3141 Textile Furnishings Mills**

This NAICS industry group includes establishments classified in the following NAICS Industries: 31411, Carpet and Rug Mills; and 31412, Curtain and Linen Mills.

### **31411 Carpet and Rug Mills**

This industry comprises establishments primarily engaged in (1) manufacturing woven, tufted, and other carpets and rugs, such as art squares, floor mattings, needlepunch carpeting, and door mats and mattings, from textile materials or from twisted paper, grasses, reeds, sisal, jute, or rags and/or (2) finishing carpets and rugs.

#### **314110 Carpet and Rug Mills**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing woven, tufted, and other carpets and rugs, such as art squares, floor mattings, needlepunch carpeting, and door mats and mattings, from textile materials or from twisted paper, grasses, reeds, sisal, jute, or rags and/or (2) finishing carpets and rugs.

The data published with NAICS code 314110 include the following SIC industry:

2273 Carpets and rugs

#### **31412 Curtain and Linen Mills**

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

#### **314121 Curtain and Drapery Mills**

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

The data published with NAICS code 314121 include the following SIC industries:

2391 Curtains and draperies

5714 Drapery and upholstery stores (pt)

#### **314129 Other Household Textile Product Mills**

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

The data published with NAICS code 314129 include the following SIC industry:

2392 Housefurnishings, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 314129 do not include

establishments primarily engaged in the making of custom slip covers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3149 Other Textile Product Mills**

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

#### **31491 Textile Bag and Canvas Mills**

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

##### **314911 Textile Bag Mills**

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

The data published with NAICS code 314911 include the following SIC industries:

2392 Housefurnishings, n.e.c. (pt)

2393 Textile bags

##### **314912 Canvas and Related Product Mills**

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

The data published with NAICS code 314912 include the following SIC industry:

2394 Canvas and related products

#### **31499 All Other Textile Product Mills**

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

##### **314991 Rope, Cordage, and Twine Mills**

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

The data published with NAICS code 314991 include the following SIC industry:

2298 Cordage and twine

### **314992 Tire Cord and Tire Fabric Mills**

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

The data published with NAICS code 314992 include the following SIC industry:

2296 Tire cord and fabric

### **314999 All Other Miscellaneous Textile Product Mills**

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

The data published with NAICS code 314999 include the following SIC industries:

2299 Textile goods, n.e.c. (pt)

2395 Pleating and stitching (pt)

2396 Automotive and apparel trimmings (pt)

2399 Fabricated textile products, n.e.c. (pt)

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

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 314999 include establishments primarily engaged in the manufacture of other miscellaneous textile products from SIC 3999, but do not include establishments primarily engaged in the manufacture of dust rags or textile fire hoses, or engaged in the embroidery of advertising. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **315 Apparel Manufacturing**

Industries in the Apparel Manufacturing subsector group establishments with two distinct manufacturing processes: (1) cut and sew (i.e., purchasing fabric and cutting and sewing to make a garment) and (2) the manufacture of garments in establishments that first knit fabric and then cut and sew the fabric into a garment. The Apparel Manufacturing subsector includes a diverse range of establishments manufacturing full lines of ready-to-wear apparel and custom apparel: apparel contractors, performing cutting or sewing operations on materials owned by others; jobbers performing entrepreneurial functions involved in apparel manufacture; and tailors, manufacturing custom garments for individual clients are all included. Knitting, when done alone, is classified in the

Textile Mills subsector, but when knitting is combined with the production of complete garments, the activity is classified in Apparel Manufacturing.

### **3151 Apparel Knitting Mills**

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

### **31511 Hosiery and Sock Mills**

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

### **315111 Sheer Hosiery Mills**

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

The data published with NAICS code 315111 include the following SIC industries:

2251 Women's hosiery, except socks

2252 Hosiery, n.e.c. (pt)

### **315119 Other Hosiery and Sock Mills**

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

The data published with NAICS code 315119 include the following SIC industry:

2252 Hosiery, n.e.c. (pt)

### **31519 Other Apparel Knitting Mills**

This industry comprises establishments primarily engaged in one of the following: (1) knitting underwear, outerwear, and/or nightwear; (2) knitting fabric and manufacturing underwear, outerwear, and/or nightwear; or (3) knitting, manufacturing, and finishing knit underwear, outerwear, and/or nightwear.

### **315191 Outerwear Knitting Mills**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) knitting outerwear; (2) knitting fabric and manufacturing outerwear; and (3) knitting, manufacturing, and finishing knit outerwear. Examples of products made in knit outerwear mills are shirts, shorts, sweat suits, sweaters, gloves, and pants.

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The data published with NAICS code 315191 include the following SIC industries:

2253 Knit outerwear mills

2259 Knitting mills, n.e.c. (pt)

### **3151911 Outerwear Knitting Mills – Manufacturer**

Establishments primarily engaged in knitting outerwear clothing.

### **3151912 Outerwear Knitting Mills – Jobber**

Establishments engaged as knit outerwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **3151913 Outerwear Knitting Mills – Contractor**

Establishments primarily engaged in manufacturing knit outerwear on materials owned by others (commission basis).

### **315192 Underwear and Nightwear Knitting Mills**

This U.S. industry comprises establishments primarily engaged in one of the following: (1) knitting underwear and nightwear; (2) knitting fabric and manufacturing underwear and nightwear; or (3) knitting, manufacturing, and finishing knit underwear and nightwear. Examples of products produced in underwear and nightwear knitting mills are briefs, underwear T-shirts, pajamas, nightshirts, foundation garments, and panties.

The data published with NAICS code 315192 include the following SIC industries:

2254 Knit underwear mills

2259 Knitting mills, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315192 do not include knitting mills primarily engaged in the manufacture of bath and lounge robes. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3152 Cut and Sew Apparel Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing cut and sew apparel from woven fabric or purchased knit fabric. Included in this industry group is a diverse range of establishments manufacturing full lines of ready-to-wear apparel and custom apparel: apparel contractors, performing cutting or sewing operations on materials owned by others; jobbers performing entrepreneurial functions involved in apparel

manufacture; and tailors, manufacturing custom garments for individual clients. Establishments weaving or knitting fabric, without manufacturing apparel, are classified in Subsector 313, Textile Mills.

### **31521 Cut and Sew Apparel Contractors**

This industry comprises establishments commonly referred to as contractors primarily engaged in (1) cutting materials owned by others for apparel and accessories and/or (2) sewing materials owned by others for apparel and accessories.

### **315211 Men’s and Boys’ Cut and Sew Apparel Contractors**

This U.S. industry comprises establishments commonly referred to as contractors primarily engaged in (1) cutting materials owned by others for men’s and boys’ apparel and/or (2) sewing materials owned by others for men’s and boys’ apparel.

The data published with NAICS code 315211 include the following SIC industries:

2311 Men’s and boys’ suits and coats (pt)

2321 Shirts, men’s and boys’ (pt)

2322 Men’s and boys’ underwear and nightwear (pt)

2325 Men’s and boys’ trousers and slacks (pt)

2326 Men’s and boys’ work clothing (pt)

2329 Men’s and boys’ clothing, n.e.c. (pt)

2341 Women’s and children’s underwear (pt)

2384 Robes and dressing gowns (pt)

2385 Waterproof outer garments (pt)

2395 Pleating and stitching (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315211 do not include establishments primarily engaged in cut and sew contract work for men’s and boy’s neckwear, hats, shirts, other outerwear, fur goods, dress and work gloves, leather gloves and mittens, leather and sheep-lined clothing, apparel belts, or apparel and accessories, nec. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **315212 Women’s, Girls’, and Infants’ Cut and Sew Apparel Contractors**

This U.S. industry comprises establishments commonly referred to as contractors primarily engaged in (1) cutting materials owned by others for women’s, girls’, and infants’ apparel and accessories and/or (2) sewing materials owned by others for women’s, girls’, and infants’ apparel and accessories.

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The data published with NAICS code 315212 include the following SIC industries:

- 2331 Women's blouses and waists (pt)
- 2335 Women's dresses (pt)
- 2337 Women's suits and coats (pt)
- 2339 Women's outerwear, n.e.c. (pt)
- 2341 Women's and children's underwear (pt)
- 2342 Brassieres and allied garments (pt)
- 2361 Girls' and children's dresses and blouses (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2384 Robes and dressing gowns (pt)
- 2385 Waterproof outer garments (pt)
- 2389 Apparel and accessories, n.e.c. (pt)
- 2395 Pleating and stitching (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315212 do not include establishments primarily engaged in cut and sew contract work for women's, girls', and infants' hats; fur goods; dress and work gloves; leather gloves and mittens; leather and sheep-lined clothing; or apparel belts. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **31522 Men's and Boys' Cut and Sew Apparel Manufacturing**

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

### **315221 Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturing**

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

The data published with NAICS code 315221 include the following SIC industries:

- 2322 Men's and boys' underwear and nightwear (pt)
- 2341 Women's and children's underwear (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2384 Robes and dressing gowns (pt)

### **315222 Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing**

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

The data published with NAICS code 315222 include the following SIC industries:

- 2311 Men's and boys' suits and coats (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2385 Waterproof outer garments (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 315222 do not include establishments primarily engaged in custom tailoring.

### **3152221 Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing men's and boys' suits, overcoats, sport coats, tuxedos, dress uniforms, and other tailored apparel (except fur and leather) from purchased fabric.

### **3152222 - Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturing - Jobber**

Establishments engaged as men's and boys' suit, coat, and overcoat jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315223 Men's and Boys' Cut and Sew Shirt (Except Work Shirt) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' outerwear shirts from purchased fabric. Men's and boys' shirt (except

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work shirt) jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included. Unisex outerwear shirts, such as T-shirts and sweatshirts that are sized without specific reference to gender (i.e., adult S, M, L, XL) are included in this industry.

The data published with NAICS code 315223 include the following SIC industries:

2321 Shirts, men's and boys' (pt)

2361 Girls' and children's dresses and blouses (pt)

### **3152231 Men's and Boys' Cut and Sew Shirt (Except Work Shirt) Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing men's and boys' outerwear shirts from purchased fabric.

### **3152232 Men's and Boys' Cut and Sew Shirt (Except Work Shirt) Manufacturing – Jobber**

Establishments engaged as men's and boys' shirt (except work shirt) jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315224 Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing**

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

The data published with NAICS code 315224 include the following SIC industries:

2325 Men's and boys' trousers and slacks (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

### **3152241 Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing men's and boys' jeans, dungarees, and other separate trousers and slacks (except work pants) from purchased fabric.

### **3152242 Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturing – Jobbers**

Establishments engaged as men's and boys' trouser, slack, and jean jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315225 Men's and Boys' Cut and Sew Work Clothing Manufacturing**

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

The data published with NAICS code 315225 include the following SIC industry:

2326 Men's and boys' work clothing (pt)

### **3152251 Men's and Boys' Cut and Sew Work Clothing Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing men's and boys' work shirts, work pants (excluding jeans and dungarees), other work clothing, and washable service apparel from purchased fabric.

### **3152252 Men's and Boys' Cut and Sew Work Clothing Manufacturing – Jobbers**

Establishments engaged as men's and boys' work clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315228 Men's and Boys' Cut and Sew Other Outerwear Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing men's and boys' cut and sew outerwear from purchased fabric (except underwear, nightwear, shirts, suits, overcoats and tailored coats, separate trousers and slacks, and work clothing). Men's and boys' other outerwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples,

arranging for apparel to be made from their materials, and marketing finished apparel, are included. Unisex sweat-pants and similar garments that are sized without specific reference to gender (i.e., adult S, M, L, XL) are also included in this industry. Examples of products made by these establishments are athletic clothing (except athletic uniforms), bathing suits, down coats, outerwear shorts, windbreakers and jackets, and jogging suits.

The data published with NAICS code 315228 include the following SIC industries:

2329 Men's and boys' clothing, n.e.c. (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)

### **3152281 Men's and Boys' Cut and Sew Other Outerwear Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing men's and boys' cut and sew outerwear from purchased fabric (except underwear, nightwear, shirts, suits, overcoats and tailored coats, separate trousers and slacks, and working clothing).

### **3152282 Men's and Boys' Cut and Sew Other Outerwear Manufacturing – Jobbers**

Establishments engaged as men's and boys' other outerwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **31523 Women's and Girls' Cut and Sew Apparel Manufacturing**

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

### **315231 Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' bras, girdles, and other underwear; lingerie; loungewear; and nightwear from purchased fabric. Women's and girls' lingerie, loungewear, and nightwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their

materials, and marketing finished apparel, are included. Examples of products made by these establishments are bathrobes, foundation garments, nightgowns, pajamas, panties, and slips.

The data published with NAICS code 315231 include the following SIC industries:

2341 Women's and children's underwear (pt)

2342 Brassieres and allied garments (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2384 Robes and dressing gowns (pt)

2389 Apparel and accessories, n.e.c. (pt)

### **3152311 Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing women's and girls' bras, girdles, and other underwear; lingerie; loungewear; and nightwear from purchased fabric.

### **3152312 Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturing – Jobbers**

Establishments engaged as women's and girls' lingerie, loungewear, and nightwear jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315232 Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing**

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

The data published with NAICS code 315232 include the following SIC industries:

2331 Women's blouses and waists (pt)

2361 Girls' and children's dresses and blouses (pt)

### **3152321 Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing women's and girls' blouses and shirts from purchased fabric.

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### **3152322 Women's and Girls' Cut and Sew Blouse and Shirt Manufacturing – Jobbers**

Establishments engaged as women's and girls' blouse and shirt jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315233 Women's and Girls' Cut and Sew Dress Manufacturing**

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

The data published with NAICS code 315233 include the following SIC industries:

2335 Women's dresses (pt)

2361 Girls' and children's dresses and blouses (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 315233 do not include establishments primarily engaged in custom tailoring.

### **3152331 Women's and Girls' Cut and Sew Dress Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing women's and girls' dresses from purchased fabric.

### **3152332 Women's and Girls' Cut and Sew Dress Manufacturing – Jobbers**

Establishments engaged as women's and girls' dress jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315234 Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing women's and girls' suits, pantsuits, skirts, tailored jackets, vests, raincoats, and other tailored coats, (except fur and leather coats) from purchased fabric. Women's and girls' suit, coat, tailored jacket, and skirt jobbers, who perform entrepreneurial

functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel, are included.

The data published with NAICS code 315234 include the following SIC industries:

2337 Women's suits and coats (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)

### **3152341 Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing women's and girls' suits, pantsuits, skirts, tailored jackets, vests, raincoats, and other tailored coats, (except fur and leather coats) from purchased fabric.

### **3152342 Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing – Jobbers**

Establishments engaged as women's and girls' suit, coat, tailored jacket, and skirt jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **315239 Women's and Girls' Cut and Sew Other Outerwear Manufacturing**

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

The data published with NAICS code 315239 include the following SIC industries:

2339 Women's outerwear, n.e.c. (pt)

2369 Girls' and children's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)



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### **3152391 Women's and Girls' Cut and Sew Other Outerwear Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing women's and girls' cut and sew apparel from purchased fabric (except underwear, lingerie, nightwear, blouses, shirts, dresses, suits, tailored coats, tailored jackets, and skirts).

### **3152392 Women's and Girls' Cut and Sew Other Outerwear Manufacturing – Jobbers**

Establishments engaged as women's and girls' other outerwear clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel.

### **31529 Other Cut and Sew Apparel Manufacturing**

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

### **315291 Infants' Cut and Sew Apparel Manufacturing**

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

The data published with NAICS code 315291 include the following SIC industries:

- 2341 Women's and children's underwear (pt)
- 2361 Girls' and children's dresses and blouses (pt)
- 2369 Girls' and children's outerwear, n.e.c. (pt)
- 2385 Waterproof outer garments (pt)

### **3152911 Infants' Cut and Sew Apparel Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing infants' dresses, blouses, shirts, and all other infants' wear from purchased fabric. For the purposes of classification, the term "infants' apparel" includes apparel for young children of an age not exceeding 24 months.

### **3152912 Infants' Cut and Sew Apparel Manufacturing – Jobbers**

Establishments engaged as infants' clothing jobbers, who perform entrepreneurial functions involved in apparel manufacture, including buying raw materials, designing and preparing samples, arranging for apparel to be made from their materials, and marketing finished apparel. For the purposes of classification, the term "infants' apparel" includes apparel for young children of an age not exceeding 24 months.

### **315292 Fur and Leather Apparel Manufacturing**

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

The data published with NAICS code 315292 include the following SIC industries:

- 2371 Fur goods
- 2386 Leather and sheep-lined clothing

### **315299 All Other Cut and Sew Apparel Manufacturing**

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

The data published with NAICS code 315299 include the following SIC industries:

- 2329 Men's and boys' clothing, n.e.c. (pt)
- 2339 Women's outerwear, n.e.c. (pt)
- 2389 Apparel and accessories, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 315299 do not include establishments primarily engaged in the manufacture of

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waterproof rubber and plastic outerwear or rubber pants and raincoats. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3152991 All Other Cut and Sew Apparel Manufacturing – Manufacturer**

Establishments primarily engaged in manufacturing cut and sew apparel from purchased fabric (except cut and sew apparel contractors; men's and boys' cut and sew underwear, nightwear, suits, coats, shirts, trousers, work clothing, and other outerwear; women's and girls' lingerie, blouses, shirts, dresses, suits, coats, and other outerwear; infants' apparel; and fur and leather apparel). Examples of products made by these establishments are team athletic uniforms, band uniforms, academic caps and gowns, clerical vestments, and costumes.

### **3152992 All Other Cut and Sew Apparel Manufacturing – Jobbers**

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

### **3159 Apparel Accessories and Other Apparel Manufacturing**

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

### **31599 Apparel Accessories and Other Apparel Manufacturing**

This industry comprises establishments primarily engaged in manufacturing apparel and accessories (except apparel knitting mills, cut and sew apparel contractors, men's and boys' cut and sew apparel, women's and girls' cut and sew apparel, and other cut and sew apparel). Jobbers, who perform entrepreneurial functions involved in apparel accessories manufacture, including buying raw materials, designing and preparing samples, arranging for

apparel accessories to be made from their materials, and marketing finished apparel accessories, are included. Examples of products made by these establishments are belts, caps, gloves (except medical, sporting, safety), hats, and neckties.

### **315991 Hat, Cap, and Millinery Manufacturing**

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

The data published with NAICS code 315991 include the following SIC industry:

2353 Hats, caps, and millinery

### **315992 Glove and Mitten Manufacturing**

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

The data published with NAICS code 315992 include the following SIC industries:

2381 Fabric gloves and mittens

3151 Leather gloves and mittens

### **315993 Men's and Boys' Neckwear Manufacturing**

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

The data published with NAICS code 315993 include the following SIC industry:

2323 Men's and boys' neckwear

### **315999 Other Apparel Accessories and Other Apparel Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing apparel and apparel accessories (except apparel knitting mills; cut and sew apparel contractors; cut and sew apparel; hats and caps; mittens and

gloves; and men's and boys' neckwear). Jobbers for these products, who perform entrepreneurial functions involved in other apparel and accessory manufacture, including buying raw materials, designing and preparing samples, arranging for other apparel and accessories to be made from their materials, and marketing finished other apparel and accessories, are included. Examples of products made by these establishments are apparel trimmings and findings, belts, women's scarves, suspenders, and waterproof outerwear.

The data published with NAICS code 315999 include the following SIC industries:

2339 Women's outerwear, n.e.c. (pt)

2385 Waterproof outer garments (pt)

2387 Apparel belts

2389 Apparel and accessories, n.e.c. (pt)

2396 Automotive and apparel trimmings (pt)

2399 Fabricated textile products, n.e.c. (pt)

5699 Miscellaneous apparel and accessory stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 315999 include establishments primarily engaged in custom tailoring but do not include establishments primarily engaged in the manufacture of rubber bibs, aprons, and bathing caps.

### **316 Leather and Allied Product Manufacturing**

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

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

### **3161 Leather and Hide Tanning and Finishing**

This NAICS industry group includes establishments classified in NAICS Industry 31611, Leather and Hide Tanning and Finishing.

#### **31611 Leather and Hide Tanning and Finishing**

This industry comprises establishments primarily engaged in one or more of the following: (1) tanning, currying, and finishing hides and skins; (2) having others process hides and skins on a contract basis; and (3) dyeing or dressing furs.

##### **316110 Leather and Hide Tanning and Finishing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) tanning, currying, and finishing hides and skins; (2) having others process hides and skins on a contract basis; and (3) dyeing or dressing furs.

The data published with NAICS code 316110 include the following SIC industries:

3111 Leather tanning and finishing

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

### **3162 Footwear Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 31621, Footwear Manufacturing.

#### **31621 Footwear Manufacturing**

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

##### **316211 Rubber and Plastics Footwear Manufacturing**

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

The data published with NAICS code 316211 include the following SIC industry:

Rubber and plastics footwear

##### **316212 House Slipper Manufacturing**

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

The data published with NAICS code 316212 include the following SIC industry:

3142 House slippers

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### **316213 Men's Footwear (Except Athletic) Manufacturing**

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

The data published with NAICS code 316213 include the following SIC industry:

3143 Men's footwear, except athletic

### **316214 Women's Footwear (Except Athletic) Manufacturing**

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

The data published with NAICS code 316214 include the following SIC industry:

3144 Women's footwear, except athletic

### **316219 Other Footwear Manufacturing**

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

The data published with NAICS code 316219 include the following SIC industry:

3149 Footwear, except rubber, n.e.c.

### **3169 Other Leather and Allied Product Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 31699, Other Leather and Allied Product Manufacturing.

### **31699 Other Leather and Allied Product Manufacturing**

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

### **316991 Luggage Manufacturing**

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

The data published with NAICS code 316991 include the following SIC industry:

3161 Luggage

### **316992 Women's Handbag and Purse Manufacturing**

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

The data published with NAICS code 316992 include the following SIC industry:

3171 Women's handbags and purses

### **316993 Personal Leather Goods (Except Women's Handbag and Purse) Manufacturing**

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

The data published with NAICS code 316993 include the following SIC industry:

3172 Personal leather goods, n.e.c.

### **316999 All Other Leather Goods Manufacturing**

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

The data published with NAICS code 316999 include the following SIC industries:

3131 Footwear cut stock and findings (pt)

3199 Leather goods, n.e.c.

### **321 Wood Product Manufacturing**

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

The Wood Product Manufacturing subsector includes establishments that make wood products from logs and bolts that are sawed and shaped, and establishments that purchase sawed lumber and make wood products. With the exception of sawmills and wood preservation establishments, the establishments are grouped into industries mainly based on the specific products manufactured.

## **3211 Sawmills and Wood Preservation**

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

### **32111 Sawmills and Wood Preservation**

This industry comprises establishments primarily engaged in one or more of the following: (1) sawing dimension lumber, boards, beams, timber, poles, ties, shingles, shakes, siding, and wood chips from logs or bolts; (2) sawing round wood poles, pilings, and posts and treating them with preservatives; and (3) treating wood sawed, planed, or shaped in other establishments with creosote or other preservatives to prevent decay and to protect against fire and insects. Sawmills may plane the rough lumber that they make with a planing machine to achieve smoothness and uniformity of size.

#### **321113 Sawmills**

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

The data published with NAICS code 321113 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2429 Special product sawmills, n.e.c. (pt)

2439 Structural wood members, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 321113 include establishments primarily engaged in the manufacture of lumber members made from logs and bolts, but do not include establishments primarily engaged in the manufacture of hardwood dimension made from logs and bolts. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **321114 Wood Preservation**

This U.S. industry comprises establishments primarily engaged in (1) treating wood sawed, planed, or shaped in other establishments with creosote or other preservatives,

such as chromated copper arsenate, to prevent decay and to protect against fire and insects and/or (2) sawing round wood poles, pilings, and posts and treating them with preservatives.

The data published with NAICS code 321114 include the following SIC industry:

2491 Wood preserving

## **3212 Veneer, Plywood, and Engineered Wood Product Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 32121, Veneer, Plywood, and Engineered Wood Product Manufacturing.

### **32121 Veneer, Plywood, and Engineered Wood Product Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing veneer and/or plywood; (2) manufacturing engineered wood members; and (3) manufacturing reconstituted wood products. This industry includes manufacturing plywood from veneer made in the same establishment or from veneer made in other establishments, and manufacturing plywood faced with nonwood materials, such as plastics or metal.

#### **321211 Hardwood Veneer and Plywood Manufacturing**

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

The data published with NAICS code 321211 include the following SIC industry:

2435 Hardwood veneer and plywood

#### **321212 Softwood Veneer and Plywood Manufacturing**

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

The data published with NAICS code 321212 include the following SIC industry:

2436 Softwood veneer and plywood

#### **321213 Engineered Wood Member (Except Truss) Manufacturing**

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

The data published with NAICS code 321213 include the following SIC industry:

2439 Structural wood members, n.e.c. (pt)

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### **321214 Truss Manufacturing**

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

The data published with NAICS code 321214 include the following SIC industry:

2439 Structural wood members, n.e.c. (pt)

### **321219 Reconstituted Wood Product Manufacturing**

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

The data published with NAICS code 321219 include the following SIC industry:

2493 Reconstituted wood products

### **3219 Other Wood Product Manufacturing**

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

#### **32191 Millwork**

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

#### **321911 Wood Window and Door Manufacturing**

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

The data published with NAICS code 321911 include the following SIC industry:

2431 Millwork (pt)

#### **321912 Cut Stock, Resawing Lumber, and Planing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing dimension lumber from purchased lumber; (2) manufacturing dimension stock (i.e., shapes) or cut stock; (3) resawing the output of sawmills; and (4) planing purchased lumber. These establishments generally use woodworking machinery, such as jointers, planers, lathes, and routers to shape wood.

The data published with NAICS code 321912 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2426 Hardwood dimension and flooring mills (pt)

2439 Structural wood members, n.e.c. (pt)

2499 Wood products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 321912 include establishments primarily engaged in the manufacture of hardwood dimension made from logs and bolts, lumber members made from purchased lumber, and semi-machined and fully-machined softwood dimension lumber, but do not include establishments primarily engaged in the manufacture of staves from purchased lumber. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **321918 Other Millwork (Including Flooring)**

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

The data published with NAICS code 321918 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2426 Hardwood dimension and flooring mills (pt)

2431 Millwork (pt)

#### **32192 Wood Container and Pallet Manufacturing**

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

#### **321920 Wood Container and Pallet Manufacturing**

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

The data published with NAICS code 321920 include the following SIC industries:

2429 Special product sawmills, n.e.c. (pt)

2441 Nailed wood boxes & shoo

2448 Wood pallets and skids

2449 Wood containers, n.e.c.

2499 Wood products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 321920 include establishments primarily engaged in the manufacture of cooperage headings and staves made of purchased lumber. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **32199 All Other Wood Product Manufacturing**

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

#### **321991 Manufactured Home (Mobile Home) Manufacturing**

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

The data published with NAICS code 321991 include the following SIC industry:

2451 Mobile homes

#### **321992 Prefabricated Wood Building Manufacturing**

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

The data published with NAICS code 321992 include the following SIC industry:

2452 Prefabricated wood buildings

#### **321999 All Other Miscellaneous Wood Product Manufacturing**

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

The data published with NAICS code 321999 include the following SIC industries:

2421 Sawmills and planing mills, general (pt)

2429 Special product sawmills, n.e.c. (pt)

2499 Wood products, n.e.c. (pt)

3131 Footwear cut stock and findings (pt)

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

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 321999 include establishments primarily engaged in the manufacture of wood cooling towers, but do not include establishments primarily engaged in the manufacture of finished metal moldings for mirrors and pictures, semi-machined and fully-machined softwood dimension, or cooperage headings. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **322 Paper Manufacturing**

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

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

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

An important process used in the Paper Bag and Coated and Treated Paper Manufacturing industry is lamination, often combined with coating. Lamination and coating makes a composite material with improved properties of strength, impermeability, and so on. The laminated materials may be paper, metal foil, or plastics film. While paper is often one of the components, it is not always. Lamination of plastics film to plastics film is classified in the NAICS Subsector 326, Plastics and Rubber Products Manufacturing, because establishments that do this often first make the film.

The same situation holds with respect to bags. The manufacturing of bags from plastics only, whether or not laminated, is classified in Subsector 326, Plastics and Rubber Products Manufacturing, but all other bag manufacturing is classified in this subsector.

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

### **3221 Pulp, Paper, and Paperboard Mills**

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

#### **32211 Pulp Mills**

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

##### **322110 Pulp Mills**

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

The data published with NAICS code 322110 include the following SIC industry:

2611 Pulp mills

##### **32212 Paper Mills**

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

##### **322121 Paper (Except Newsprint) Mills**

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

The data published with NAICS code 322121 include the following SIC industries:

2621 Paper mills (pt)

2676 Sanitary paper products (pt)

3842 Surgical appliances and supplies (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 322121 include paper mills which convert sanitary paper stock into sanitary paper products, but do not include paper mills which are primarily engaged in the manufacture of other converted paper products. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **3221211 Paper (Except Newsprint) Mills – Integrated Producer**

Establishments primarily engaged in manufacturing paper (except newsprint and uncoated groundwood paper) from pulp in combination with pulp manufacture.

##### **3221212 Paper (Except Newsprint) Mills – Nonintegrated Producer**

Establishments primarily engaged in manufacturing paper (except newsprint and uncoated groundwood paper) from pulp not in combination with pulp manufacture.

##### **322122 Newsprint Mills**

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

The data published with NAICS code 322122 include the following SIC industry:

2621 Paper mills (pt)

##### **3221221 Newsprint Mills – Integrated Producer**

Establishments primarily engaged in manufacturing newsprint and uncoated groundwood paper from pulp in combination with pulp manufacture.

##### **3221222 Newsprint Mills – Nonintegrated Producer**

Establishments primarily engaged in manufacturing newsprint and uncoated groundwood paper from pulp not in combination with pulp manufacture.

##### **32213 Paperboard Mills**

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



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### **322130 Paperboard Mills**

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

The data published with NAICS code 322130 include the following SIC industry:

2631 Paperboard mills

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 322130 do not include paperboard mills primarily engaged in converting paperboard into paperboard products. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **3221301 Paperboard Mills – Integrated Producer**

Establishments primarily engaged in manufacturing paperboard from pulp in combination with pulp manufacture.

#### **3221302 Paperboard Mills – Nonintegrated Producer**

Establishments primarily engaged in manufacturing paperboard from pulp not in combination with pulp manufacture or paperboard converting.

### **3222 Converted Paper Product Manufacturing**

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

#### **32221 Paperboard Container Manufacturing**

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

#### **322211 Corrugated and Solid Fiber Box Manufacturing**

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

The data published with NAICS code 322211 include the following SIC industry:

2653 Corrugated and solid fiber boxes

#### **322212 Folding Paperboard Box Manufacturing**

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

The data published with NAICS code 322212 include the following SIC industry:

2657 Folding paperboard boxes

#### **322213 Setup Paperboard Box Manufacturing**

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

The data published with NAICS code 322213 include the following SIC industry:

2652 Setup paperboard boxes

#### **322214 Fiber Can, Tube, Drum, and Similar Products Manufacturing**

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

The data published with NAICS code 322214 include the following SIC industry:

2655 Fiber cans, drums, and similar products

#### **322215 Nonfolding Sanitary Food Container Manufacturing**

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

The data published with NAICS code 322215 include the following SIC industry:

2656 Sanitary food containers

#### **32222 Paper Bag and Coated and Treated Paper Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) cutting and coating paper and paperboard; (2) cutting and laminating paper and paperboard and other flexible materials (except plastics film to plastics film); (3) manufacturing bags or multiwall bags or sacks of paper, metal foil, coated paper, or laminates or coated combinations of paper and foil with plastics film; (4) manufacturing laminated aluminum and other converted metal foils from purchased foils; and (5) surface coating paper or paperboard.

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### **322221 Coated and Laminated Packaging Paper and Plastics Film Manufacturing**

This U.S. industry comprises establishments primarily engaged in performing one or more of the following activities associated with the manufacturing of packaging materials: (1) cutting and coating paper; and (2) cutting and laminating paper with other flexible materials (except plastics to plastics or foil to paper laminates). The products made in this industry are made from purchased sheet materials and may be printed in the same establishment.

The data published with NAICS code 322221 include the following SIC industry:

2671 Paper - coated and laminated, packaging (pt)

### **322222 Coated and Laminated Paper Manufacturing**

This U.S. industry comprises establishments primarily engaged in performing one or more of the following activities associated with making products designed for purposes other than packaging: (1) cutting and coating paper; (2) cutting and laminating paper and other flexible materials (except plastics film to plastics film); and (3) manufacturing converted aluminum and other metal foils for non-packaging uses from purchased foils. The products made in this industry are made from purchased sheet materials and may be printed in the same establishment.

The data published with NAICS code 322222 include the following SIC industries:

2672 Paper - coated and laminated, n.e.c.

2679 Converted paper products, n.e.c. (pt)

### **322223 Plastics, Foil, and Coated Paper Bag Manufacturing**

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

The data published with NAICS code 322223 include the following SIC industry:

2673 Bags - plastics, laminated, and coated (pt)

### **322224 Uncoated Paper and Multiwall Bag Manufacturing**

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

The data published with NAICS code 322224 include the following SIC industry:

2674 Bags - uncoated paper and multiwall

### **322225 Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses**

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

The data published with NAICS code 322225 include the following SIC industry:

3497 Metal foil and leaf (pt)

### **322226 Surface-Coated Paperboard Manufacturing**

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

The data published with NAICS code 322226 include the following SIC industry:

2675 Die-cut paper and board (pt)

### **32223 Stationery Product Manufacturing**

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

### **322231 Die-Cut Paper and Paperboard Office Supplies Manufacturing**

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

The data published with NAICS code 322231 include the following SIC industries:

2675 Die-cut paper and board (pt)

2679 Converted paper products, n.e.c. (pt)

### **322232 Envelope Manufacturing**

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

The data published with NAICS code 322232 include the following SIC industry:

2677 Envelopes

### **322233 Stationery, Tablet, and Related Product Manufacturing**

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

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The data published with NAICS code 322233 include the following SIC industry:

2678 Stationery products

### **32229 Other Converted Paper Product Manufacturing**

This industry comprises establishments primarily engaged in (1) converting paper and paperboard into products (except containers, bags, coated and treated paper and paperboard, and stationery products), or (2) converting pulp into pulp products, such as disposable diapers, or molded pulp egg cartons, food trays, and dishes. Processes used include laminating or lining purchased paper or paperboard.

#### **322291 Sanitary Paper Product Manufacturing**

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

The data published with NAICS code 322291 include the following SIC industries:

2676 Sanitary paper products (pt)

3842 Surgical appliances and supplies (pt)

#### **322299 All Other Converted Paper Product Manufacturing**

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

The data published with NAICS code 322299 include the following SIC industries:

2675 Die-cut paper and board (pt)

2679 Converted paper products, n.e.c. (pt)

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

### **323 Printing and Related Support Activities**

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

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

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

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

#### **3231 Printing and Related Support Activities**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32311, Printing; and 32312, Support Activities for Printing.

##### **32311 Printing**

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

##### **323110 Commercial Lithographic Printing**

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

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The data published with NAICS code 3231 10 include the following SIC industries:

- 2752 Commercial printing, lithographic (pt)
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

### **323111 Commercial Gravure Printing**

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

The data published with NAICS code 3231 11 include the following SIC industries:

- 2754 Commercial printing, gravure
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

### **323112 Commercial Flexographic Printing**

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

The data published with NAICS code 3231 12 include the following SIC industries:

- 2759 Commercial printing, n.e.c. (pt)
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

### **323113 Commercial Screen Printing**

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

The data published with NAICS code 3231 13 include the following SIC industries:

- 2396 Automotive and apparel trimmings (pt)
- 2759 Commercial printing, n.e.c. (pt)
- 2771 Greeting cards (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

### **323114 Quick Printing**

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

The data published with NAICS code 3231 14 include the following SIC industries:

- 2752 Commercial printing, lithographic (pt)
- 2759 Commercial printing, n.e.c. (pt)

### **323115 Digital Printing**

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

The data published with NAICS code 3231 15 include the following SIC industry:

- 2759 Commercial printing, n.e.c. (pt)

### **323116 Manifold Business Form Printing**

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

The data published with NAICS code 3231 16 include the following SIC industries:

- 2761 Manifold business forms
- 2782 Blankbooks and looseleaf binders (pt)

### **323117 Book Printing**

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

The data published with NAICS code 3231 17 include the following SIC industry:

- 2732 Book printing

### **323118 Blankbook, Looseleaf Binders, and Devices Manufacturing**

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

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The data published with NAICS code 323118 include the following SIC industry:

2782 Blankbooks and looseleaf binders (pt)

### **323119 Other Commercial Printing**

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

The data published with NAICS code 323119 include the following SIC industries:

2759 Commercial printing, n.e.c. (pt)

2771 Greeting cards (pt)

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

### **32312 Support Activities for Printing**

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

### **323121 Tradebinding and Related Work**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) tradebinding; (2) sample mounting; and (3) postpress services (e.g., book or paper bronzing, die-cutting, edging, embossing, folding, gilding, gluing, indexing).

The data published with NAICS code 323121 include the following SIC industry:

2789 Bookbinding and related work

### **323122 Prepress Services**

This U.S. industry comprises (1) establishments primarily engaged in prepress services, such as imagesetting or typesetting, for printers and (2) establishments primarily engaged in preparing film or plates for printing purposes.

The data published with NAICS code 323122 include the following SIC industries:

2791 Typesetting

2796 Platemaking services

## **324 Petroleum and Coal Products Manufacturing**

The Petroleum and Coal Products Manufacturing subsector is based on the transformation of crude petroleum and coal into usable products. The dominant process is

petroleum refining that involves the separation of crude petroleum into component products through such techniques as cracking and distillation.

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

## **3241 Petroleum and Coal Products Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32411, Petroleum Refineries; 32412, Asphalt Paving, Roofing, and Saturated Materials Manufacturing; and 32419, Other Petroleum and Coal Products Manufacturing.

### **32411 Petroleum Refineries**

This industry comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following activities: (1) fractionation; (2) straight distillation of crude oil; and (3) cracking.

#### **324110 Petroleum Refineries**

This U.S. industry comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following activities: (1) fractionation; (2) straight distillation of crude oil; and (3) cracking.

The data published with NAICS code 324110 include the following SIC industry:

2911 Petroleum refining

### **32412 Asphalt Paving, Roofing, and Saturated Materials Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing asphalt and tar paving mixtures and blocks and roofing cements and coatings from purchased asphaltic materials and/or (2) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials.

#### **32412 Asphalt Paving, Roofing, and Saturated Materials Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing asphalt and tar paving mixtures and blocks and roofing cements and coatings from purchased asphaltic materials and/or (2) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials.

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### **324121 Asphalt Paving Mixture and Block Manufacturing**

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

The data published with NAICS code 324121 include the following SIC industry:

2951 Asphalt paving mixtures and blocks

### **324122 Asphalt Shingle and Coating Materials Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) saturating purchased mats and felts with asphalt or tar from purchased asphaltic materials and (2) manufacturing asphalt and tar and roofing cements and coatings from purchased asphaltic materials.

The data published with NAICS code 324122 include the following SIC industry:

2952 Asphalt felts and coatings

### **32419 Other Petroleum and Coal Products Manufacturing**

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

#### **324191 Petroleum Lubricating Oil and Grease Manufacturing**

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

The data published with NAICS code 324191 include the following SIC industry:

2992 Lubricating oils and greases

#### **324199 All Other Petroleum and Coal Products Manufacturing**

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

The data published with NAICS code 324199 include the following SIC industries:

2999 Petroleum and coal products, n.e.c.

3312 Blast furnaces and steel mills (pt)

### **325 Chemical Manufacturing**

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

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

#### **3251 Basic Chemical Manufacturing**

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

##### **32511 Petrochemical Manufacturing**

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

###### **325110 Petrochemical Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing acyclic (i.e., aliphatic) hydrocarbons such as ethylene, propylene, and butylene made from refined petroleum or liquid hydrocarbon and/or (2) manufacturing cyclic aromatic hydrocarbons such as benzene, toluene, styrene, xylene, ethyl benzene, and cumene made from refined petroleum or liquid hydrocarbons.

The data published with NAICS code 325110 include the following SIC industries:

2865 Cyclic crudes and intermediates (pt)

2869 Industrial organic chemicals, n.e.c. (pt)

### **32512 Industrial Gas Manufacturing**

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

### **325120 Industrial Gas Manufacturing**

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

The data published with NAICS code 325120 include the following SIC industries:

2813 Industrial gases

2869 Industrial organic chemicals, n.e.c. (pt)

### **32513 Synthetic Dye and Pigment Manufacturing**

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

### **325131 Inorganic Dye and Pigment Manufacturing**

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

The data published with NAICS code 325131 include the following SIC industries:

2816 Inorganic pigments (pt)

2819 Industrial inorganic chemicals, n.e.c. (pt)

### **325132 Synthetic Organic Dye and Pigment Manufacturing**

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

The data published with NAICS code 325132 include the following SIC industry:

2865 Cyclic crudes and intermediates (pt)

### **32518 Other Basic Inorganic Chemical Manufacturing**

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

### **325181 Alkalies and Chlorine Manufacturing**

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

The data published with NAICS code 325181 include the following SIC industry:

2812 Alkalies and chlorine

### **325182 Carbon Black Manufacturing**

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

The data published with NAICS code 325182 include the following SIC industries:

2816 Inorganic pigments (pt)

2895 Carbon black

### **325188 All Other Basic Inorganic Chemical Manufacturing**

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

The data published with NAICS code 325188 include the following SIC industries:

2819 Industrial inorganic chemicals, n.e.c. (pt)

2869 Industrial organic chemicals, n.e.c. (pt)

### **32519 Other Basic Organic Chemical Manufacturing**

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

### **325191 Gum and Wood Chemical Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) distilling wood or gum into products, such as tall oil and wood distillates, and (2) manufacturing wood or gum chemicals, such as naval stores, natural tanning materials, charcoal briquettes, and charcoal (except activated).

The data published with NAICS code 325191 include the following SIC industry:

2861 Gum and wood chemicals

### **325192 Cyclic Crude and Intermediate Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) distilling coal tars and/or (2) manufacturing cyclic crudes or cyclic intermediates (i.e., hydrocarbons, except aromatic petrochemicals) from refined petroleum or natural gas.

The data published with NAICS code 325192 include the following SIC industry:

2865 Cyclic crudes and intermediates (pt)

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### **325193 Ethyl Alcohol Manufacturing**

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

The data published with NAICS code 325193 include the following SIC industry:

2869 Industrial organic chemicals, n.e.c. (pt)

### **325199 All Other Basic Organic Chemical Manufacturing**

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

The data published with NAICS code 325199 include the following SIC industries:

2869 Industrial organic chemicals, n.e.c. (pt)

2899 Chemical preparations, n.e.c. (pt)

### **3252 Resin, Synthetic Rubber, and Artificial and Synthetic Fibers and Filaments Manufacturing**

#### **32521 Resin and Synthetic Rubber Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing synthetic resins, plastics materials, and nonvulcanizable elastomers and mixing and blending resins on a custom basis; (2) manufacturing noncustomized synthetic resins; and (3) manufacturing synthetic rubber.

#### **325211 Plastics Material and Resin Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing resins, plastics materials, and nonvulcanizable thermoplastic elastomers and mixing and blending resins on a custom basis and/or (2) manufacturing noncustomized synthetic resins.

The data published with NAICS code 325211 include the following SIC industry:

2821 Plastics materials and resins

#### **325212 Synthetic Rubber Manufacturing**

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

The data published with NAICS code 325212 include the following SIC industry:

2822 Synthetic rubber

### **32522 Artificial and Synthetic Fibers and Filaments Manufacturing**

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

#### **325221 Cellulosic Organic Fiber Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing cellulosic (i.e., rayon and acetate) fibers and filaments in the form of monofilament, filament yarn, staple, or tow or (2) manufacturing and texturing cellulosic fibers and filaments.

The data published with NAICS code 325221 include the following SIC industry:

2823 Cellulosic manmade fibers

#### **325222 Noncellulosic Organic Fiber Manufacturing**

This U.S. industry consists of establishments primarily engaged in (1) manufacturing noncellulosic (i.e., nylon, polyolefin, and polyester) fibers and filaments in the form of monofilament, filament yarn, staple, or tow or (2) manufacturing and texturing noncellulosic fibers and filaments.

The data published with NAICS code 325222 include the following SIC industry:

2824 Organic fibers, noncellulosic

### **3253 Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32531, Fertilizer Manufacturing; and 32532, Pesticide and Other Agricultural Chemical Manufacturing.

#### **32531 Fertilizer Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing nitrogenous or phosphatic fertilizer materials; (2) manufacturing fertilizers from sewage or animal waste; (3) manufacturing nitrogenous or phosphatic materials and mixing with other ingredients into fertilizers; and (4) mixing ingredients made elsewhere into fertilizers.

#### **325311 Nitrogenous Fertilizer Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing nitrogenous fertilizer materials and mixing ingredients



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into fertilizers; (2) manufacturing fertilizers from sewage or animal waste; and (3) manufacturing nitrogenous materials and mixing them into fertilizers.

The data published with NAICS code 325311 include the following SIC industry:

2873 Nitrogenous fertilizers

### **325312 Phosphatic Fertilizer Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing phosphatic fertilizer materials or (2) manufacturing phosphatic materials and mixing them into fertilizers.

The data published with NAICS code 325312 include the following SIC industry:

2874 Phosphatic fertilizers

### **325314 Fertilizer (Mixing Only) Manufacturing**

This U.S. industry comprises establishments primarily engaged in mixing ingredients made elsewhere into fertilizers.

The data published with NAICS code 325314 include the following SIC industry:

2875 Fertilizers, mixing only

### **32532 Pesticide and Other Agricultural Chemical Manufacturing**

This industry comprises establishments primarily engaged in the formulation and preparation of agricultural and household pest control chemicals (except fertilizers).

### **325320 Pesticide and Other Agricultural Chemical Manufacturing**

This U.S. industry comprises establishments primarily engaged in the formulation and preparation of agricultural and household pest control chemicals (except fertilizers).

The data published with NAICS code 325320 include the following SIC industry:

2879 Agricultural chemicals, n.e.c.

### **3254 Pharmaceutical and Medicine Manufacturing**

This NAICS industry group includes establishments classified in Industry 32541, Pharmaceutical and Medicine Manufacturing.

### **32541 Pharmaceutical and Medicine Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing biological and medicinal products; (2) processing (i.e., grading, grinding, and milling) botanical drugs and herbs; (3) isolating active medicinal principals from botanical drugs and herbs; and (4) manufacturing pharmaceutical

products intended for internal and external consumption in such forms as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

### **325411 Medicinal and Botanical Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing uncompounded medicinal chemicals and their derivatives (i.e., generally for use by pharmaceutical preparation manufacturers) and/or (2) grading, grinding, and milling uncompounded botanicals.

The data published with NAICS code 325411 include the following SIC industry:

2833 Medicinals and botanicals

### **325412 Pharmaceutical Preparation Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing in-vivo diagnostic substances and pharmaceutical preparations (except biological) intended for internal and external consumption in dose forms, such as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

The data published with NAICS code 325412 include the following SIC industries:

2834 Pharmaceutical preparations

2835 Diagnostic substances (pt)

### **325413 In-Vitro Diagnostic Substance Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing in-vitro (i.e., not taken internally) diagnostic substances, such as chemical, biological, or radioactive substances. The substances are used for diagnostic tests that are performed in test tubes, petri dishes, machines, and other diagnostic test-type devices.

The data published with NAICS code 325413 include the following SIC industry:

2835 Diagnostic substances (pt)

### **325414 Biological Product (Except Diagnostic) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing vaccines, toxoids, blood fractions, and culture media of plant or animal origin (except diagnostic).

The data published with NAICS code 325414 include the following SIC industry:

2836 Biological products, except diagnostic

### **3255 Paint, Coating, and Adhesive Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32551, Paint and Coating Manufacturing; and 32552, Adhesive Manufacturing.

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### **32551 Paint and Coating Manufacturing**

This industry comprises establishments primarily engaged in (1) mixing pigments, solvents, and binders into paints and other coatings, such as stains, varnishes, lacquers, enamels, shellacs, and water repellent coatings for concrete and masonry, and/or (2) manufacturing allied paint products, such as putties, paint and varnish removers, paint brush cleaners, and frit.

#### **325510 Paint and Coating Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) mixing pigments, solvents, and binders into paints and other coatings, such as stains, varnishes, lacquers, enamels, shellacs, and water repellent coatings for concrete and masonry, and/or (2) manufacturing allied paint products, such as putties, paint and varnish removers, paint brush cleaners, and frit.

The data published with NAICS code 325510 include the following SIC industries:

2851 Paints and allied products

2899 Chemical preparations, n.e.c. (pt)

### **32552 Adhesive Manufacturing**

This industry comprises establishments primarily engaged in manufacturing adhesives, glues, and caulking compounds.

#### **325520 Adhesive Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing adhesives, glues, and caulking compounds.

The data published with NAICS code 325520 include the following SIC industry:

2891 Adhesives and sealants

### **3256 Soap, Cleaning Compound, and Toilet Preparation Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32561, Soap and Cleaning Compound Manufacturing; and 32562, Toilet Preparation Manufacturing.

#### **32561 Soap and Cleaning Compound Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and packaging soap and other cleaning compounds, surface active agents, and textile and leather finishing agents used to reduce tension or speed the drying process.

### **325611 Soap and Other Detergent Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and packaging soaps and other detergents, such as laundry detergents; dishwashing detergents; toothpaste gels and tooth powders; and natural glycerin.

The data published with NAICS code 325611 include the following SIC industries:

2841 Soap and other detergents

2844 Toilet preparations (pt)

#### **325612 Polish and Other Sanitation Good Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and packaging polishes and specialty cleaning preparations.

The data published with NAICS code 325612 include the following SIC industry:

2842 Polishes and sanitation goods

#### **325613 Surface Active Agent Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing bulk surface active agents for use as wetting agents, emulsifiers, and penetrants, and/or (2) manufacturing textiles and leather finishing agents used to reduce tension or speed the drying process.

The data published with NAICS code 325613 include the following SIC industry:

2843 Surface active agents

#### **32562 Toilet Preparation Manufacturing**

This industry comprises establishments primarily engaged in preparing, blending, compounding, and packaging toilet preparations, such as perfumes, shaving preparations, hair preparations, face creams, lotions (including sunscreens), and other cosmetic preparations.

#### **325620 Toilet Preparation Manufacturing**

This U.S. industry comprises establishments primarily engaged in preparing, blending, compounding, and packaging toilet preparations, such as perfumes, shaving preparations, hair preparations, face creams, lotions (including sunscreens), and other cosmetic preparations.

The data published with NAICS code 325620 include the following SIC industry:

2844 Toilet preparations (pt)

#### **3259 Other Chemical Product Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals; resins, synthetic rubber, cellulosic and

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noncellulosic fibers and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; soaps and cleaning compounds; and toilet preparations).

### **32591 Printing Ink Manufacturing**

This industry comprises establishments primarily engaged in manufacturing printing and inkjet inks and inkjet cartridges.

### **325910 Printing Ink Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing printing and inkjet inks and inkjet cartridges.

The data published with NAICS code 325910 include the following SIC industry:

2893 Printing ink

### **32592 Explosives Manufacturing**

This industry comprises establishments primarily engaged in manufacturing explosives.

### **325920 Explosives Manufacturing**

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

The data published with NAICS code 325920 include the following SIC industry:

2892 Explosives

### **32599 All Other Chemical Product and Preparation Manufacturing**

This industry comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals, resins, and synthetic rubber; cellulosic and noncellulosic fibers and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; and soaps, cleaning compounds, and toilet preparations; printing inks; and explosives).

### **325991 Custom Compounding of Purchased Resins**

This U.S. industry comprises establishments primarily engaged in (1) custom mixing and blending plastics resins made elsewhere or (2) reformulating plastics resins from recycled plastics products.

The data published with NAICS code 325991 include the following SIC industries:

3087 Custom compound purchased resins

### **325992 Photographic Film, Paper, Plate, and Chemical Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing sensitized film, sensitized paper, sensitized cloth, sensitized plates, toners (i.e., for photocopiers, laser printers, and similar electrostatic printing devices), toner cartridges, and photographic chemicals.

The data published with NAICS code 325992 include the following SIC industry:

3861 Photographic equipment and supplies (pt)

### **325998 All Other Miscellaneous Chemical Product and Preparation Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing chemical products (except basic chemicals, resins, synthetic rubber; cellulosic and noncellulosic fiber and filaments; pesticides, fertilizers, and other agricultural chemicals; pharmaceuticals and medicines; paints, coatings, and adhesives; soap, cleaning compounds, and toilet preparations; printing inks; explosives; custom compounding of purchased resins; and photographic films, papers, plates, and chemicals).

The data published with NAICS code 325998 include the following SIC industries:

2819 Industrial inorganic chemicals, n.e.c. (pt)

2899 Chemical preparations, n.e.c. (pt)

3952 Lead pencils and art goods (pt)

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

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 325998 do not include establishments primarily engaged in aerosol packaging. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **326 Plastics and Rubber Products Manufacturing**

Industries in the Plastics and Rubber Products Manufacturing subsector make goods by processing plastics materials and raw rubber. The core technology employed by establishments in this subsector is that of plastics or rubber product production. Plastics and rubber are combined in the same subsector because plastics are increasingly being used as a substitute for rubber; however, the subsector is generally restricted to the production of products made of just one material, either solely plastics or rubber.

Many manufacturing activities use plastics or rubber, for example the manufacture of footwear, or furniture. Typically, the production process of these products

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involves more than one material. In these cases, technologies that allow disparate materials to be formed and combined are of central importance in describing the manufacturing activity. In NAICS, such activities (the footwear and furniture manufacturing) are not classified in the Plastics and Rubber Products Manufacturing subsector because the core technologies for these activities are diverse and involve multiple materials.

Within the Plastics and Rubber Products Manufacturing subsector, a distinction is made between plastics and rubber products at the industry group level, although it is not a rigid distinction, as can be seen from the definition of Industry 32622, Rubber and Plastics Hose and Belting Manufacturing. As materials technology progresses, plastics are increasingly being used as a substitute for rubber; and eventually, the distinction may disappear as a basis for establishment classification.

In keeping with the core technology focus of plastics, lamination of plastics film to plastics film as well as the production of bags from plastics only is classified in this subsector. Lamination and bag production involving plastics and materials other than plastics are classified in the NAICS Subsector 322, Paper Manufacturing.

### **3261 Plastics Product Manufacturing**

This industry group comprises establishments primarily engaged in processing new or spent (i.e., recycled) plastics resins into intermediate or final products, using such processes as compression molding; extrusion molding; injection molding; blow molding; and casting. Within most of these industries, the production process is such that a wide variety of products can be made.

#### **32611 Unsupported Plastics Film, Sheet, and Bag Manufacturing**

This industry comprises establishments primarily engaged in (1) converting plastics resins into unsupported plastics film and sheet and/or (2) forming, coating, or laminating plastics film and sheet into plastics bags.

##### **326111 Unsupported Plastics Bag Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) converting plastics resins into plastics bags or (2) forming, coating, or laminating plastics film and sheet into single wall or multiwall plastics bags. Establishments in this industry may print on the bags they manufacture.

The data published with NAICS code 326111 include the following SIC industry:

2673 Bags - plastics, laminated, and coated (pt)

##### **326112 Unsupported Plastics Packaging Film and Sheet Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting plastics resins into plastics packaging (flexible) film and packaging sheet.

The data published with NAICS code 326112 include the following SIC industry:

2671 Paper - coated and laminated, packaging (pt)

##### **326113 Unsupported Plastics Film and Sheet (Except Packaging) Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting plastics resins into plastics film and unlaminated sheet (except packaging).

The data published with NAICS code 326113 include the following SIC industry:

3081 Unsupported plastics film and sheet

##### **32612 Plastics Pipe, Pipe Fitting, and Unsupported Profile Shape Manufacturing**

This industry comprises establishments primarily engaged in manufacturing plastics pipes and pipe fittings, and plastics profile shapes such as rod, tube, and sausage casings.

##### **326121 Unsupported Plastics Profile Shapes Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting plastics resins into nonrigid plastics profile shapes (except film, sheet, and bags), such as rod, tube, and sausage casings.

The data published with NAICS code 326121 include the following SIC industry:

3082 Unsupported plastics profile shapes

##### **326122 Plastics Pipe and Pipe Fitting Manufacturing**

This U.S. industry comprises establishments primarily engaged in converting plastics resins into rigid plastics pipes and pipe fittings.

The data published with NAICS code 326122 include the following SIC industries:

3084 Plastics pipe

3089 Plastics products, n.e.c. (pt)

##### **32613 Laminated Plastics Plate, Sheet, and Shape Manufacturing**

This industry comprises establishments primarily engaged in laminating plastics profile shapes such as plate, sheet (except packaging), and rod. The lamination process generally involves bonding or impregnating profiles with plastics resins and compressing them under heat.

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### **326130 Laminated Plastics Plate, Sheet, and Shape Manufacturing**

This U.S. industry comprises establishments primarily engaged in laminating plastics profile shapes such as plate, sheet (except packaging), and rod. The lamination process generally involves bonding or impregnating profiles with plastics resins and compressing them under heat.

The data published with NAICS code 326130 include the following SIC industry:

3083 Laminated plastics plate and sheet

### **32614 Polystyrene Foam Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing polystyrene foam products.

### **326140 Polystyrene Foam Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing polystyrene foam products.

The data published with NAICS code 326140 include the following SIC industry:

3086 Plastics foam products (pt)

### **32615 Urethane and Other Foam Product (Except Polystyrene) Manufacturing**

This industry comprises establishments primarily engaged in manufacturing plastics foam products (except polystyrene).

### **326150 Urethane and Other Foam Product (Except Polystyrene) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing plastics foam products (except polystyrene).

The data published with NAICS code 326150 include the following SIC industry:

3086 Plastics foam products (pt)

### **32616 Plastics Bottle Manufacturing**

This industry comprises establishments primarily engaged in manufacturing plastics bottles.

### **326160 Plastics Bottle Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing plastics bottles.

The data published with NAICS code 326160 include the following SIC industry:

3085 Plastics bottles

### **32619 Other Plastics Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing resilient floor covering and other plastics products (except film, sheet, bags, profile shapes, pipes, pipe fittings, laminates, foam products, and bottles).

### **326191 Plastics Plumbing Fixture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing plastics or fiberglass plumbing fixtures. Examples of products made by these establishments are plastics or fiberglass bathtubs, hot tubs, portable toilets, and shower stalls.

The data published with NAICS code 326191 include the following SIC industry:

3088 Plastics plumbing fixtures

### **326192 Resilient Floor Covering Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing resilient floor coverings for permanent installation.

The data published with NAICS code 326192 include the following SIC industries:

3069 Fabricated rubber products, n.e.c. (pt)

3996 Hard surface floor coverings

### **326199 All Other Plastics Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing plastics products (except film, sheet, bags, profile shapes, pipes, pipe fittings, laminates, foam products, bottles, plumbing fixtures, and resilient floor coverings).

The data published with NAICS code 326199 include the following SIC industries:

3089 Plastics products, n.e.c. (pt)

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

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 326199 include establishments primarily engaged in the manufacture of plastic furniture parts. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3262 Rubber Product Manufacturing**

This industry group comprises establishments primarily engaged in processing natural and synthetic or reclaimed rubber materials into intermediate or final products using processes such as vulcanizing, cementing, molding, extruding, and lathe-cutting.

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### **32621 Tire Manufacturing**

This industry comprises establishments primarily engaged in manufacturing tires and inner tubes from natural and synthetic rubber and retreading or rebuilding tires.

#### **326211 Tire Manufacturing (Except Retreading)**

This U.S. industry comprises establishments primarily engaged in manufacturing tires and inner tubes from natural and synthetic rubber.

The data published with NAICS code 326211 include the following SIC industry:

3011 Tires and inner tubes

#### **326212 Tire Retreading**

This U.S. industry comprises establishments primarily engaged in retreading, or rebuilding tires.

The data published with NAICS code 326212 include the following SIC industry:

7534 Tire retreading and repair shops (pt)

#### **32622 Rubber and Plastics Hoses and Belting Manufacturing**

This industry comprises establishments primarily engaged in manufacturing rubber hose and/or plastics (reinforced) hose and belting from natural and synthetic rubber and/or plastics resins. Establishments manufacturing garden hoses from purchased hose are included in this industry.

#### **326220 Rubber and Plastics Hoses and Belting Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing rubber hose and/or plastics (reinforced) hose and belting from natural and synthetic rubber and/or plastics resins. Establishments manufacturing garden hoses from purchased hose are included in this industry.

The data published with NAICS code 326220 include the following SIC industry:

3052 Rubber and plastics hose and belting

#### **32629 Other Rubber Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing rubber products (except tires, hoses, and belting) from natural and synthetic rubber.

#### **326291 Rubber Product Manufacturing for Mechanical Use**

This U.S. industry comprises establishments primarily engaged in molding, extruding, or lathe-cutting rubber to manufacture rubber goods (except tubing) for mechanical applications. Products of this industry are generally parts for motor vehicles, machinery, and equipment.

The data published with NAICS code 326291 include the following SIC industry:

3061 Mechanical rubber goods

#### **326299 All Other Rubber Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing rubber products (except tires; hoses and belting; and molded, extruded, and lathe-cut rubber goods for mechanical applications) from natural and synthetic rubber.

The data published with NAICS code 326299 include the following SIC industry:

3069 Fabricated rubber products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 326299 include establishments primarily engaged in the manufacture of rubber products including gloves, toys, pants, raincoats, bibs, aprons, bathing caps, life jackets, and wet suits. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **327 Nonmetallic Mineral Product Manufacturing**

The Nonmetallic Mineral Product Manufacturing subsector transforms mined or quarried nonmetallic minerals, such as sand, gravel, stone, clay, and refractory materials, into products for intermediate or final consumption. Processes used include grinding, mixing, cutting, shaping, and honing. Heat often is used in the process and chemicals are frequently mixed to change the composition, purity, and chemical properties for the intended product. For example, glass is produced by heating silica sand to the melting point (sometimes combined with cullet or recycled glass) and then drawn, floated, or blow molded to the desired shape or thickness. Refractory materials are heated and then formed into bricks or other shapes for use in industrial applications.

The Nonmetallic Mineral Product Manufacturing subsector includes establishments that manufacture products, such as bricks, refractories, ceramic products, and glass and glass products, such as plate glass and containers. Also included are cement and concrete products, lime, gypsum and other nonmetallic mineral products including abrasive products, ceramic plumbing fixtures, statuary, cut stone products, and mineral wool. The products are used in a wide range of activities from construction and heavy and light manufacturing to articles for personal use.

Mining, beneficiating, and manufacturing activities often occur in a single location. Separate receipts will be collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals, beneficiate the nonmetallic minerals and further

process the nonmetallic minerals into a more finished manufactured product are classified based on the primary activity of the establishment. A mine that manufactures a small amount of finished products will be classified in Sector 21, Mining. An establishment that mines whose primary output is a more-finished manufactured product will be classified in the Manufacturing Sector.

Excluded from the Nonmetallic Mineral Product Manufacturing subsector are establishments that primarily benefit mined nonmetallic minerals. Beneficiation is the process whereby the extracted material is reduced to particles that can be separated into mineral and waste, the former suitable for further processing or direct use. Beneficiation establishments are included in Sector 21, Mining.

### **3271 Clay Product and Refractory Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32711, Pottery, Ceramics, and Plumbing Fixture Manufacturing; and 32712, Clay Building Material and Refractories Manufacturing.

#### **32711 Pottery, Ceramics, and Plumbing Fixture Manufacturing**

This industry comprises establishments primarily engaged in shaping, molding, glazing, and firing pottery, ceramics, and plumbing fixtures made entirely or partly of clay or other ceramic materials.

#### **327111 Vitreous China Plumbing Fixture and China and Earthenware Bathroom Accessories Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing vitreous china plumbing fixtures and china and earthenware bathroom accessories, such as faucet handles, towel bars, and soap dishes.

The data published with NAICS code 327111 include the following SIC industry:

3261 Vitreous plumbing fixtures

#### **327112 Vitreous China, Fine Earthenware, and Other Pottery Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing table and kitchen articles, art and ornamental items, and similar vitreous china, fine earthenware, stoneware, coarse earthenware, and pottery products.

The data published with NAICS code 327112 include the following SIC industries:

3262 Vitreous china table and kitchen articles

3263 Fine earthenware table and kitchen articles

3269 Pottery products, n.e.c.

3299 Nonmetallic mineral products, n.e.c. (pt)

### **327113 Porcelain Electrical Supply Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing porcelain electrical insulators, molded porcelain parts for electrical devices, ferrite or ceramic magnets, and electronic and electrical supplies from nonmetallic minerals, such as clay and ceramic materials.

The data published with NAICS code 327113 include the following SIC industry:

3264 Porcelain electrical supplies

### **32712 Clay Building Material and Refractories Manufacturing**

This industry comprises establishments primarily engaged in shaping, molding, baking, burning, or hardening clay refractories, nonclay refractories, ceramic tile, structural clay tile, brick, and other structural clay building materials.

#### **327121 Brick and Structural Clay Tile Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing brick and structural clay tiles.

The data published with NAICS code 327121 include the following SIC industry:

3251 Brick and structural clay tile

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 327121 include establishments primarily engaged in the manufacture of slumped brick. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **327122 Ceramic Wall and Floor Tile Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ceramic wall and floor tiles.

The data published with NAICS code 327122 include the following SIC industry:

3253 Ceramic wall and floor tile

#### **327123 Other Structural Clay Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing clay sewer pipe, drain tile, flue lining tile, architectural terra-cotta, and other structural clay products.

The data published with NAICS code 327123 include the following SIC industry:

3259 Structural clay products, n.e.c.

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### **327124 Clay Refractory Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing clay refractory, mortar, brick, block, tile, and fabricated clay refractories, such as melting pots. A refractory is a material that will retain its shape and chemical identity when subjected to high temperatures and is used in applications that require extreme resistance to heat, such as furnace linings.

The data published with NAICS code 327124 include the following SIC industry:

3255 Clay refractories

### **327125 Nonclay Refractory Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonclay refractory, mortar, brick, block, tile, and fabricated nonclay refractories such as graphite, magnesite, silica, or alumina crucibles. A refractory is a material that will retain its shape and chemical identity when subjected to high temperatures and is used in applications that require extreme resistance to heat, such as furnace linings.

The data published with NAICS code 327125 include the following SIC industry:

3297 Nonclay refractories

### **3272 Glass and Glass Product Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 32721, Glass and Glass Product Manufacturing.

#### **32721 Glass and Glass Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing glass and/or glass products. Establishments in this industry may manufacture glass and/or glass products by melting silica sand or cullet, or purchasing glass.

#### **327211 Flat Glass Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing flat glass by melting silica sand or cullet or (2) manufacturing both flat glass and laminated glass by melting silica sand or cullet.

The data published with NAICS code 327211 include the following SIC industry:

3211 Flat glass

#### **327212 Other Pressed and Blown Glass and Glassware Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing glass by melting silica sand or cullet and making pressed, blown, or shaped glass or glassware (except glass packaging containers).

The data published with NAICS code 327212 include the following SIC industry:

3229 Pressed and blown glass, n.e.c.

#### **327213 Glass Container Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing glass packaging containers.

The data published with NAICS code 327213 include the following SIC industry:

3221 Glass containers

#### **327215 Glass Product Manufacturing Made of Purchased Glass**

This U.S. industry comprises establishments primarily engaged in remelting, pressing, blowing, or shaping purchased glass.

The data published with NAICS code 327215 include the following SIC industry:

3231 Products of purchased glass

### **3273 Cement and Concrete Product Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32731, Cement Manufacturing; 32732, Ready-Mix Concrete Manufacturing; 32733, Concrete Pipe, Brick, and Block Manufacturing; and 32739, Other Concrete Product Manufacturing.

#### **32731 Cement Manufacturing**

This industry comprises establishments primarily engaged in manufacturing portland, natural, masonry, pozzalanic, and other hydraulic cements. Cement manufacturing establishments may calcine earths or mine, quarry, manufacture, or purchase lime.

#### **327310 Cement Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing portland, natural, masonry, pozzalanic, and other hydraulic cements. Cement manufacturing establishments may calcine earths or mine, quarry, manufacture, or purchase lime.

The data published with NAICS code 327310 include the following SIC industry:

3241 Cement, hydraulic

#### **32732 Ready-Mix Concrete Manufacturing**

This industry comprises establishments, such as batch plants or mix plants, primarily engaged in manufacturing concrete delivered to a purchaser in a plastic and unhardened state. Ready-mix concrete manufacturing establishments may mine, quarry, or purchase sand and gravel.



### **327320 Ready-Mix Concrete Manufacturing**

This U.S. industry comprises establishments, such as batch plants or mix plants, primarily engaged in manufacturing concrete delivered to a purchaser in a plastic and unhardened state. Ready-mix concrete manufacturing establishments may mine, quarry, or purchase sand and gravel.

The data published with NAICS code 327320 include the following SIC industry:

3273 Ready-mixed concrete

### **32733 Concrete Pipe, Brick, and Block Manufacturing**

This industry comprises establishments primarily engaged in manufacturing concrete pipe, brick, and block

#### **327331 Concrete Block and Brick Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing concrete block and brick.

The data published with NAICS code 327331 include the following SIC industry:

3271 Concrete brick and block

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 327331 do not include establishments primarily engaged in the manufacture of slumped brick. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **327332 Concrete Pipe Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing concrete pipe.

The data published with NAICS code 327332 include the following SIC industry:

3272 Concrete products, n.e.c. (pt)

#### **32739 Other Concrete Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing concrete products (except block, brick, and pipe).

#### **327390 Other Concrete Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing concrete products (except block, brick, and pipe).

The data published with NAICS code 327390 include the following SIC industry:

3272 Concrete products, n.e.c. (pt)

### **3274 Lime and Gypsum Product Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 32741, Lime Manufacturing; and 32742, Gypsum Product Manufacturing.

#### **32741 Lime Manufacturing**

This industry comprises establishments primarily engaged in manufacturing lime from calcitic limestone, dolomitic limestone, or other calcareous materials, such as coral, chalk, and shells. Lime manufacturing establishments may mine, quarry, collect, or purchase the sources of calcium carbonate.

#### **327410 Lime Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing lime from calcitic limestone, dolomitic limestone, or other calcareous materials, such as coral, chalk, and shells. Lime manufacturing establishments may mine, quarry, collect, or purchase the sources of calcium carbonate.

The data published with NAICS code 327410 include the following SIC industry:

3274 Lime

#### **32742 Gypsum Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing gypsum products such as wall-board, plaster, plasterboard, molding, ornamental moldings, statuary, and architectural plaster work. Gypsum product manufacturing establishments may mine, quarry, or purchase gypsum.

#### **327420 Gypsum Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing gypsum products, such as wall-board, plaster, plasterboard, molding, ornamental moldings, statuary, and architectural plaster work. Gypsum product manufacturing establishments may mine, quarry, or purchase gypsum.

The data published with NAICS code 327420 include the following SIC industries:

3275 Gypsum products

3299 Nonmetallic mineral products, n.e.c. (pt)

#### **3279 Other Nonmetallic Mineral Product Manufacturing**

The Other Nonmetallic Mineral Product Manufacturing industry group comprises establishments manufacturing nonmetallic mineral products (except clay products, refractory products, glass products, cement and concrete products, lime, and gypsum products).

### **32791 Abrasive Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing abrasive grinding wheels of natural or synthetic materials, abrasive-coated products, and other abrasive products

#### **327910 Abrasive Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing abrasive grinding wheels of natural or synthetic materials, abrasive-coated products, and other abrasive products.

The data published with NAICS code 327910 include the following SIC industry:

3291 Abrasive products (pt)

### **32799 All Other Nonmetallic Mineral Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing nonmetallic mineral products (except pottery, ceramics, and plumbing fixtures; clay building materials and refractories; glass and glass products; cement; ready-mix concrete; concrete products; lime; gypsum products; and abrasive products).

#### **327991 Cut Stone and Stone Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in cutting, shaping, and finishing granite, marble, limestone, slate, and other stone for building and miscellaneous uses. Stone product manufacturing establishments may mine, quarry, or purchase stone.

The data published with NAICS code 327991 include the following SIC industry:

3281 Cut stone and stone products

#### **327992 Ground or Treated Mineral and Earth Manufacturing**

This U.S. industry comprises establishments primarily engaged in calcining, dead burning, or otherwise processing beyond beneficiation, clays, ceramic and refractory minerals, barite, and miscellaneous nonmetallic minerals.

The data published with NAICS code 327992 include the following SIC industry:

3295 Minerals, ground or treated

#### **327993 Mineral Wool Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing mineral wool and mineral wool (i.e., fiberglass) insulation products made of such siliceous materials as rock, slag, and glass or combinations thereof.

The data published with NAICS code 327993 include the following SIC industry:

3296 Mineral wool

### **327999 All Other Miscellaneous Nonmetallic Mineral Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonmetallic mineral products (except pottery, ceramics, and plumbing fixtures; clay building materials and refractories; glass and glass products; cement; ready-mix concrete; concrete products; lime; gypsum products; abrasive products; cut stone and stone products; ground and treated minerals and earth; and mineral wool).

The data published with NAICS code 327999 include the following SIC industries:

3272 Concrete products, n.e.c. (pt)

3292 Asbestos products (pt)

3299 Nonmetallic mineral products, n.e.c. (pt)

### **331 Primary Metal Manufacturing**

Industries in the Primary Metal Manufacturing subsector smelt and/or refine ferrous and nonferrous metals from ore, pig or scrap, using electrometallurgical and other process metallurgical techniques. Establishments in this subsector also manufacture metal alloys and superalloys by introducing other chemical elements to pure metals. The output of smelting and refining, usually in ingot form, is used in rolling, drawing, and extruding operations to make sheet, strip, bar, rod, or wire, and in molten form to make castings and other basic metal products.

Primary manufacturing of ferrous and nonferrous metals begins with ore or concentrate as the primary input. Establishments manufacturing primary metals from ore and/or concentrate remain classified in the primary smelting, primary refining, or iron and steel mill, industries regardless of the form of their output. Establishments primarily engaged in secondary smelting and/or secondary refining recover ferrous and nonferrous metals from scrap and/or dross. The output of the secondary smelting and/or secondary refining industries is limited to shapes, such as ingot or billet, that will be further processed. Recovery of metals from scrap often occurs in establishments that are primarily engaged in activities, such as rolling, drawing, extruding, or similar processes.

Excluded from the Primary Metal Manufacturing subsector are establishments primarily engaged in manufacturing ferrous and nonferrous forgings (except ferrous forgings made in steel mills) and stampings. Although forging, stamping, and casting are all methods used to make metal shapes, forging and stamping do not use molten metals and are included in Subsector 332, Fabricated Metal Product Manufacturing. Establishments primarily engaged in operating coke ovens are classified in Industry 32419, Other Petroleum and Coal Products Manufacturing.

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### **3311 Iron and Steel Mills and Ferroalloy Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33111, Iron and Steel Mills and Ferroalloy Manufacturing.

#### **33111 Iron and Steel Mills and Ferroalloy Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) direct reduction of iron ore; (2) manufacturing pig iron in molten or solid form; (3) converting pig iron into steel; (4) manufacturing ferroalloys; (5) making steel; (6) making steel and manufacturing shapes (e.g., bar, plate, rod, sheet, strip, wire); and (7) making steel and forming pipe and tube.

#### **331111 Iron and Steel Mills**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) direct reduction of iron ore; (2) manufacturing pig iron in molten or solid form; (3) converting pig iron into steel; (4) making steel; (5) making steel and manufacturing shapes (e.g., bar, plate, rod, sheet, strip, wire); and (6) making steel and forming tube and pipe.

The data published with NAICS code 331111 include the following SIC industries:

3312 Blast furnaces and steel mills (pt)

3399 Primary metal products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 331111 include establishments primarily engaged in the manufacture of ferrous metal powder, paste, and flake. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **3311111 Iron and Steel Mills – Fully Integrated**

Establishments primarily engaged in smelting iron ore in a blast furnace to produce pig iron in molten or solid form; then converting pig iron into steel by removal of the carbon in the iron through combustion in a basic oxygen or electric furnace; then producing iron and steel basic shapes, such as plates, sheets, strips, and bars, and other related products, such as pipes, tubes, and wire.

#### **3311112 Iron and Steel Mills – Partially Integrated With a Blast Furnace**

Establishments primarily engaged in smelting iron ore in a blast furnace to produce pig iron in molten or solid form; then converting pig iron into steel by removal of the carbon in the iron through combustion in a basic oxygen or electric furnace; then producing ingots and/or semifinished shapes, such as blooms, billets, and rods.

#### **3311113 Iron and Steel Mills – Partially Integrated Without a Blast Furnace**

Establishments primarily engaged in converting pig iron, direct reduced iron, and/or scrap into steel by removal of the carbon in the iron through combustion in a basic oxygen or electric furnace; then producing iron and steel basic shapes, such as plates, sheets, strips, and bars, and other related products, such as pipes, tubes, and wire.

#### **3311114 Iron and Steel Mills – Nonintegrated**

Establishments primarily engaged in producing iron and steel basic shapes, such as plates, sheets, strips, and bars, and other related products, such as pipes, tubes, and wire from purchased ingots and/or semifinished shapes, such as blooms, billets, and rods.

#### **331112 Electrometallurgical Ferroalloy Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electrometallurgical ferroalloys. Ferroalloys add critical elements, such as silicon and manganese for carbon steel and chromium, vanadium, tungsten, titanium, and molybdenum for low- and high-alloy metals. Ferroalloys include iron-rich alloys and more pure forms of elements added during the steel manufacturing process that alter or improve the characteristics of the metal being made.

The data published with NAICS code 331112 include the following SIC industry:

3313 Electrometallurgical products (pt)

#### **3312 Steel Product Manufacturing From Purchased Steel**

This industry group comprises establishments primarily engaged in manufacturing iron and steel tube and pipe, drawing steel wire, and rolling or drawing shapes from purchased iron or steel.

#### **33121 Iron and Steel Pipes and Tubes Manufacturing From Purchased Steel**

This industry comprises establishments primarily engaged in manufacturing welded, riveted, or seamless pipe and tube from purchased iron or steel.

#### **331210 Iron and Steel Pipes and Tubes Manufacturing From Purchased Steel**

This U.S. industry comprises establishments primarily engaged in manufacturing welded, riveted, or seamless pipe and tube from purchased iron or steel.

The data published with NAICS code 331210 include the following SIC industry:

3317 Steel pipe and tubes

### **33122 Rolling and Drawing of Purchased Steel**

This industry comprises establishments primarily engaged in rolling and/or drawing steel shapes, such as plate, sheet, strip, rod, and bar, from purchased steel.

#### **331221 Rolled Steel Shape Manufacturing**

This U.S. industry comprises establishments primarily engaged in rolling or drawing shapes (except wire), such as plate, sheet, strip, rod, and bar, from purchased steel.

The data published with NAICS code 331221 include the following SIC industry:

3316 Cold finishing of steel shapes

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 331221 do not include establishments primarily engaged in making coke oven and blast furnace products; in making steel and rolling or drawing steel shapes; or in the making of ferrous metal powder, paste, and flake. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **331222 Steel Wire Drawing**

This U.S. industry comprises establishments primarily engaged in drawing wire from purchased steel.

The data published with NAICS code 331222 include the following SIC industry:

3315 Steel wire and related products (pt)

### **3313 Alumina and Aluminum Production and Processing**

This NAICS industry group includes establishments classified in NAICS Industry 33131, Alumina and Aluminum Production and Processing.

#### **33131 Alumina and Aluminum Production and Processing**

This industry comprises establishments primarily engaged in one or more of the following: (1) refining alumina; (2) making (i.e., the primary production) aluminum from alumina; (3) recovering aluminum from scrap or dross; (4) alloying purchased aluminum; and (5) manufacturing aluminum primary forms (e.g., bar, foil, pipe, plate, rod, sheet, tube, wire).

##### **331311 Alumina Refining**

This U.S. industry comprises establishments primarily engaged in refining alumina (i.e., aluminum oxide) generally from bauxite.

The data published with NAICS code 331311 include the following SIC industry:

2819 Industrial inorganic chemicals, n.e.c. (pt)

### **331312 Primary Aluminum Production**

This U.S. industry comprises establishments primarily engaged in (1) making aluminum from alumina and/or (2) making aluminum from alumina and rolling, drawing, extruding, or casting the aluminum they make into primary forms (e.g., bar, billet, ingot, plate, rod, sheet, strip). Establishments in this industry may make primary aluminum or aluminum-based alloys from alumina.

The data published with NAICS code 331312 include the following SIC industry:

3334 Primary aluminum

#### **331314 Secondary Smelting and Alloying of Aluminum**

This U.S. industry comprises establishments primarily engaged in (1) recovering aluminum and aluminum alloys from scrap and/or dross (i.e., secondary smelting) and making billet or ingot (except by rolling) and/or (2) manufacturing alloys, powder, paste, or flake from purchased aluminum.

The data published with NAICS code 331314 include the following SIC industries:

3341 Secondary nonferrous metals (pt)

3399 Primary metal products, n.e.c. (pt)

#### **331315 Aluminum Sheet, Plate, and Foil Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) flat rolling or continuous casting sheet, plate, foil, and welded tube from purchased aluminum and/or (2) recovering aluminum from scrap and flat rolling or continuous casting sheet, plate, foil, and welded tube in integrated mills.

The data published with NAICS code 331315 include the following SIC industry:

3353 Aluminum sheet, plate, and foil (pt)

#### **331316 Aluminum Extruded Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) extruding aluminum bar, pipe, and tube blooms or extruding or drawing tube from purchased aluminum; and/or (2) recovering aluminum from scrap and extruding bar, pipe, and tube blooms or drawing tube in integrated mills.

The data published with NAICS code 331316 include the following SIC industry:

3354 Aluminum extruded products

### **331319 Other Aluminum Rolling and Drawing**

This U.S. industry comprises establishments primarily engaged in (1) rolling, drawing, or extruding shapes (except flat rolled sheet, plate, foil, and welded tube; extruded rod, bar, pipe, and tube blooms; and drawn or extruded tube) from purchased aluminum and/or (2) recovering aluminum from scrap and rolling, drawing or extruding shapes (except flat rolled sheet, plate, foil, and welded tube; extruded rod, bar, pipe, and tube blooms; and drawn or extruded tube) in integrated mills.

The data published with NAICS code 331319 include the following SIC industries:

3355 Aluminum rolling and drawing, n.e.c.

3357 Nonferrous wire drawing and insulating (pt)

### **3314 Nonferrous Metal (Except Aluminum) Production and Processing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33141, Nonferrous Metal (Except Aluminum) Smelting and Refining; 33142, Copper Rolling, Drawing, Extruding, and Alloying; and 33149, Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, Extruding, and Alloying.

#### **33141 Nonferrous Metal (Except Aluminum) Smelting and Refining**

This industry comprises establishments primarily engaged in (1) smelting ores into nonferrous metals and/or (2) the primary refining of nonferrous metals (except aluminum) using electrolytic or other processes.

#### **331411 Primary Smelting and Refining of Copper**

This U.S. industry comprises establishments primarily engaged in (1) smelting copper ore and/or (2) the primary refining of copper by electrolytic methods or other processes. Establishments in this industry make primary copper and copper-based alloys, such as brass and bronze, from ore or concentrates.

The data published with NAICS code 331411 include the following SIC industry:

3331 Primary copper

#### **331419 Primary Smelting and Refining of Nonferrous Metal (Except Copper and Aluminum)**

This U.S. industry comprises establishments primarily engaged in (1) making (i.e., the primary production) nonferrous metals by smelting ore and/or (2) the primary refining of nonferrous metals by electrolytic methods or other processes.

The data published with NAICS code 331419 include the following SIC industry:

3339 Primary nonferrous metals, n.e.c.

### **33142 Copper Rolling, Drawing, Extruding, and Alloying**

This industry comprises establishments primarily engaged in one or more of the following: (1) recovering copper or copper alloys from scraps; (2) alloying purchased copper; (3) rolling, drawing, or extruding shapes, (e.g., bar, plate, sheet, strip, tube, and wire) from purchased copper; and (4) recovering copper or copper alloys from scrap and rolling drawing, or extruding shapes (e.g., bar, plate, sheet, strip, tube, and wire).

#### **331421 Copper Rolling, Drawing, and Extruding**

This U.S. industry comprises establishments primarily engaged in (1) rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, tube (except bare or insulated copper communication or energy wire)) from purchased copper; and/or (2) recovering copper from scrap and rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, tube (except bare or insulated copper communication or energy wire in integrated mills)).

The data published with NAICS code 331421 include the following SIC industry:

3351 Copper rolling and drawing

#### **331422 Copper Wire (Except Mechanical) Drawing**

This U.S. industry comprises establishments primarily engaged in drawing or drawing and insulating communication and energy wire and cable from purchased copper or in integrated secondary smelting and wire drawing plants.

The data published with NAICS code 331422 include the following SIC industry:

3357 Nonferrous wire drawing and insulating (pt)

#### **331423 Secondary Smelting, Refining, and Alloying of Copper**

This U.S. industry comprises establishments primarily engaged in (1) recovering copper and copper alloys from scrap and/or (2) alloying purchased copper. Establishments in this industry make primary forms, such as ingot, wire bar, cake, and slab from copper or copper alloys, such as brass and bronze.

The data published with NAICS code 331423 include the following SIC industries:

3341 Secondary nonferrous metals (pt)

3399 Primary metal products, n.e.c. (pt)

### **33149 Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, Extruding, and Alloying**

This industry comprises establishments primarily engaged in one or more of the following: (1) recovering nonferrous metals (except copper and aluminum) and nonferrous metal alloys from scrap; (2) alloying purchased

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nonferrous metals (except copper and aluminum); (3) rolling, drawing, and extruding shapes from purchased nonferrous metals (except copper and aluminum); and (4) recovering nonferrous metals from scrap (except copper and aluminum) and rolling, drawing, or extruding shapes in integrated facilities.

### **331491 Nonferrous Metal (Except Copper and Aluminum) Rolling, Drawing, and Extruding**

This U.S. industry comprises establishments primarily engaged in (1) rolling, drawing, or extruding shapes (e.g., bar, plate, sheet, strip, tube) from purchased nonferrous metals) and/or (2) recovering nonferrous metals from scrap and rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, tube) in integrated mills.

The data published with NAICS code 331491 include the following SIC industries:

3356 Nonferrous rolling and drawing, n.e.c.

3357 Nonferrous wire drawing and insulating (pt)

### **331492 Secondary Smelting, Refining, and Alloying of Nonferrous Metal (Except Copper and Aluminum)**

This U.S. industry comprises establishments primarily engaged in (1) alloying purchased nonferrous metals and/or (2) recovering nonferrous metals from scrap. Establishments in this industry make primary forms (e.g., bar, billet, bloom, cake, ingot, slab, slug, wire) using smelting or refining processes.

The data published with NAICS code 331492 include the following SIC industries:

3313 Electrometallurgical products (pt)

3341 Secondary nonferrous metals (pt)

3399 Primary metal products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 331492 include establishments primarily engaged in the manufacture of other nonferrous additive alloys. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3315 Foundries**

This industry group comprises establishments primarily engaged in pouring molten metal into molds or dies to form castings. Establishments making castings and further manufacturing, such as machining or assembling, a specific manufactured product are classified in the industry of the finished product. Foundries may perform operations, such as cleaning and deburring, on the castings they manufacture. More involved processes, such as tapping,

threading, milling, or machining to tight tolerances, that transform castings into more finished products are classified elsewhere in the manufacturing sector based on the product being made.

Establishments in this industry group make castings from purchased metals or in integrated secondary smelting and casting facilities. When the production of primary metals is combined with making castings, the establishment is classified in 331 with the primary metal being made.

### **33151 Ferrous Metal Foundries**

This industry comprises establishments primarily engaged in pouring molten iron and steel into molds of a desired shape to make castings. Establishments in this industry purchase iron and steel made in other establishments.

#### **331511 Iron Foundries**

This U.S. industry comprises establishments primarily engaged in pouring molten pig iron or iron alloys into molds to manufacture castings, (e.g., cast iron man-hole covers, cast iron pipe, cast iron skillets). Establishments in this industry purchase iron made in other establishments.

The data published with NAICS code 331511 include the following SIC industries:

3321 Gray iron foundries

3322 Malleable iron foundries

#### **331512 Steel Investment Foundries**

This U.S. industry comprises establishments primarily engaged in manufacturing steel investment castings. Investment molds are formed by covering a wax shape with a refractory slurry. After the refractory slurry hardens, the wax is melted, leaving a seamless mold. Investment molds provide highly detailed, consistent castings. Establishments in this industry purchase steel made in other establishments.

The data published with NAICS code 331512 include the following SIC industry:

3324 Steel investment foundries

#### **331513 Steel Foundries (Except Investment)**

This U.S. industry comprises establishments primarily engaged in manufacturing steel castings (except steel investment castings). Establishments in this industry purchase steel made in other establishments.

The data published with NAICS code 331513 include the following SIC industry:

3325 Steel foundries, n.e.c.

### **33152 Nonferrous Metal Foundries**

This industry comprises establishments primarily engaged in pouring and/or introducing molten nonferrous metal, under high pressure, into metal molds or dies to manufacture castings. Establishments in this industry purchase nonferrous metals made in other establishments.

### **331521 Aluminum Die-Casting Foundries**

This U.S. industry comprises establishments primarily engaged in introducing molten aluminum, under high pressure, into molds or dies to make aluminum die-castings. Establishments in this industry purchase aluminum made in other establishments.

The data published with NAICS code 331521 include the following SIC industry:

3363 Aluminum die-castings

### **331522 Nonferrous (Except Aluminum) Die-Casting Foundries**

This U.S. industry comprises establishments primarily engaged in introducing molten nonferrous metal (except aluminum), under high pressure, into molds to make nonferrous metal die-castings. Establishments in this industry purchase nonferrous metals made in other establishments.

The data published with NAICS code 331522 include the following SIC industry:

3364 Nonferrous die-casting, except aluminum

### **331524 Aluminum Foundries (Except Die-Casting)**

This U.S. industry comprises establishments primarily engaged in pouring molten aluminum into molds to manufacture aluminum castings. Establishments in this industry purchase aluminum made in other establishments.

The data published with NAICS code 331524 include the following SIC industry:

3365 Aluminum foundries

### **331525 Copper Foundries (Except Die-Casting)**

This U.S. industry comprises establishments primarily engaged in pouring molten copper into molds to manufacture copper castings. Establishments in this industry purchase copper made in other establishments.

The data published with NAICS code 331525 include the following SIC industry:

3366 Copper foundries

### **331528 Other Nonferrous Foundries (Except Die-Casting)**

This U.S. industry comprises establishments primarily engaged in pouring molten nonferrous metals (except aluminum and copper) into molds to manufacture nonferrous castings (except aluminum die-castings, nonferrous

(except aluminum) die-castings, aluminum castings, and copper castings). Establishments in this industry purchase nonferrous metals, such as nickel, lead, and zinc, made in other establishments.

The data published with NAICS code 331528 include the following SIC industry:

3369 Nonferrous foundries, n.e.c.

### **332 Fabricated Metal Product Manufacturing**

Industries in the Fabricated Metal Product Manufacturing subsector transform metal into intermediate or end products, other than machinery, computers and electronics, and metal furniture or treating metals and metal formed products fabricated elsewhere. Important fabricated metal processes are forging, stamping, bending, forming, and machining, used to shape individual pieces of metal; and other processes, such as welding and assembling, used to join separate parts together. Establishments in this subsector may use one of these processes or a combination of these processes.

The NAICS structure for this subsector distinguishes the forging and stamping processes in a single industry. The remaining industries, in the subsector, group establishments based on similar combinations of processes used to make products.

The manufacturing performed in the Fabricated Metal Product Manufacturing subsector begins with manufactured metal shapes. The establishments in this sector further fabricate the purchased metal shapes into a product. For instance, the Spring and Wire Product Manufacturing industry starts with wire and fabricates such items.

Within manufacturing there are other establishments that make the same products made by this subsector; only these establishments begin production further back in the production process. These establishments have a more integrated operation. For instance, one establishment may manufacture steel, draw it into wire, and make wire products in the same establishment. Such operations are classified in the Primary Metal Manufacturing subsector.

### **3321 Forging and Stamping**

This NAICS industry group includes establishments classified in NAICS Industry 33211, Forging and Stamping.

### **33211 Forging and Stamping**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing forgings from purchased metals; (2) manufacturing metal custom roll forming products; (3) manufacturing metal stamped and spun products (except automotive, cans, coins); and (4) manufacturing powder metallurgy products. Establishments making metal forgings, metal stampings, and metal spun products and further manufacturing (e.g., machining, assembling) a specific manufactured product are classified in the industry of the finished

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product. Metal forging, metal stamping, and metal spun products establishments may perform surface finishing operations, such as cleaning and deburring, on the products they manufacture.

### **332111 Iron and Steel Forging**

This U.S. industry comprises establishments primarily engaged in manufacturing iron and steel forgings from purchased iron and steel by hammering mill shapes. Establishments making iron and steel forgings and further manufacturing (e.g., machining, assembling) a specific manufactured product are classified in the industry of the finished product. Iron and steel forging establishments may perform surface finishing operations, such as cleaning and deburring, on the forgings they manufacture.

The data published with NAICS code 332111 include the following SIC industry:

3462 Iron and steel forgings

### **332112 Nonferrous Forging**

This U.S. industry comprises establishments primarily engaged in manufacturing nonferrous forgings from purchased nonferrous metals by hammering mill shapes. Establishments making nonferrous forgings and further manufacturing (e.g., machining, assembling) a specific manufactured product are classified in the industry of the finished product. Nonferrous forging establishments may perform surface finishing operations, such as cleaning and deburring, on the forgings they manufacture.

The data published with NAICS code 332112 include the following SIC industry:

3463 Nonferrous forgings

### **332114 Custom Roll Forming**

This U.S. industry comprises establishments primarily engaged in custom roll forming metal products by use of rotary motion of rolls with various contours to bend or shape the products.

The data published with NAICS code 332114 include the following SIC industry:

3449 Miscellaneous metal work (pt)

### **332115 Crown and Closure Manufacturing**

This U.S. industry comprises establishments primarily engaged in stamping metal crowns and closures, such as bottle caps and home canning lids and rings.

The data published with NAICS code 332115 include the following SIC industry:

3466 Crowns and closures

### **332116 Metal Stamping**

This U.S. industry comprises establishments primarily engaged in manufacturing unfinished metal stampings and spinning unfinished metal products (except crowns, cans, closures, automotive, and coins). Establishments making metal stampings and metal spun products and further manufacturing (e.g., machining, assembling) a specific product are classified in the industry of the finished product. Metal stamping and metal spun products establishments may perform surface finishing operations, such as cleaning and deburring, on the products they manufacture.

The data published with NAICS code 332116 include the following SIC industry:

3469 Metal stampings, n.e.c. (pt)

### **332117 Powder Metallurgy Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing powder metallurgy products by compacting them in a shaped die and sintering. Establishments in this industry generally make a wide range of parts on a job or order basis.

The data published with NAICS code 332117 include the following SIC industry:

3499 Fabricated metal products, n.e.c. (pt)

### **3322 Cutlery and Handtool Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33221, Cutlery and Handtool Manufacturing.

#### **33221 Cutlery and Handtool Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing nonprecious and precious plated metal cutlery and flatware; (2) manufacturing nonpowered hand and edge tools; (3) manufacturing nonpowered handsaws; (4) manufacturing saw blades, all types (including those for sawing machines); and (5) manufacturing metal kitchen utensils (except cutting-type) and pots and pans (except those manufactured by casting (e.g., cast iron skillets) or stamped without further fabrication).

#### **332211 Cutlery and Flatware (Except Precious) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonprecious and precious plated metal cutlery and flatware.

The data published with NAICS code 332211 include the following SIC industries:

3421 Cutlery

3914 Silverware and plated ware (pt)



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This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census—Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332211 do not include establishments primarily engaged in the manufacture of hand-operated clippers for human hair. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **332212 Hand and Edge Tool Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonpowered hand and edge tools (except saws).

The data published with NAICS code 332212 include the following SIC industries:

- 3423 Hand and edge tools, n.e.c.
- 3523 Farm machinery and equipment (pt)
- 3524 Lawn and garden equipment (pt)
- 3545 Machine tool accessories (pt)
- 3699 Electrical equipment and supplies, n.e.c. (pt)
- 3799 Transportation equipment, n.e.c. (pt)
- 3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census—Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332212 include establishments primarily engaged in the manufacture of wheelbarrows or quality control laser equipment but do not include establishments primarily engaged in the manufacture of tool-type shears or fish wire, an electrical wiring tool. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **332213 Saw Blade and Handsaw Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing nonpowered handsaws and/or (2) manufacturing saw blades, all types (including those for power sawing machines).

The data published with NAICS code 332213 include the following SIC industry:

- 3425 Saw blades and handsaws

### **332214 Kitchen Utensil, Pot, and Pan Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal kitchen utensils (except cutting-type), pots, and pans (except those manufactured by casting (e.g., cast iron skillets) or stamped without further fabrication).

The data published with NAICS code 332214 include the following SIC industry:

- 3469 Metal stampings, n.e.c. (pt)

### **3323 Architectural and Structural Metals Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33231, Plate Work and Fabricated Structural Product Manufacturing; and 33232, Ornamental and Architectural Metal Products Manufacturing.

#### **33231 Plate Work and Fabricated Structural Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing one or more of the following: (1) prefabricated metal buildings, panels, and sections; (2) structural metal products; and (3) metal plate work products.

##### **332311 Prefabricated Metal Building and Component Manufacturing**

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

The data published with NAICS code 332311 include the following SIC industry:

- 3448 Prefabricated metal buildings

##### **332312 Fabricated Structural Metal Manufacturing**

This U.S. industry comprises establishments primarily engaged in fabricating structural metal products, such as concrete reinforcing bars and fabricated bar joists.

The data published with NAICS code 332312 include the following SIC industries:

- 3441 Fabricated structural metal
- 3449 Miscellaneous metal work (pt)

##### **332313 Plate Work Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated metal plate work by cutting, punching, bending, shaping, and welding purchased metal plate.

The data published with NAICS code 332313 include the following SIC industry:

- 3443 Fabricated plate work, boiler shops (pt)

##### **33232 Ornamental and Architectural Metal Products Manufacturing**

This industry comprises establishments primarily engaged in manufacturing one or more of the following: (1) metal framed windows (i.e., typically using purchased glass) and metal doors; (2) sheet metal work; and (3) ornamental and architectural metal products.

### **332321 Metal Window and Door Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal framed windows (i.e., typically using purchased glass) and metal doors. Examples of products made by these establishments are metal door frames; metal framed window and door screens; metal molding and trim (except automotive); and metal curtain walls.

The data published with NAICS code 332321 include the following SIC industries:

- 2499 Wood products, n.e.c. (pt)
- 3442 Metal doors, sash, and trim
- 3449 Miscellaneous metal work (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332321 include establishments primarily engaged in the manufacture of metal finished moldings for mirrors and pictures. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **332322 Sheet Metal Work Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing sheet metal work (except stampings).

The data published with NAICS code 332322 include the following SIC industry:

- 3444 Sheet metal work (pt)

### **332323 Ornamental and Architectural Metal Work Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ornamental and architectural metal work, such as staircases, metal open steel flooring, fire escapes, railings, and scaffolding.

The data published with NAICS code 332323 include the following SIC industries:

- 3446 Architectural metal work
- 3449 Miscellaneous metal work (pt)
- 3523 Farm machinery and equipment (pt)

### **3324 Boiler, Tank, and Shipping Container Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33241, Power Boiler and Heat Exchanger Manufacturing; 33242, Metal Tank (Heavy Gauge) Manufacturing; and 33243, Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing.

### **33241 Power Boiler and Heat Exchanger Manufacturing**

This industry comprises establishments primarily engaged in manufacturing power boilers and heat exchangers. Establishments in this industry may perform installation in addition to manufacturing power boilers and heat exchangers.

### **332410 Power Boiler and Heat Exchanger Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing power boilers and heat exchangers. Establishments in this industry may perform installation in addition to manufacturing power boilers and heat exchangers.

The data published with NAICS code 332410 include the following SIC industry:

- 3443 Fabricated plate work, boiler shops (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332410 do not include establishments primarily engaged in the manufacture of nuclear control drive mechanisms. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33242 Metal Tank (Heavy Gauge) Manufacturing**

This industry comprises establishments primarily engaged in cutting, forming, and joining heavy gauge metal to manufacture tanks, vessels, and other containers.

### **332420 Metal Tank (Heavy Gauge) Manufacturing**

This U.S. industry comprises establishments primarily engaged in cutting, forming, and joining heavy gauge metal to manufacture tanks, vessels, and other containers.

The data published with NAICS code 332420 include the following SIC industry:

- 3443 Fabricated plate work, boiler shops (pt)

### **33243 Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing**

This industry comprises establishments primarily engaged in forming light gauge metal containers.

### **332431 Metal Can Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal cans, lids, and ends.

The data published with NAICS code 332431 include the following SIC industry:

- 3411 Metal cans

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### **332439 Other Metal Container Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal (light gauge) containers (except cans).

The data published with NAICS code 332439 include the following SIC industries:

- 3412 Metal barrels, drums, and pails
- 3429 Hardware, n.e.c. (pt)
- 3444 Sheet metal work (pt)
- 3499 Fabricated metal products, n.e.c. (pt)
- 3537 Industrial trucks and tractors (pt)

### **3325 Hardware Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33251, Hardware Manufacturing.

#### **33251 Hardware Manufacturing**

This industry comprises establishments primarily engaged in manufacturing metal hardware, such as metal hinges, metal handles, keys, and locks (except coin-operated, time locks).

#### **332510 Hardware Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal hardware, such as metal hinges, metal handles, keys, and locks (except coin-operated, time locks).

The data published with NAICS code 332510 include the following SIC industries:

- 3429 Hardware, n.e.c. (pt)
- 3499 Fabricated metal products, n.e.c. (pt)

### **3326 Spring and Wire Product Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33261, Spring and Wire Product Manufacturing.

#### **33261 Spring and Wire Product Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing steel springs by forming, such as cutting, bending, and heat winding metal rod or strip stock and/or (2) manufacturing wire springs and fabricated wire products from wire drawn elsewhere (except watch and clock springs).

#### **332611 Spring (Heavy Gauge) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing heavy gauge springs by forming, such as cutting, bending, and heat winding rod or strip stock.

The data published with NAICS code 332611 include the following SIC industry:

- 3493 Steel springs, except wire

### **332612 Spring (Light Gauge) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing light gauge springs from purchased wire or strip.

The data published with NAICS code 332612 include the following SIC industry:

- 3495 Wire springs (pt)

### **332618 Other Fabricated Wire Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated wire products (except springs) made from purchased wire.

The data published with NAICS code 332618 include the following SIC industries:

- 3315 Steel wire and related products (pt)
- 3399 Primary metal products, n.e.c. (pt)
- 3496 Miscellaneous fabricated wire products

### **3327 Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33271, Machine Shops; and 33272, Turned Product and Screw, Nut, and Bolt Manufacturing.

#### **33271 Machine Shops**

This industry comprises establishments known as machine shops primarily engaged in machining metal parts on a job or order basis. Generally machine shop jobs are low volume using machine tools, such as lathes (including computer numerically controlled); automatic screw machines; and machines for boring, grinding, and milling.

#### **332710 Machine Shops**

This U.S. industry comprises establishments known as machine shops primarily engaged in machining metal parts on a job or order basis. Generally machine shop jobs are low volume using machine tools, such as lathes (including computer numerically controlled); automatic screw machines; and machines for boring, grinding, and milling.

The data published with NAICS code 332710 include the following SIC industry:

- 3599 Industrial machinery, n.e.c. (pt)

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### **33272 Turned Product and Screw, Nut, and Bolt Manufacturing**

This industry comprises establishments primarily engaged in (1) machining precision turned products or (2) manufacturing metal bolts, nuts, screws, rivets, and other industrial fasteners. Included in this industry are establishments primarily engaged manufacturing parts for machinery and equipment on a customized basis.

### **332721 Precision Turned Product Manufacturing**

This U.S. industry comprises establishments known as precision turned manufacturers primarily engaged in machining precision products of all materials on a job or order basis. Generally precision turned product jobs are large volume using machines, such as automatic screw machines, rotary transfer machines, computer numerically controlled (CNC) lathes, or turning centers.

The data published with NAICS code 332721 include the following SIC industry:

3451 Screw machine products

### **332722 Bolt, Nut, Screw, Rivet, and Washer Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal bolts, nuts, screws, rivets, and washers, and other industrial fasteners using machines, such as headers, threaders, and nut forming machines.

The data published with NAICS code 332722 include the following SIC industry:

3452 Bolts, nuts, rivets, and washers

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332722 do not include establishments primarily engaged in the manufacture of turnbuckles and hose clamps. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3328 Coating, Engraving, Heat Treating, and Allied Activities**

This NAICS industry group includes establishments classified in NAICS Industry 33281, Coating, Engraving, Heat Treating, and Allied Activities.

### **33281 Coating, Engraving, Heat Treating, and Allied Activities**

This industry comprises establishments primarily engaged in one or more of the following: (1) heat treating metals and metal products; (2) enameling, lacquering, varnishing metals and metal products; (3) hot dip galvanizing metals and metal products; (4) engraving, chasing, or

etching metals and metal products (except jewelry; personal goods carried on or about the person, such as compacts and cigarette cases; precious metal products (except precious plated flatware and other plated ware); and printing plates); (5) powder coating metals and metal products; (6) electroplating, plating, anodizing, coloring, and finishing metals and metal products; and (7) providing other metal surfacing services for the trade. Establishments in this industry coat engravings and heat treat metals and metal formed products fabricated elsewhere.

### **332811 Metal Heat Treating**

This U.S. industry comprises establishments primarily engaged in heat treating, such as annealing, tempering, and brazing, metals and metal products for the trade.

The data published with NAICS code 332811 include the following SIC industry:

3398 Metal heat treating

### **332812 Metal Coating, Engraving (Except Jewelry and Silverware), and Allied Services to Manufacturers**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) enameling, lacquering, and varnishing metals and metal products; (2) hot dip galvanizing metals and metal products; (3) engraving, chasing, or etching metals and metal products (except jewelry; personal goods carried on or about the person, such as compacts and cigarette cases; precious metal products (except precious plated flatware and other plated ware); and printing plates); (4) powder coating metals and metal products; and (5) providing other metal surfacing services for the trade.

The data published with NAICS code 332812 include the following SIC industry:

3479 Metal coating and allied services (pt)

### **332813 Electroplating, Plating, Polishing, Anodizing, and Coloring**

This U.S. industry comprises establishments primarily engaged in electroplating, plating, anodizing, coloring, buffing, polishing, cleaning, and sandblasting metals and metal products for the trade.

The data published with NAICS code 332813 include the following SIC industry:

3471 Plating and polishing

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332813 do not include establishments primarily engaged in laminating steel. The NAICS definitions will be fully implemented with the 2002 Economic Census.

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### **3329 Other Fabricated Metal Product Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metals, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, and nuts and bolts).

#### **33291 Metal Valve Manufacturing**

This industry comprises establishments primarily engaged in manufacturing one or more of the following metal valves: (1) industrial valves; (2) fluid power valves and hose fittings; (3) plumbing fixture fittings and trim; and (4) other metal valves and pipe fittings.

#### **332911 Industrial Valve Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial valves and valves for water works and municipal water systems.

The data published with NAICS code 332911 include the following SIC industries:

3491 Industrial valves

#### **332912 Fluid Power Valve and Hose Fitting Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power valves and hose fittings.

The data published with NAICS code 332912 include the following SIC industries:

3492 Fluid power valves and hose fittings

3728 Aircraft parts and equipment, n.e.c. (pt)

#### **332913 Plumbing Fixture Fitting and Trim Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal and plastics plumbing fixture fittings and trim, such as faucets, flush valves, and shower heads.

The data published with NAICS code 332913 include the following SIC industry:

3432 Plumbing fittings and brass goods (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332913 include establishments primarily engaged in the manufacture of lawn hose nozzels. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **332919 Other Metal Valve and Pipe Fitting Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal valves (except industrial valves, fluid power valves, fluid power hose fittings, and plumbing fixture fittings and trim).

The data published with NAICS code 332919 include the following SIC industries:

3429 Hardware, n.e.c. (pt)

3494 Valves and pipe fittings, n.e.c. (pt)

3499 Fabricated metal products, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332919 do not include establishments primarily engaged in manufacturing lawn hose nozzels. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33299 All Other Fabricated Metal Product Manufacturing**

This industry comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metal products, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, nuts and bolts, and metal valves).

#### **332991 Ball and Roller Bearing Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ball and roller bearings of all materials.

The data published with NAICS code 332991 include the following SIC industry:

3562 Ball and roller bearings

#### **332992 Small Arms Ammunition Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing small arms ammunition.

The data published with NAICS code 332992 include the following SIC industry:

3482 Small arms ammunition

#### **332993 Ammunition (Except Small Arms) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ammunition (except small arms). Examples of products made by these establishments are bombs, depth charges, rockets (except guided missiles), grenades, mines, and torpedoes.

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The data published with NAICS code 332993 include the following SIC industry:

3483 Ammunition, except small arms, n.e.c.

### **332994 Small Arms Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing small firearms that are carried and fired by the individual.

The data published with NAICS code 332994 include the following SIC industry:

3484 Small arms

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332994 do not include establishments primarily engaged in the manufacture of tranquilizer guns. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **332995 Other Ordnance and Accessories Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ordnance (except small arms) and accessories.

The data published with NAICS code 332995 include the following SIC industry:

3489 Ordnance and accessories, n.e.c.

### **332996 Fabricated Pipe and Pipe Fitting Manufacturing**

This U.S. industry comprises establishments primarily engaged in fabricating (such as cutting, threading and bending) metal pipes and pipe fittings made from purchased metal pipe.

The data published with NAICS code 332996 include the following SIC industries:

3353 Aluminum sheet, plate, and foil (pt)

3498 Fabricated pipe and fittings

### **332997 Industrial Pattern Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial patterns.

The data published with NAICS code 332997 include the following SIC industry:

3543 Industrial patterns

### **332998 Enameled Iron and Metal Sanitary Ware Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing enameled iron and metal sanitary ware.

The data published with NAICS code 332998 include the following SIC industry:

3431 Metal sanitary ware

### **332999 All Other Miscellaneous Fabricated Metal Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fabricated metal products (except forgings and stampings, cutlery and handtools, architectural and structural metals, boilers, tanks, shipping containers, hardware, spring and wire products, machine shop products, turned products, screws, nuts, and bolts, metal valves, ball and roller bearings, ammunition, small arms and other ordnances, fabricated pipes and pipe fittings, industrial patterns, and enameled iron and metal sanitary ware).

The data published with NAICS code 332999 include the following SIC industries:

3291 Abrasive products (pt)

3432 Plumbing fixture fittings and trim

3494 Valves and pipe fittings, n.e.c. (pt)

3497 Metal foil and leaf (pt)

3499 Fabricated metal products, n.e.c. (pt)

3537 Industrial trucks and tractors (pt)

3599 Industrial machinery, n.e.c. (pt)

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

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332999 do not include establishments primarily engaged in manufacturing fire-place fixtures, traps, handcuffs and leg irons, ladder jacks, or other like metal products, or primarily engaged in manufacturing precious metal hollowware. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **333 Machinery Manufacturing**

Industries in the Machinery Manufacturing subsector create end products that apply mechanical force, for example, the application of gears and levers, to perform work. Some important processes for the manufacture of machinery are forging, stamping, bending, forming, and machining that are used to shape individual pieces of metal. Processes, such as welding and assembling are used to join separate parts together. Although these processes are similar to those used in metal fabricating establishments, machinery manufacturing is different because it

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typically employs multiple metal forming processes in manufacturing the various parts of the machine. Moreover, complex assembly operations are an inherent part of the production process.

In general, design considerations are very important in machinery production. Establishments specialize in making machinery designed for particular applications. Thus, design is considered to be part of the production process for the purpose of implementing NAICS. The NAICS structure reflects this by defining industries and industry groups that make machinery for different applications. A broad distinction exists between machinery that is generally used in a variety of industrial applications (i.e., general-purpose machinery) and machinery that is designed to be used in a particular industry (i.e., special-purpose machinery). Three industry groups consist of special-purpose machinery—Agricultural, Construction, and Mining Machinery Manufacturing; Industrial Machinery Manufacturing; and Commercial and Service Industry Machinery Manufacturing. The other industry groups make general-purpose machinery: Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing; Metalworking Machinery Manufacturing; Engine, Turbine, and Power Transmission Equipment Manufacturing; and Other General-Purpose Machinery Manufacturing.

### **3331 Agriculture, Construction, and Mining Machinery Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33311, Agricultural Implement Manufacturing; 33312, Construction Machinery Manufacturing; and 33313, Mining and Oil and Gas Field Machinery Manufacturing.

#### **33311 Agricultural Implement Manufacturing**

This industry comprises establishments primarily engaged in manufacturing farm machinery and equipment, powered mowing equipment, and other powered home lawn and garden equipment.

#### **333111 Farm Machinery and Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing agricultural and farm machinery and equipment, and other turf and grounds care equipment, including planting, harvesting, and grass mowing equipment (except lawn and garden-type).

The data published with NAICS code 333111 include the following SIC industry:

3523 Farm machinery and equipment (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to

NAICS. Data for NAICS industry 333111 do not include establishments primarily engaged in manufacturing cotton ginning machinery. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **333112 Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing powered lawnmowers, lawn and garden tractors, and other home lawn and garden equipment, such as tillers, shredders, and yard vacuums and blowers.

The data published with NAICS code 333112 include the following SIC industry:

3524 Lawn and garden equipment (pt)

#### **33312 Construction Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing construction machinery, surface mining machinery, and logging equipment.

#### **333120 Construction Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing construction machinery, surface mining machinery, and logging equipment.

The data published with NAICS code 333120 include the following SIC industry:

3531 Construction machinery (pt)

#### **33313 Mining and Oil and Gas Field Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing oil and gas field and underground mining machinery and equipment.

#### **333131 Mining Machinery and Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing underground mining machinery and equipment, such as coal breakers, mining cars, core drills, coal cutters, rock drills and (2) manufacturing mineral beneficiating machinery and equipment used in surface or underground mines.

The data published with NAICS code 333131 include the following SIC industry:

3532 Mining machinery

#### **333132 Oil and Gas Field Machinery and Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing oil and gas field machinery and equipment, such as oil and gas field drilling machinery and equipment; oil and gas field production machinery and equipment; and oil and gas field derricks and (2) manufacturing water well drilling machinery.

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The data published with NAICS code 333132 include the following SIC industry:

3533 Oil field machinery

### **3332 Industrial Machinery Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33321, Sawmill and Woodworking Machinery Manufacturing; 33322, Plastics and Rubber Industry Machinery Manufacturing; and 33329, Other Industrial Machinery Manufacturing.

#### **33321 Sawmill and Woodworking Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing sawmill and woodworking machinery (except handheld), such as circular and band sawing equipment, planing machinery, and sanding machinery.

#### **333210 Sawmill and Woodworking Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing sawmill and woodworking machinery (except handheld), such as circular and band sawing equipment, planing machinery, and sanding machinery.

The data published with NAICS code 333210 include the following SIC industry:

3553 Woodworking machinery

#### **33322 Plastics and Rubber Industry Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing plastics and rubber products making machinery, such as plastics compression, extrusion and injection molding machinery and equipment, and tire building and recapping machinery and equipment.

#### **333220 Plastics and Rubber Industry Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing plastics and rubber products making machinery, such as plastics compression, extrusion and injection molding machinery and equipment, and tire building and recapping machinery and equipment.

The data published with NAICS code 333220 include the following SIC industry:

3559 Special industry machinery, n.e.c. (pt)

#### **33329 Other Industrial Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing industrial machinery (except agricultural and farm-type, construction, mining, sawmill and woodworking, and plastics and rubber products making machinery).

### **333291 Paper Industry Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing paper industry machinery for making paper and paper products, such as pulp making machinery, paper and paperboard making machinery, and paper and paperboard converting machinery.

The data published with NAICS code 333291 include the following SIC industry:

3554 Paper industries machinery

### **333292 Textile Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing textile machinery for making thread, yarn, and fiber.

The data published with NAICS code 333292 include the following SIC industries:

3552 Textile machinery

3699 Electrical equipment and supplies, n.e.c. (pt)

### **333293 Printing Machinery and Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing printing and bookbinding machinery and equipment, such as printing presses, type-setting machinery, and bindery machinery.

The data published with NAICS code 333293 include the following SIC industries:

3555 Printing trades machinery

3699 Electrical equipment and supplies, n.e.c. (pt)

### **333294 Food Product Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing food and beverage manufacturing-type machinery and equipment, such as dairy product plant machinery and equipment (e.g., homogenizers, pasteurizers, ice cream freezers), bakery machinery and equipment (e.g., dough mixers, bake ovens, pastry rolling machines), meat and poultry processing and preparation machinery, and other commercial food products machinery (e.g., slicers, choppers, and mixers).

The data published with NAICS code 333294 include the following SIC industry:

3556 Food products machinery

### **333295 Semiconductor Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wafer processing equipment, semiconductor assembly and packaging equipment, and other semiconductor making machinery.

The data published with NAICS code 333295 include the following SIC industry:

3559 Special industry machinery, n.e.c. (pt)



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### **333298 All Other Industrial Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial machinery (except agricultural and farm-type, construction and mining machinery, sawmill and woodworking machinery, plastics and rubber making machinery, paper and paperboard making machinery, textile machinery, printing machinery and equipment, food manufacturing-type machinery, and semiconductor making machinery).

The data published with NAICS code 333298 include the following SIC industries:

3559 Special industry machinery, n.e.c. (pt)

3639 Household appliances, n.e.c. (pt)

### **3333 Commercial and Service Industry Machinery Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33331, Commercial and Service Industry Machinery Manufacturing.

### **33331 Commercial and Service Industry Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing commercial and service machinery, such as automatic vending machinery, commercial laundry and drycleaning machinery, office machinery, photographic and photocopying machinery, optical instruments and machinery, automotive maintenance equipment (except mechanic's handtools), industrial vacuum cleaners, and commercial-type cooking equipment.

### **333311 Automatic Vending Machine Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing coin, token, currency, or magnetic card operated vending machines and/or (2) manufacturing coin operated mechanism for machines, such as vending machines, lockers, and laundry machines.

The data published with NAICS code 333311 include the following SIC industry:

3581 Automatic merchandising machines

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 333311 do not include establishments primarily engaged in the manufacture of change making machines. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **333312 Commercial Laundry, Drycleaning, and Pressing Machine Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing commercial and industrial laundry and drycleaning equipment and pressing machines.

The data published with NAICS code 333312 include the following SIC industry:

3582 Commercial laundry equipment

### **333313 Office Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing office machinery (except computers and photocopying equipment), such as mail-handling machinery and equipment, calculators, typewriters, and dedicated word processing equipment.

The data published with NAICS code 333313 include the following SIC industries:

3578 Calculating and accounting equipment (pt)

3579 Office machines, n.e.c. (pt)

### **333314 Optical Instrument and Lens Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing optical instruments and lens, such as binoculars, microscopes (except electron, proton), telescopes, prisms, and lenses (except ophthalmic); (2) coating or polishing lenses (except ophthalmic); and (3) mounting lenses (except ophthalmic).

The data published with NAICS code 333314 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3827 Optical instruments and lenses

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333314 include establishments primarily engaged in the manufacture of sighting and tracking laser products.

### **333315 Photographic and Photocopying Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing photographic and photocopying equipment, such as cameras (except television, video, digital projectors, film developing equipment, photocopying equipment, and microfilm equipment).

The data published with NAICS code 333315 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3861 Photographic equipment and supplies (pt)

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This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333315 include establishments primarily engaged in the manufacture of photographic laser products.

### **333319 Other Commercial and Service Industry Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing commercial and service industry equipment (except automatic vending machines, commercial laundry, drycleaning and pressing machines, office machinery, optical instruments and lenses, and photographic and photocopying equipment).

The data published with NAICS code 333319 include the following SIC industries:

3559 Special industry machinery, n.e.c. (pt)

3589 Service industry machinery, n.e.c.

3599 Industrial machinery, n.e.c. (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 333319 do not include establishments primarily engaged in the manufacture of beauty and barbershop equipment, except chairs. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3334 Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33341, Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing.

#### **33341 Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing ventilating, heating, air-conditioning, and commercial and industrial refrigeration and freezer equipment.

#### **333411 Air Purification Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing stationary air purification equipment, such as industrial dust and fume collection equipment, electrostatic precipitation equipment, warm air furnace filters, air washers, and other dust collection equipment.

The data published with NAICS code 333411 include the following SIC industry:

3564 Blowers and fans (pt)

#### **333412 Industrial and Commercial Fan and Blower Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing attic fans and industrial and commercial fans and blowers, such as commercial exhaust fans and commercial ventilating fans.

The data published with NAICS code 333412 include the following SIC industry:

3564 Blowers and fans (pt)

#### **333414 Heating Equipment (Except Warm Air Furnaces) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing heating equipment (except electric and warm air furnaces), such as heating boilers, heating stoves, floor and wall furnaces, and wall and baseboard heating units.

The data published with NAICS code 333414 include the following SIC industries:

3433 Heating equipment, except electric

3634 Electric housewares and fans (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 333414 do not include establishments primarily engaged in the manufacture of cooling towers of wood, metal, or sheet metal, or the manufacture of electric swimming pool heaters. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **333415 Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing air-conditioning (except motor vehicle) and warm air furnace equipment and/or (2) manufacturing commercial and industrial refrigeration and freezer equipment.

The data published with NAICS code 333415 include the following SIC industries:

3443 Fabricated plate work, boiler shops (pt)

3585 Refrigeration and heating equipment (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to

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NAICS. Data for NAICS industry 333415 include establishments primarily engaged in the manufacture of metal cooling towers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3335 Metalworking Machinery Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33351, Metalworking Machinery Manufacturing.

#### **33351 Metalworking Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing metalworking machinery, such as metal cutting and metal forming machine tools; cutting tools; and accessories for metalworking machinery; special dies, tools, jigs, and fixtures; industrial molds; rolling mill machinery; assembly machinery; coil handling, conversion, or straightening equipment; and wire drawing and fabricating machines.

##### **333511 Industrial Mold Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial molds for casting metals or forming other materials, such as plastics, glass, or rubber.

The data published with NAICS code 333511 include the following SIC industry:

3544 Special dies, tools, jigs, and fixtures (pt)

##### **333512 Machine Tool (Metal Cutting Types) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal cutting machine tools (except handtools).

The data published with NAICS code 333512 include the following SIC industries:

3541 Machine tools, metal cutting types

3699 Electrical equipment and supplies, n.e.c. (pt)

##### **333513 Machine Tool (Metal Forming Types) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal forming machine tools (except handtools), such as punching, sheering, bending, forming, pressing, forging and die-casting machines.

The data published with NAICS code 333513 include the following SIC industries:

3542 Machine tools, metal forming types

#### **333514 Special Die and Tool, Die Set, Jig, and Fixture Manufacturing**

This U.S. industry comprises establishments, known as tool and die shops, primarily engaged in manufacturing special tools and fixtures, such as cutting dies and jigs.

The data published with NAICS code 333514 include the following SIC industry:

3544 Special dies, tools, jigs, and fixtures (pt)

#### **333515 Cutting Tool and Machine Tool Accessory Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing accessories and attachments for metal cutting and metal forming machine tools.

The data published with NAICS code 333515 include the following SIC industry:

3545 Machine tool accessories (pt)

#### **333516 Rolling Mill Machinery and Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing rolling mill machinery and equipment for metal production.

The data published with NAICS code 333516 include the following SIC industry:

3547 Rolling mill machinery

#### **333518 Other Metalworking Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal working machinery (except industrial molds; metal cutting machine tools; metal forming machine tools; special dies and tools, die sets, jigs, and fixtures; cutting tools and machine tool accessories; and rolling mill machinery and equipment).

The data published with NAICS code 333518 include the following SIC industry:

3549 Metalworking machinery, n.e.c.

#### **3336 Engine, Turbine, and Power Transmission Equipment Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33361, Engine, Turbine, and Power Transmission Equipment Manufacturing.

##### **33361 Engine, Turbine, and Power Transmission Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing turbines, power transmission equipment, and internal combustion engines (except automotive gasoline and aircraft).

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### **333611 Turbine and Turbine Generator Set Units Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing turbines (except aircraft); and complete turbine generator set units, such as steam, hydraulic, gas, and wind.

The data published with NAICS code 333611 include the following SIC industry:

3511 Turbines and turbine generator sets

### **333612 Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing gears, speed changers, and industrial high-speed drives (except hydrostatic).

The data published with NAICS code 333612 include the following SIC industry:

3566 Speed changers, drives, and gears

### **333613 Mechanical Power Transmission Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing mechanical power transmission equipment (except motor vehicle and aircraft), such as plain bearings, brakes and clutches (except motor vehicle and electromagnetic industrial control), couplings, joints, and drive chains.

The data published with NAICS code 333613 include the following SIC industry:

3568 Power transmission equipment, n.e.c.

### **333618 Other Engine Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing internal combustion engines (except automotive gasoline and aircraft).

The data published with NAICS code 333618 include the following SIC industries:

3519 Internal combustion engines, n.e.c. (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

### **3339 Other General-Purpose Machinery Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33391, Pump and Compressor Manufacturing; 33392, Material Handling Equipment Manufacturing; and 33399, All Other General-Purpose Machinery Manufacturing.

### **33391 Pump and Compressor Manufacturing**

This industry comprises establishments primarily engaged in manufacturing pumps and compressors, such as general-purpose air and gas compressors, nonagricultural spraying and dusting equipment, general-purpose pumps and pumping equipment (except fluid power pumps and motors), and measuring and dispensing pumps.

#### **333911 Pump and Pumping Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing general-purpose pumps and pumping equipment (except fluid power pumps and motors), such as reciprocating pumps, turbine pumps, centrifugal pumps, rotary pumps, diaphragm pumps, domestic water system pumps, oil well and oil field pumps and sump pumps.

The data published with NAICS code 333911 include the following SIC industries:

3561 Pumps and pumping equipment

3743 Railroad equipment (pt)

#### **333912 Air and Gas Compressor Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing general-purpose air and gas compressors, such as reciprocating compressors, centrifugal compressors, vacuum pumps (except laboratory), and nonagricultural spraying and dusting compressors and spray gun units.

The data published with NAICS code 333912 include the following SIC industry:

3563 Air and gas compressors

#### **333913 Measuring and Dispensing Pump Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing measuring and dispensing pumps, such as gasoline pumps and lubricating oil measuring and dispensing pumps.

The data published with NAICS code 333913 include the following SIC industry:

3586 Measuring and dispensing pumps

#### **33392 Material Handling Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing material handling equipment, such as elevators and moving stairs; conveyors and conveying equipment; overhead traveling cranes, hoists, and monorail systems; and industrial trucks, tractors, trailers, and stacker machinery.

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### **333921 Elevator and Moving Stairway Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing elevators and moving stairways.

The data published with NAICS code 333912 include the following SIC industry:

3534 Elevators and moving stairways

### **333922 Conveyor and Conveying Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing conveyors and conveying equipment, such as gravity conveyors, trolley conveyors, tow conveyors, pneumatic tube conveyors, carousel conveyors, farm conveyors, and belt conveyors.

The data published with NAICS code 333922 include the following SIC industries:

3523 Farm machinery and equipment (pt)

3535 Conveyors and conveying equipment

### **333923 Overhead Traveling Crane, Hoist, and Monorail System Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing overhead traveling cranes, hoists, and monorail systems.

The data published with NAICS code 333923 include the following SIC industries:

3531 Construction machinery (pt)

3536 Hoists, cranes, and monorails

### **333924 Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial trucks, tractors, trailers, and stackers (i.e., truck-type) such as forklifts, pallet loaders and unloaders, and portable loading docks.

The data published with NAICS code 333924 include the following SIC industry:

3537 Industrial trucks and tractors (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 332994 do not include establishments primarily engaged in the manufacture of tranquilizer guns. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33399 All Other General-Purpose Machinery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing general-purpose machinery (except ventilation, heating, air-conditioning, and commercial refrigeration equipment; metal working machinery; engines, turbines, and power transmission equipment; pumps and compressors; and material handling equipment).

#### **333991 Power-Driven Handtool Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing power-driven (e.g., battery, corded, pneumatic) handtools, such as drills, screwguns, circular saws, chain saws, staplers, and nailers.

The data published with NAICS code 333991 include the following SIC industry:

3546 Power-driven handtools

#### **333992 Welding and Soldering Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing welding and soldering equipment and accessories (except transformers), such as arc, resistance, gas, plasma, laser, electron beam, and ultrasonic welding equipment; welding electrodes; coated or cored welding wire; and soldering equipment (except handheld).

The data published with NAICS code 333992 include the following SIC industries:

3548 Welding apparatus (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

#### **333993 Packaging Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing packaging machinery, such as wrapping, bottling, canning, and labeling machinery.

The data published with NAICS code 333993 include the following SIC industry:

3565 Packaging machinery

#### **333994 Industrial Process Furnace and Oven Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial process furnaces, ovens, induction and dielectric heating equipment, and kilns (except cement, chemical, wood).

The data published with NAICS code 333994 include the following SIC industry:

3567 Industrial furnaces and ovens

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### **333995 Fluid Power Cylinder and Actuator Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power (i.e., hydraulic and pneumatic) cylinders and actuators.

The data published with NAICS code 333995 include the following SIC industries:

3593 Fluid power cylinders and actuators

3728 Aircraft parts and equipment, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333995 include establishments primarily engaged in the manufacture of aerospace-type fluid power actuators. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **333996 Fluid Power Pump and Motor Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power (i.e., hydraulic and pneumatic) pumps and motors.

The data published with NAICS code 333996 include the following SIC industries:

3594 Fluid power pumps and motors

3728 Aircraft parts and equipment, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 333996 include establishments primarily engaged in the manufacture of aerospace-type fluid power actuators. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **333997 Scale and Balance (Except Laboratory) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing scales and balances (except laboratory).

The data published with NAICS code 333997 include the following SIC industry:

3596 Scales and balances, except laboratory

### **333999 All Other Miscellaneous General-Purpose Machinery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing general-purpose machinery (except ventilating, heating, air-conditioning, and commercial refrigeration equipment; metal working machinery;

engines, turbines, and power transmission equipment; pumps and compressors; material handling equipment; power-driven handtools; welding and soldering equipment; packaging machinery; industrial process furnaces and ovens; fluid power cylinders and actuators; fluid power pumps and motors; and scales and balances).

The data published with NAICS code 333999 include the following SIC industries:

3569 General industrial machinery, n.e.c.

3599 Industrial machinery, n.e.c. (pt)

### **334 Computer and Electronic Product Manufacturing**

Industries in the Computer and Electronic Product Manufacturing subsector group establishments that manufacture computers, computer peripherals, communications equipment, and similar electronic products, and establishments that manufacture components for such products. The Computer and Electronic Product Manufacturing industries have been combined in the hierarchy of NAICS because of the economic significance they have attained. Their rapid growth suggests that they will become even more important to the economies of all three North American countries in the future, and in addition their manufacturing processes are fundamentally different from the manufacturing processes of other machinery and equipment. The design and use of integrated circuits and the application of highly specialized miniaturization technologies are common elements in the production technologies of the computer and electronic subsector. Convergence of technology motivates this NAICS subsector. Digitalization of sound recording, for example, causes both the medium (the compact disc) and the equipment to resemble the technologies for recording, storing, transmitting, and manipulating data. Communications technology and equipment have been converging with computer technology. When technologically related components are in the same sector, it makes it easier to adjust the classification for future changes, without needing to redefine its basic structure. The creation of the Computer and Electronic Product Manufacturing subsector will assist in delineating new and emerging industries because the activities that will serve as the probable sources of new industries, such as computer manufacturing and communications equipment manufacturing, or computers and audio equipment are brought together. As new activities emerge, they are less likely, therefore, to cross the subsector boundaries of the classification.

### **3341 Computer and Peripheral Equipment Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33411, Computer and Peripheral Equipment Manufacturing.

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### **33411 Computer and Peripheral Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or assembling electronic computers, such as mainframes, personal computers, workstations, laptops, and computer servers; and computer peripheral equipment, such as storage devices, printers, monitors, input/output devices and terminals. Computers can be analog, digital, or hybrid. Digital computers, the most common type, are devices that do all of the following: (1) store the processing program or programs and the data immediately necessary for the execution of the program; (2) can be freely programmed in accordance with the requirements of the user; (3) perform arithmetical computations specified by the user; and (4) execute, without human intervention, a processing program that requires the computer to modify its execution by logical decision during the processing run. Analog computers are capable of simulating mathematical models and comprise at least analog, control, and programming elements.

#### **334111 Electronic Computer Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or assembling electronic computers, such as mainframes, personal computers, workstations, laptops, and computer servers. Computers can be analog, digital, or hybrid. Digital computers, the most common type, are devices that do all of the following: (1) store the processing program or programs and the data immediately necessary for the execution of the program; (2) can be freely programmed in accordance with the requirements of the user; (3) perform arithmetical computations specified by the user; and (4) execute, without human intervention, a processing program that requires the computer to modify its execution by logical decision during the processing run. Analog computers are capable of simulating mathematical models and contain at least analog, control, and programming elements. The manufacture of computers includes the assembly or integration of processors, coprocessors, memory, storage, and input/output devices into a user-programmable final product.

The data published with NAICS code 334111 include the following SIC industry:

3571 Electronic computers

#### **334112 Computer Storage Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing computer storage devices that allow the storage and retrieval of data from a phase change, magnetic, optical, or magnetic/optical media. Examples of products made by these establishments are CD-ROM drives, floppy disk drives, hard disk drives, and tape storage and backup units.

The data published with NAICS code 334112 include the following SIC industry:

3572 Computer storage devices

#### **334113 Computer Terminal Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing computer terminals. Computer terminals are input/output devices that connect with a central computer for processing.

The data published with NAICS code 334113 include the following SIC industry:

3575 Computer terminals

#### **334119 Other Computer Peripheral Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing computer peripheral equipment (except storage devices and computer terminals).

The data published with NAICS code 334119 include the following SIC industries:

3577 Computer peripheral equipment, n.e.c.

3578 Calculating and accounting equipment (pt)

3699 Electrical equipment and supplies, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334119 include establishments primarily engaged in the manufacture of laser products.

#### **3342 Communications Equipment Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33421, Telephone Apparatus Manufacturing; 33422, Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing; and 33429, Other Communications Equipment Manufacturing.

#### **33421 Telephone Apparatus Manufacturing**

This industry comprises establishments primarily engaged in manufacturing wire telephone and data communications equipment. These products may be stand-alone or board-level components of a larger system. Examples of products made by these establishments are central office switching equipment, cordless telephones (except cellular), PBX equipment, telephones, telephone answering machines, and data communications equipment, such as bridges, routers, and gateways.

### **334210 Telephone Apparatus Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wire telephone and data communications equipment. These products may be stand-alone or board-level components of a larger system. Examples of products made by these establishments are central office switching equipment, cordless telephones (except cellular), PBX equipment, telephones, telephone answering machines, and data communications equipment, such as bridges, routers, and gateways.

The data published with NAICS code 334210 include the following SIC industry:

3661 Telephone and telegraph apparatus (pt)

### **33422 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.

### **334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.

The data published with NAICS code 334220 include the following SIC industries:

3663 Radio and TV communications equipment

3679 Electronic components, n.e.c. (pt)

### **33429 Other Communications Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, and radio and television broadcast, and wireless communications equipment).

### **334290 Other Communications Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, radio and television broadcast, and wireless communications equipment).

The data published with NAICS code 334290 include the following SIC industry:

3669 Communications equipment, n.e.c.

### **3343 Audio and Video Equipment Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33431, Audio and Video Equipment Manufacturing.

### **33431 Audio and Video Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing electronic audio and video equipment for home entertainment, motor vehicle, public address and musical instrument amplifications. Examples of products made by these establishments are video cassette recorders, televisions, stereo equipment, speaker systems, household-type video cameras, jukeboxes, and amplifiers for musical instruments and public address systems.

### **334310 Audio and Video Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic audio and video equipment for home entertainment, motor vehicle, public address and musical instrument amplifications. Examples of products made by these establishments are video cassette recorders, televisions, stereo equipment, speaker systems, household-type video cameras, jukeboxes, and amplifiers for musical instruments and public address systems.

The data published with NAICS code 334310 include the following SIC industry:

3651 Household audio and video equipment

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334310 do not include establishments primarily engaged in the manufacture of radio headphones. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3344 Semiconductor and Other Electronic Component Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33441, Semiconductor and Other Electronic Component Manufacturing.

### **33441 Semiconductor and Other Electronic Component Manufacturing**

This industry comprises establishments primarily engaged in manufacturing semiconductors and other components for electronic applications. Examples of products



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made by these establishments are capacitors, resistors, microprocessors, bare and loaded printed circuit boards, electron tubes, electronic connectors, and computer modems.

### **334411 Electron Tube Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electron tubes and parts (except glass blanks). Examples of products made by these establishments are cathode ray tubes (i.e., picture tubes), klystron tubes, magnetron tubes, and traveling wave tubes.

The data published with NAICS code 334411 include the following SIC industries:

3671 Electron tubes

### **334412 Bare Printed Circuit Board Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing bare (i.e., rigid or flexible) printed circuit boards without mounted electronic components. These establishments print, perforate, plate, screen, etch, or photoprint interconnecting pathways for electric current on laminates.

The data published with NAICS code 334412 include the following SIC industry:

3672 Printed circuit boards

### **334413 Semiconductor and Related Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing semiconductors and related solid state devices. Examples of products made by these establishments are integrated circuits, memory chips, microprocessors, diodes, transistors, solar cells, and other optoelectronic devices.

The data published with NAICS code 334413 include the following SIC industry:

3674 Semiconductors and related devices

### **334414 Electronic Capacitor Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic fixed and variable capacitors and condensers.

The data published with NAICS code 334414 include the following SIC industry:

3675 Electronic capacitors

### **334415 Electronic Resistor Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic resistors, such as fixed and variable resistors, resistor networks, thermistors, and varistors.

The data published with NAICS code 334415 include the following SIC industry:

3676 Electronic resistors

### **334416 Electronic Coil, Transformer, and Other Inductor Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic inductors, such as coils and transformers.

The data published with NAICS code 334416 include the following SIC industries:

3661 Telephone and telegraph apparatus (pt)

3677 Electronic coils and transformers

3825 Instruments to measure electricity (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334416 include establishments primarily engaged in the manufacture of telephone transformers or portable instrument transformers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **334417 Electronic Connector Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic connectors, such as coaxial, cylindrical, rack and panel, pin and sleeve, printed circuit and fiber optic.

The data published with NAICS code 334417 include the following SIC industry:

3678 Electronic connectors

### **334418 Printed Circuit Assembly (Electronic Assembly) Manufacturing**

This U.S. industry comprises establishments primarily engaged in loading components onto printed circuit boards or who manufacture and ship loaded printed circuit boards. Also known as printed circuit assemblies, electronics assemblies, or modules, these products are printed circuit boards that have some or all of the semiconductor and electronic components inserted or mounted and are inputs to a wide variety of electronic systems and devices.

The data published with NAICS code 334418 include the following SIC industries:

3661 Telephone and telegraph apparatus (pt)

3679 Electronic components, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334418 do not include

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establishments primarily engaged in the manufacture of plotter controllers. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **334419 Other Electronic Component Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic components (except electron tubes; bare printed circuit boards; semiconductors and related devices; electronic capacitors; electronic resistors; coils, transformers and other inductors; connectors; and loaded printed circuit boards).

The data published with NAICS code 334419 include the following SIC industry:

3679 Electronic components, n.e.c. (pt)

### **3345 Navigational, Measuring, Medical, and Control Instruments Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33451, Navigational, Measuring, Medical, and Control Instruments Manufacturing.

#### **33451 Navigational, Measuring, Medical, and Control Instruments Manufacturing**

This industry comprises establishments primarily engaged in manufacturing navigational, measuring, electromedical, and control instruments. Examples of products made by these establishments are aeronautical instruments, appliance regulators and controls (except switches), laboratory analytical instruments, navigation and guidance systems, and physical properties testing equipment.

#### **334510 Electromedical and Electrotherapeutic Apparatus Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electromedical and electrotherapeutic apparatus, such as magnetic resonance imaging equipment, medical ultrasound equipment, pacemakers, hearing aids, electrocardiographs, and electromedical endoscopic equipment.

The data published with NAICS code 334510 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3842 Surgical appliances and supplies (pt)

3845 Electromedical equipment

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334510 include establishments primarily engaged in the manufacture of electro-medical laser products.

#### **334511 Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing search, detection, navigation, guidance, aeronautical, and nautical systems and instruments. Examples of products made by these establishments are aircraft instruments (except engine), flight recorders, navigational instruments and systems, radar systems and equipment, and sonar systems and equipment.

The data published with NAICS code 334511 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3812 Search and navigation equipment

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334511 include establishments primarily engaged in the manufacture of search and detection laser products.

#### **334512 Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use**

This U.S. industry comprises establishments primarily engaged in manufacturing automatic controls and regulators for applications, such as heating, air-conditioning, refrigeration and appliances.

The data published with NAICS code 334512 include the following SIC industry:

3822 Environmental controls

#### **334513 Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables**

This U.S. industry comprises establishments primarily engaged in manufacturing instruments and related devices for measuring, displaying, indicating, recording, transmitting, and controlling industrial process variables. These instruments measure, display or control (monitor, analyze, and so forth) industrial process variables, such as temperature, humidity, pressure, vacuum, combustion, flow, level, viscosity, density, acidity, concentration, and rotation.

The data published with NAICS code 334513 include the following SIC industry:

3823 Process control instruments

#### **334514 Totalizing Fluid Meter and Counting Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing totalizing (i.e., registering) fluid meters and counting devices. Examples of products made

by these establishments are gas consumption meters, water consumption meters, parking meters, taxi meters, motor vehicle gauges, and fare collection equipment.

The data published with NAICS code 334514 include the following SIC industry:

3824 Fluid meters and counting devices

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334514 do not include establishments primarily engaged in the manufacture of automotive ammeters and voltmeters or motor vehicle gauges. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **334515 Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals**

This U.S. industry comprises establishments primarily engaged in manufacturing instruments for measuring and testing the characteristics of electricity and electrical signals. Examples of products made by these establishments are circuit and continuity testers, volt meters, ohm meters, wattmeters, multimeters, and semiconductor test equipment.

The data published with NAICS code 334515 include the following SIC industry:

3825 Instruments to measure electricity (pt)

### **334516 Analytical Laboratory Instrument Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing instruments and instrumentation systems for laboratory analysis of the chemical or physical composition or concentration of samples of solid, fluid, gaseous, or composite material.

The data published with NAICS code 334516 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3826 Analytical instruments

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334516 include establishments primarily engaged in the manufacture of analytical and scientific laser products.

### **334517 Irradiation Apparatus Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing irradiation apparatus and tubes for applications, such as medical diagnostic, medical therapeutic, industrial, research and scientific evaluation. Irradiation can take the form of beta-rays, gamma-rays, X-rays, or other ionizing radiation.

The data published with NAICS code 334517 include the following SIC industry:

3844 X-ray apparatus and tubes

### **334518 Watch, Clock, and Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or assembling clocks; watches; timing mechanisms for clockwork operated devices; time clocks; time and date recording devices; and clock and watch parts (except crystals), such as springs, jewels, and modules.

The data published with NAICS code 334518 include the following SIC industries:

3495 Wire springs (pt)

3579 Office machines, n.e.c. (pt)

3873 Watches, clocks, and watchcases

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334518 do not include establishments primarily engaged in the manufacture of electronic chronometers or watch jewels. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **334519 Other Measuring and Controlling Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing measuring and controlling devices (except search, detection, navigation, guidance, aeronautical, and nautical instruments and systems; automatic environmental controls for residential, commercial, and appliance use; instruments for measurement, display, and control of industrial process variables; totalizing fluid meters and counting devices; instruments for measuring and testing electricity and electrical signals; analytical laboratory instruments; watches, clocks, and parts; irradiation equipment; and electromedical and electrotherapeutic apparatus).

The data published with NAICS code 334519 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3829 Measuring and controlling devices, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing implemented the conversion to NAICS differently. Data for NAICS industry 334519 include establishments primarily engaged in the manufacture of commercial geophysical, meteorological, survey, and drafting laser products.

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### **3346 Manufacturing and Reproducing Magnetic and Optical Media**

This NAICS industry group includes establishments classified in NAICS Industry 33461, Manufacturing and Reproducing Magnetic and Optical Media.

#### **33461 Manufacturing and Reproducing Magnetic and Optical Media**

This industry comprises establishments primarily engaged in (1) manufacturing optical and magnetic media, such as blank audio tape, blank video tape, and blank diskettes and/or (2) mass duplicating (i.e., making copies) audio, video, software, and other data on magnetic, optical, and similar media.

##### **334611 Software Reproducing**

This U.S. industry comprises establishments primarily engaged in mass reproducing computer software. These establishments do not generally develop any software; they mass reproduce data and programs on magnetic media, such as diskettes, tapes, or cartridges. Establishments in this industry mass reproduce products, such as CD-ROMs and game cartridges.

The data published with NAICS code 334611 include the following SIC industries:

7379 Computer Related Services, n.e.c. (pt)

##### **334612 Prerecorded Compact Disc (Except Software), Tape, and Record Reproducing**

This U.S. industry comprises establishments primarily engaged in mass reproducing audio and video material on magnetic or optical media. Examples of products mass reproduced by these establishments are audio compact discs, prerecorded audio and video cassettes, and laser discs.

The data published with NAICS code 334612 include the following SIC industries:

3652 Prerecorded records and tapes

7819 Services allied to motion pictures (pt)

##### **334613 Magnetic and Optical Recording Media Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing magnetic and optical recording media, such as blank magnetic tape, blank diskettes, blank optical discs, hard drive media, and blank magnetic tape cassettes.

The data published with NAICS code 334613 include the following SIC industry:

3695 Magnetic and optical recording media

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 334613 do not include establishments primarily engaged in the manufacture of magnetic tape cleaners. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **335 Electrical Equipment, Appliance, and Component Manufacturing**

Industries in the Electrical Equipment, Appliance, and Component Manufacturing subsector manufacture products that generate, distribute and use electrical power. Electric lighting equipment manufacturing establishments produce electric lamp bulbs, lighting fixtures, and parts. Household appliance manufacturing establishments make both small and major electrical appliances and parts. Electrical equipment manufacturing establishments make goods, such as electric motors, generators, transformers, and switchgear apparatus. Other electrical equipment and component manufacturing establishments make devices for storing electrical power (e.g., batteries), for transmitting electricity (e.g., insulated wire), and wiring devices (e.g., electrical outlets, fuse boxes, and light switches).

#### **3351 Electric Lighting Equipment Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33511, Electric Lamp Bulb and Parts Manufacturing; and 33512, Lighting Fixture Manufacturing.

##### **33511 Electric Lamp Bulb and Parts Manufacturing**

This industry comprises establishments primarily engaged in manufacturing electric light bulbs and tubes, and parts and components (except glass blanks for electric light bulbs).

###### **335110 Electric Lamp Bulb and Part Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electric light bulbs and tubes, and parts and components (except glass blanks for electric light bulbs).

The data published with NAICS code 335110 include the following SIC industry:

3641 Electric lamps

##### **33512 Lighting Fixture Manufacturing**

This industry comprises establishments primarily engaged in manufacturing electric lighting fixtures (except vehicular), nonelectric lighting equipment, lamp shades (except glass and plastics) and lighting fixture components (except current-carrying wiring devices).

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### **335121 Residential Electric Lighting Fixture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fixed or portable residential electric lighting fixtures and lamp shades of metal, paper, or textiles. Residential electric lighting fixtures include those for use both inside and outside the residence.

The data published with NAICS code 335121 include the following SIC industries:

- 3089 Plastics products, n.e.c. (pt)
- 3645 Residential lighting fixtures
- 3999 Manufacturing industries, n.e.c. (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 335121 include establishments primarily engaged in the manufacture of plastic lampshades. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **335122 Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing commercial, industrial, and institutional electric lighting fixtures.

The data published with NAICS code 335122 include the following SIC industry:

- 3646 Commercial lighting fixtures

### **335129 Other Lighting Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electric lighting fixtures (except residential, commercial, industrial, institutional, and vehicular electric lighting fixtures) and nonelectric lighting equipment.

The data published with NAICS code 335129 include the following SIC industries:

- 3648 Lighting equipment, n.e.c.
- 3699 Electrical equipment and supplies, n.e.c. (pt)

### **3352 Household Appliance Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33521, Small Electrical Appliance Manufacturing; and 33522, Major Appliance Manufacturing.

#### **33521 Small Electrical Appliance Manufacturing**

This industry comprises establishments primarily engaged in manufacturing small electric appliances and electric housewares, household-type fans, household-type vacuum cleaners, and other electric household-type floor care machines.

#### **335211 Electric Housewares and Household Fan Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing small electric appliances and electric housewares for heating, cooking, and other purposes, and electric household-type fans (except attic fans).

The data published with NAICS code 335211 include the following SIC industry:

- 3634 Electric housewares and fans (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 335211 do not include establishments primarily engaged in the manufacture of electric hair clippers for humans. The NAICS definitions will be fully implemented with the 2002 Economic Census.

#### **335212 Household Vacuum Cleaner Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electric vacuum cleaners, electric floor waxing machines, and other electric floor care machines typically for household use.

The data published with NAICS code 335212 include the following SIC industries:

- 3635 Household vacuum cleaners
- 3639 Household appliances, n.e.c. (pt)

#### **33522 Major Appliance Manufacturing**

This industry comprises establishments primarily engaged in manufacturing household-type cooking appliances, household-type laundry equipment, household-type refrigerators, upright and chest freezers, and other electrical and nonelectrical major household-type appliances, such as dishwashers, water heaters, and garbage disposal units.

##### **335221 Household Cooking Appliance Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing household-type electric and nonelectric cooking equipment (except small electric appliances and electric housewares).

The data published with NAICS code 335221 include the following SIC industry:

- 3631 Household cooking equipment

##### **335222 Household Refrigerator and Home Freezer Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing household-type refrigerators and upright and chest freezers.

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The data published with NAICS code 335222 include the following SIC industry:

3632 Household refrigerators and freezers

### **335224 Household Laundry Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing household-type laundry equipment.

The data published with NAICS code 335224 include the following SIC industry:

3633 Household laundry equipment

### **335228 Other Major Household Appliance Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electric and nonelectric major household-type appliances (except cooking equipment, refrigerators, upright and chest freezers, and household-type laundry equipment).

The data published with NAICS code 335228 include the following SIC industry:

3639 Household appliances, n.e.c. (pt)

### **3353 Electrical Equipment Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33531, Electrical Equipment Manufacturing.

#### **33531 Electrical Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing power, distribution, and specialty transformers; electric motors, generators, and motor generator sets; switchgear and switchboard apparatus; relays; and industrial controls.

#### **335311 Power, Distribution, and Specialty Transformer Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing power, distribution, and specialty transformers (except electronic components). Industrial-type and consumer-type transformers in this industry vary (e.g., step up or step down) voltage but do not convert alternating to direct or direct to alternating current.

The data published with NAICS code 335311 include the following SIC industries:

3548 Welding apparatus (pt)

3612 Transformers

#### **335312 Motor and Generator Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing electric motors (except internal combustion engine starting motors), power generators (except battery charging alternators for internal combustion engines), and motor generator sets (except turbine generator set units). This industry includes establishments rewinding armatures on a factory basis.

The data published with NAICS code 335312 include the following SIC industries:

3621 Motors and generators

7694 Armature rewinding shops (pt)

#### **335313 Switchgear and Switchboard Apparatus Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing switchgear and switchboard apparatus.

The data published with NAICS code 335313 include the following SIC industry:

3613 Switchgear and switchboard apparatus

#### **335314 Relay and Industrial Control Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing relays, motor starters and controllers, and other industrial controls and control accessories.

The data published with NAICS code 335314 include the following SIC industry:

3625 Relays and industrial controls

#### **3359 Other Electrical Equipment and Component Manufacturing**

This industry group comprises establishments manufacturing electrical equipment and components (except electric lighting equipment, household-type appliances, transformers, switchgear, relays, motors, and generators).

#### **33591 Battery Manufacturing**

This industry comprises establishments primarily engaged in manufacturing primary and storage batteries.

#### **335911 Storage Battery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing storage batteries.

The data published with NAICS code 335911 include the following SIC industry:

3691 Storage batteries

### **335912 Primary Battery Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wet or dry primary batteries.

The data published with NAICS code 335912 include the following SIC industry:

3692 Primary batteries, dry and wet

### **33592 Communication and Energy Wire and Cable Manufacturing**

This industry comprises establishments insulating fiber-optic cable, and manufacturing insulated nonferrous wire and cable from nonferrous wire drawn in other establishments.

### **335921 Fiber Optic Cable Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing insulated fiber-optic cable from purchased fiber-optic strand.

The data published with NAICS code 335921 include the following SIC industry:

3357 Nonferrous wire drawing and insulating (pt)

### **335929 Other Communication and Energy Wire Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing insulated wire and cable of nonferrous metals from purchased wire.

The data published with NAICS code 335929 include the following SIC industry:

3357 Nonferrous wire drawing and insulating (pt)

### **33593 Wiring Device Manufacturing**

This industry comprises establishments primarily engaged in manufacturing current-carrying wiring devices and noncurrent-carrying wiring devices for wiring electrical circuits.

### **335931 Current-Carrying Wiring Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing current-carrying wiring devices.

The data published with NAICS code 335931 include the following SIC industry:

3643 Current-carrying wiring devices

### **335932 Noncurrent-Carrying Wiring Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing noncurrent-carrying wiring devices.

The data published with NAICS code 335932 include the following SIC industry:

3644 Noncurrent-carrying wiring devices

### **33599 All Other Electrical Equipment and Component Manufacturing**

This industry comprises establishments primarily engaged in manufacturing electrical equipment (except electric lighting equipment, household-type appliances, transformers, motors, generators, switchgear, relays, industrial controls, batteries, communication and energy wire and cable, and wiring devices).

### **335991 Carbon and Graphite Product Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing carbon, graphite, and metal-graphite brushes and brush stock; carbon or graphite electrodes for thermal and electrolytic uses; carbon and graphite fibers; and other carbon, graphite, and metal-graphite products.

The data published with NAICS code 335991 include the following SIC industry:

3624 Carbon and graphite products

### **335999 All Other Miscellaneous Electrical Equipment and Component Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing industrial and commercial electric apparatus and other equipment (except lighting equipment, household appliances, transformers, motors, generators, switchgear, relays, industrial controls, batteries, communication and energy wire and cable, wiring devices, and carbon and graphite products). This industry includes power converters (i.e., AC to DC and DC to AC), power supplies, surge suppressors, and similar equipment for industrial-type and consumer-type equipment.

The data published with NAICS code 335999 include the following SIC industries:

3629 Electrical industrial apparatus, n.e.c.

3699 Electrical equipment and supplies, n.e.c. (pt)

### **336 Transportation Equipment Manufacturing**

Industries in the Transportation Equipment Manufacturing subsector produce equipment for transporting people and goods. Transportation equipment is a type of machinery. An entire subsector is devoted to this activity because of the significance of its economic size in all three North American countries.

Establishments in this subsector utilize production processes similar to those of other machinery manufacturing establishments - bending, forming, welding, machining, and assembling metal or plastic parts into components and finished products. However, the assembly of components and subassemblies and their further assembly into finished vehicles tends to be a more common production process in this subsector than in the Machinery Manufacturing subsector.

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NAICS has industry groups for the manufacture of equipment for each mode of transport - road, rail, air, and water. Parts for motor vehicles warrant a separate industry group because of their importance and because parts manufacture requires less assembly, and the establishments that manufacture only parts are not as vertically integrated as those that make complete vehicles.

Land use motor vehicle equipment not designed for highway operation (e.g., agricultural equipment, construction equipment, and materials handling equipment) is classified in the appropriate NAICS subsector based on the type and use of the equipment.

### **3361 Motor Vehicle Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33611, Automobile and Light Duty Motor Vehicle Manufacturing; and 33612, Heavy Duty Truck Manufacturing.

#### **33611 Automobile and Light Duty Motor Vehicle Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing complete automobile and light duty motor vehicles (i.e., body and chassis or unibody) or (2) manufacturing chassis only.

##### **336111 Automobile Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete automobiles (i.e., body and chassis or unibody) or (2) manufacturing automobile chassis only.

The data published with NAICS code 336111 include the following SIC industry:

3711 Motor vehicles and car bodies (pt)

##### **336112 Light Truck and Utility Vehicle Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete light trucks and utility vehicles (i.e., body and chassis) or (2) manufacturing light truck and utility vehicle chassis only. Vehicles made include light duty vans, pick-up trucks, minivans, and sport utility vehicles.

The data published with NAICS code 336112 include the following SIC industry:

3711 Motor vehicles and car bodies (pt)

### **33612 Heavy Duty Truck Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing heavy duty truck chassis and assembling complete heavy duty trucks, buses, heavy duty motor homes, and other special-purpose, heavy duty motor vehicles for highway use or (2) manufacturing heavy duty truck chassis only.

### **336120 Heavy Duty Truck Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing heavy duty truck chassis and assembling complete heavy duty trucks, buses, heavy duty motor homes, and other special-purpose, heavy duty motor vehicles for highway use or (2) manufacturing heavy duty truck chassis only.

The data published with NAICS code 336120 include the following SIC industry:

3711 Motor vehicles and car bodies (pt)

### **3362 Motor Vehicle Body and Trailer Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33621, Motor Vehicle Body and Trailer Manufacturing.

#### **33621 Motor Vehicle Body and Trailer Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing motor vehicle bodies and cabs or (2) manufacturing truck, automobile and utility trailers, truck trailer chassis, detachable trailer bodies and detachable trailer chassis. The products made may be sold separately or may be assembled on purchased chassis and sold as complete vehicles.

Motor homes are units where the motor and the living quarters are contained in the same integrated unit, while travel trailers are designed to be towed by a motor unit, such as an automobile or a light truck.

##### **336211 Motor Vehicle Body Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing truck and bus bodies and cabs and automobile bodies. The products made may be sold separately or may be assembled on purchased chassis and sold as complete vehicles.

The data published with NAICS code 336211 include the following SIC industries:

3711 Motor vehicles and car bodies (pt)

3713 Truck and bus bodies

3714 Motor vehicle parts and accessories (pt)

##### **336212 Truck Trailer Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing truck trailers, truck trailer chassis, cargo container chassis, detachable trailer bodies, and detachable trailer chassis for sale separately.

The data published with NAICS code 336212 include the following SIC industry:

3715 Truck trailers



### **336213 Motor Home Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing motor homes on purchased chassis and/or (2) manufacturing conversion vans on an assembly line basis. Motor homes are units where the motor and the living quarters are integrated in the same unit.

The data published with NAICS code 336213 include the following SIC industry:

3716 Motor homes

### **336214 Travel Trailer and Camper Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing travel trailers and campers designed to attach to motor vehicles; (2) manufacturing pickup coaches (i.e., campers) and caps (i.e., covers) for mounting on pickup trucks; and (3) manufacturing automobile, utility, and light-truck trailers. Travel trailers do not have their own motor but are designed to be towed by a motor unit, such as an automobile or a light truck.

The data published with NAICS code 336214 include the following SIC industries:

3792 Travel trailer and campers

3799 Transportation equipment, n.e.c. (pt)

### **3363 Motor Vehicle Parts Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33631, Motor Vehicle Gasoline Engine and Engine Parts Manufacturing; 33632, Motor Vehicle Electrical and Electronic Equipment Manufacturing; 33633, Motor Vehicle Steering and Suspension Component (Except Spring) Manufacturing; 33634, Motor Vehicle Brake System Manufacturing; 33635, Motor Vehicle Transmission and Power Train Parts Manufacturing; 33636, Motor Vehicle Seating and Interior Trim Manufacturing; 33637, Motor Vehicle Metal Stamping; and 33639, Other Motor Vehicle Parts Manufacturing.

#### **33631 Motor Vehicle Gasoline Engine and Engine Parts Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle gasoline engines and engine parts, whether or not for vehicular use.

#### **336311 Carburetor, Piston, Piston Ring, and Valve Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding carburetors, pistons, piston rings, and engine intake and exhaust valves.

The data published with NAICS code 336311 include the following SIC industries:

3592 Carburetors, pistons, rings, and valves

#### **336312 Gasoline Engine and Engine Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding gasoline motor vehicle engines and gasoline motor vehicle engine parts, excluding carburetors, pistons, piston rings, and valves.

The data published with NAICS code 336312 include the following SIC industry:

3714 Motor vehicle parts and accessories (pt)

#### **33632 Motor Vehicle Electrical and Electronic Equipment Manufacturing**

This industry comprises establishments primarily engaged in (1) manufacturing vehicular lighting and/or (2) manufacturing and/or rebuilding motor vehicle electrical and electronic equipment. The products made can be used for all types of transportation equipment (i.e., aircraft, automobiles, trains, ships).

#### **336321 Vehicular Lighting Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing vehicular lighting fixtures.

The data published with NAICS code 336321 include the following SIC industry:

3647 Vehicular lighting equipment

#### **336322 Other Motor Vehicle Electrical and Electronic Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding electrical and electronic equipment for motor vehicles and internal combustion engines.

The data published with NAICS code 336322 include the following SIC industries:

3679 Electronic components, n.e.c. (pt)

3694 Engine electrical equipment

3714 Motor vehicle parts and accessories (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336322 include establishments primarily engaged in the manufacture of electronic control modular chips for motor vehicles. The NAICS definitions will be fully implemented with the 2002 Economic Census.

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### **33633 Motor Vehicle Steering and Suspension Component (Except Spring) Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle steering mechanisms and suspension components (except springs).

### **336330 Motor Vehicle Steering and Suspension Component (Except Spring) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle steering mechanisms and suspension components (except springs).

The data published with NAICS code 336330 include the following SIC industry:

3714 Motor vehicle parts and accessories (pt)

### **33634 Motor Vehicle Brake System Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle brake systems and related components.

### **336340 Motor Vehicle Brake System Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle brake systems and related components.

The data published with NAICS code 336340 include the following SIC industries:

3292 Asbestos products (pt)

3714 Motor vehicle parts and accessories (pt)

### **33635 Motor Vehicle Transmission and Power Train Parts Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle transmission and power train parts.

### **336350 Motor Vehicle Transmission and Power Train Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle transmission and power train parts.

The data published with NAICS code 336350 include the following SIC industry:

3714 Motor vehicle parts and accessories (pt)

### **33636 Motor Vehicle Seating and Interior Trim Manufacturing**

This industry comprises establishments primarily engaged in manufacturing motor vehicle seating, seats, seat frames, seat belts, and interior trimmings.

### **336360 Motor Vehicle Seating and Interior Trim Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing motor vehicle seating, seats, seat frames, seat belts, and interior trimmings.

The data published with NAICS code 336360 include the following SIC industries:

2396 Automotive and apparel trimmings (pt)

2399 Fabricated textile products, n.e.c. (pt)

2531 Public building and related furniture (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336360 do not include establishments primarily engaged in the manufacture of metal motor vehicle seat frames. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33637 Motor Vehicle Metal Stamping**

This industry comprises establishments primarily engaged in manufacturing motor vehicle stampings, such as fenders, tops, body parts, trim, and molding.

### **336370 Motor Vehicle Metal Stamping**

This U.S. industry comprises establishments primarily engaged in manufacturing motor vehicle stampings, such as fenders, tops, body parts, trim, and molding.

The data published with NAICS code 336370 include the following SIC industry:

3465 Automotive stampings

### **33639 Other Motor Vehicle Parts Manufacturing**

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle parts and accessories (except motor vehicle gasoline engines and engine parts, motor vehicle electrical and electronic equipment, motor vehicle steering and suspension components, motor vehicle brake systems, motor vehicle transmission and power train parts, motor vehicle seating and interior trim, and motor vehicle stampings).

### **336391 Motor Vehicle Air-Conditioning Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing air-conditioning systems and compressors for motor vehicles, such as automobiles, trucks, buses, aircraft, farm machinery, construction machinery, and other related vehicles.

The data published with NAICS code 336391 include the following SIC industry:

3585 Refrigeration and heating equipment (pt)

### **336399 All Other Motor Vehicle Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle parts and accessories (except motor vehicle gasoline engines and engine parts, motor vehicle electrical and electronic equipment, motor vehicle steering and suspension components, motor vehicle brake systems, motor vehicle transmission and power train parts, motor vehicle seating and interior trim, motor vehicle stampings, and motor vehicle air-conditioning systems and compressors).

The data published with NAICS code 336399 include the following SIC industries:

3519 Internal combustion engines, n.e.c. (pt)

3714 Motor vehicle parts and accessories (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336399 do not include establishments primarily engaged in the manufacture of luggage and utility racks or trailer hitches. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3364 Aerospace Product and Parts Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33641, Aerospace Product and Parts Manufacturing.

#### **33641 Aerospace Product and Parts Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing complete aircraft, missiles, or space vehicles; (2) manufacturing aerospace engines, propulsion units, auxiliary equipment or parts; (3) developing and making prototypes of aerospace products; (4) aircraft conversion (i.e., major modifications to systems); and (5) complete aircraft or propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft to original design specifications).

##### **336411 Aircraft Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing or assembling complete aircraft; (2) developing and making aircraft prototypes; (3) aircraft conversion (i.e., major modifications to systems); and (4) complete aircraft overhaul and rebuilding (i.e., periodic restoration of aircraft to original design specifications).

The data published with NAICS code 336411 include the following SIC industry:

3721 Aircraft

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 336411 do not include establishments primarily engaged in the manufacture of target drones. The NAICS definitions will be fully implemented with the 2002 Economic Census.

##### **336412 Aircraft Engine and Engine Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing aircraft engines and engine parts; (2) developing and making prototypes of aircraft engines and engine parts; (3) aircraft propulsion system conversion (i.e., major modifications to systems); and (4) aircraft propulsion systems overhaul and rebuilding (i.e., periodic restoration of aircraft propulsion system to original design specifications).

The data published with NAICS code 336412 include the following SIC industry:

3724 Aircraft engines and engine parts

##### **336413 Other Aircraft Parts and Auxiliary Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing aircraft parts or auxiliary equipment (except engines and aircraft fluid power subassemblies) and/or (2) developing and making prototypes of aircraft parts and auxiliary equipment. Auxiliary equipment includes such items as crop dusting apparatus, armament racks, inflight refueling equipment, and external fuel tanks.

The data published with NAICS code 336413 include the following SIC industry:

3728 Aircraft parts and equipment, n.e.c. (pt)

##### **336414 Guided Missile and Space Vehicle Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete guided missiles and space vehicles and/or (2) developing and making prototypes of guided missile or space vehicles.

The data published with NAICS code 336414 include the following SIC industry:

3761 Guided missiles and space vehicles

##### **336415 Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing guided missile and/or space vehicle propulsion units and propulsion unit parts and/or (2) developing and making prototypes of guided missile and space vehicle propulsion units and propulsion unit parts.

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The data published with NAICS code 336415 include the following SIC industry:

3764 Space propulsion units and parts

### **336419 Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing guided missile and space vehicle parts and auxiliary equipment (except guided missile and space vehicle propulsion units and propulsion unit parts) and/or (2) developing and making prototypes of guided missile and space vehicle parts and auxiliary equipment.

The data published with NAICS code 336419 include the following SIC industry:

3769 Space vehicle equipment, n.e.c.

### **3365 Railroad Rolling Stock Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33651, Railroad Rolling Stock Manufacturing.

#### **33651 Railroad Rolling Stock Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing and/or rebuilding locomotives, locomotive frames and parts; (2) manufacturing railroad, street, and rapid transit cars and car equipment for operation on rails for freight and passenger service; and (3) manufacturing rail layers, ballast distributors, rail tamping equipment, and other railway track maintenance equipment.

#### **336510 Railroad Rolling Stock Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing and/or rebuilding locomotives, locomotive frames, and parts; (2) manufacturing railroad, street, and rapid transit cars and car equipment for operation on rails for freight and passenger service; and (3) manufacturing rail layers, ballast distributors, rail tamping equipment, and other railway track maintenance equipment.

The data published with NAICS code 336510 include the following SIC industries:

3531 Construction machinery (pt)

3743 Railroad equipment (pt)

### **3366 Ship and Boat Building**

This NAICS industry group includes establishments classified in NAICS Industry 33661, Ship and Boat Building.

### **33661 Ship and Boat Building**

This industry comprises establishments primarily engaged in operating shipyards or boat yards (i.e., ship or boat manufacturing facilities). Shipyards are fixed facilities with drydocks and fabrication equipment capable of building a ship, defined as watercraft typically suitable or intended for other than personal or recreational use. Boats are defined as watercraft typically suitable or intended for personal use. Activities of shipyards include the construction of ships, their repair, conversion and alteration, the production of prefabricated ship and barge sections, and specialized services, such as ship scaling.

#### **336611 Ship Building and Repairing**

This U.S. industry comprises establishments primarily engaged in operating a shipyard. Shipyards are fixed facilities with drydocks and fabrication equipment capable of building a ship, defined as watercraft typically suitable or intended for other than personal or recreational use. Activities of shipyards include the construction of ships, their repair, conversion and alteration, the production of prefabricated ship and barge sections, and specialized services, such as ship scaling.

The data published with NAICS code 336611 include the following SIC industry:

3731 Ship building and repairing

#### **336612 Boat Building**

This U.S. industry comprises establishments primarily engaged in building boats. Boats are defined as watercraft not built in shipyards and typically of the type suitable or intended for personal use.

The data published with NAICS code 336612 include the following SIC industry:

3732 Boat building and repairing (pt)

### **3369 Other Transportation Equipment Manufacturing**

This industry group comprises establishments primarily engaged in manufacturing transportation equipment (except motor vehicles and parts, aerospace products and parts, railroad rolling stock, ship building, and boat manufacturing).

#### **33699 Other Transportation Equipment Manufacturing**

This industry comprises establishments primarily engaged in manufacturing motorcycles, bicycles, metal tricycles, complete military armored vehicles, tanks, self-propelled weapons, vehicles pulled by draft animals, and other transportation equipment (except motor vehicles, boats, ships, railroad rolling stock, and aerospace products), including parts thereof.

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### **336991 Motorcycle, Bicycle, and Parts Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing motorcycles, bicycles, tricycles and similar equipment and parts.

The data published with NAICS code 336991 include the following SIC industries:

3751 Motorcycles, bicycles, and parts

3944 Games, toys, and children's vehicles (pt)

### **336992 Military Armored Vehicle, Tank, and Tank Component Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing complete military armored vehicles, combat tanks, specialized components for combat tanks, and self-propelled weapons.

The data published with NAICS code 336992 include the following SIC industries:

3711 Motor vehicles and car bodies (pt)

3795 Tanks and tank components

### **336999 All Other Transportation Equipment Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing transportation equipment (except motor vehicles, motor vehicle parts, boats, ships, railroad rolling stock, aerospace products, motorcycles, bicycles, armored vehicles, and tanks).

The data published with NAICS code 336999 include the following SIC industry:

3799 Transportation equipment, n.e.c. (pt)

### **337 Furniture and Related Product Manufacturing**

Industries in the Furniture and Related Product Manufacturing subsector make furniture and related articles, such as mattresses, window blinds, cabinets, and fixtures. The processes used in the manufacture of furniture include the cutting, bending, molding, laminating, and assembly of such materials as wood, metal, glass, plastics, and rattan. However, the production process for furniture is not solely bending metal, cutting and shaping wood, or extruding and molding plastics. Design and fashion trends play an important part in the production of furniture. The integrated design of the article for both esthetic and functional qualities is also a major part of the process of manufacturing furniture. Design services may be performed by the furniture establishment's work force or may be purchased from industrial designers.

Furniture may be made of any material, but the most common ones used in North America are metal and wood. Furniture manufacturing establishments may specialize in making articles primarily from one material. Some of the

equipment required to make a wooden table, for example, is different from that used to make a metal one. However, furniture is usually made from several materials. A wooden table might have metal brackets, and a wooden chair, a fabric or plastics seat. Therefore, in NAICS, furniture initially is classified based on the type of furniture (application for which it is designed) rather than the material used. For example, an upholstered sofa is treated as household furniture, although it may also be used in hotels or offices.

When classifying furniture according to the component material from which it is made, furniture made from more than one material is classified based on the material used in the frame, or if there is no frame, the predominant component material. Upholstered household furniture (excluding kitchen and dining room chairs with upholstered seats) is classified without regard to the frame material. Kitchen or dining room chairs with upholstered seats are classified according to the frame material.

Furniture may be made on a stock or custom basis and may be shipped assembled or unassembled (i.e., knock-down). The manufacture of furniture parts and frames is included in this subsector.

Some of the processes used in furniture manufacturing are similar to processes that are used in other segments of manufacturing. For example, cutting and assembly occurs in the production of wood trusses that are classified in Subsector 321, Wood Product Manufacturing. However, the multiple processes that distinguish wood furniture manufacturing from wood product manufacturing warrant inclusion of wooden furniture manufacturing in the Furniture and Related Product Manufacturing subsector. Metal furniture manufacturing uses techniques that are also employed in the manufacturing of roll-formed products classified in Subsector 332, Fabricated Metal Product Manufacturing. The molding process for plastics furniture is similar to the molding of other plastics products. However, plastics furniture producing establishments tend to specialize in furniture.

NAICS attempts to keep furniture manufacturing together, but there are two notable exceptions: seating for transportation equipment and laboratory and hospital furniture. These exceptions are related to that fact that some of the aspects of the production process for these products, primarily the design, are highly integrated with that of other manufactured goods, namely motor vehicles and health equipment.

### **3371 Household and Institutional Furniture and Kitchen Cabinet Manufacturing**

This industry group comprises establishments manufacturing household-type furniture, such as living room, kitchen, and bedroom furniture, and institutional (i.e., public building) furniture, such as furniture for schools, theaters, and churches.

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### **33711 Wood Kitchen Cabinet and Countertop Manufacturing**

This industry comprises establishments primarily engaged in manufacturing wood or plastics laminated on wood kitchen cabinets, bathroom vanities, and countertops (except freestanding). The cabinets and counters may be made on a stock or custom basis.

### **337110 Wood Kitchen Cabinet and Countertop Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wood or plastics laminated on wood kitchen cabinets, bathroom vanities, and countertops (except freestanding). The cabinets and counters may be made on a stock or custom basis.

The data published with NAICS code 3371110 include the following SIC industries:

2434 Wood kitchen cabinets

2541 Wood partitions and fixtures (pt)

5712 Furniture stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337110 include establishments primarily engaged in manufacturing wood countertops as part of wood office and store fixtures. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33712 Household and Institutional Furniture Manufacturing**

This industry comprises establishments primarily engaged in manufacturing household-type and public building furniture (i.e., library, school, theater, and church furniture). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

### **337121 Upholstered Household Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing upholstered household-type furniture. The furniture may be made on a stock or custom basis.

The data published with NAICS code 337121 include the following SIC industries:

2512 Upholstered household furniture

2515 Mattresses and bedsprings (pt)

5712 Furniture stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337121 do not include establishments primarily engaged in manufacturing upholstered metal household furniture. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **337122 Nonupholstered Wood Household Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonupholstered wood household-type furniture and freestanding cabinets (except television, radio, and sewing machine cabinets). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337122 include the following SIC industries:

2511 Wood household furniture

5712 Furniture stores (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337122 include establishments primarily engaged in manufacturing wood box spring frames. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **337124 Metal Household Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing metal household-type furniture and freestanding cabinets. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337124 include the following SIC industry:

2514 Metal household furniture

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337124 include establishments primarily engaged in manufacturing upholstered metal household furniture or metal box spring frames. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **337125 Household Furniture (Except Wood and Metal) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing household-type furniture of materials other than wood or metal, such as plastics, reed,

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rattan, wicker, and fiberglass. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337125 include the following SIC industry:

2519 Household furniture, n.e.c.

### **337127 Institutional Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing institutional-type furniture (e.g., library, school, theater, and church furniture). The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337127 include the following SIC industries:

2531 Public building and related furniture (pt)

2599 Furniture and fixtures, n.e.c. (pt)

3952 Lead pencils and art goods (pt)

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

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337127 do not include establishments primarily engaged in manufacturing wood or nonwood lunchroom tables and chairs. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **337129 Wood Television, Radio, and Sewing Machine Cabinet Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wood cabinets used as housings by television, stereo, loudspeaker, and sewing machine manufacturers.

The data published with NAICS code 337129 include the following SIC industry:

2517 Wood TV and radio cabinets

### **3372 Office Furniture (Including Fixtures) Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33721, Office Furniture (Including Fixtures) Manufacturing.

### **33721 Office Furniture (Including Fixtures) Manufacturing**

This industry comprises establishments primarily engaged in manufacturing office furniture and/or office and store fixtures. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

### **337211 Wood Office Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wood office-type furniture. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337211 include the following SIC industry:

2521 Wood office furniture

### **337212 Custom Architectural Woodwork and Millwork Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing custom designed interiors consisting of architectural woodwork and fixtures utilizing wood, wood products, and plastics laminates. All of the industry output is made to individual order on a job shop basis and requires skilled craftsmen as a labor input. A job might include custom manufacturing of display fixtures, gondolas, wall shelving units, entrance and window architectural detail, sales and reception counters, wall paneling, and matching furniture.

The data published with NAICS code 337212 include the following SIC industry:

2541 Wood partitions and fixtures (pt)

### **337214 Office Furniture (Except Wood) Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonwood office-type furniture. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

The data published with NAICS code 337214 include the following SIC industry:

2522 Office furniture, except wood

### **337215 Showcase, Partition, Shelving, and Locker Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing wood and nonwood office and store fixtures, shelving, lockers, frames, partitions, and related fabricated products of wood and nonwood materials, including plastics laminated fixture tops. The products are made on a stock basis and may be assembled or unassembled (i.e., knockdown). Establishments exclusively making furniture parts (e.g., frames) are included in this industry.

The data published with NAICS code 337215 include the following SIC industries:

2426 Hardwood dimension and flooring mills (pt)

2541 Wood partitions and fixtures (pt)

2542 Partitions and fixtures, except wood

3499 Fabricated metal products, n.e.c. (pt)

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This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 337215 include establishments primarily engaged in manufacturing wood or non-wood lunchroom tables and chairs, but do not include establishments primarily engaged in manufacturing wood or metal box spring frames, finished plastic furniture parts, convertible bed sleeper mechanisms or chair glides. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **3379 Other Furniture Related Product Manufacturing**

This industry group comprises establishments manufacturing furniture related products, such as mattresses, blinds, and shades.

#### **33791 Mattress Manufacturing**

This industry comprises establishments primarily engaged in manufacturing innerspring, box spring, and noninnerspring mattresses, including mattresses for waterbeds.

##### **337910 Mattress Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing innerspring, box spring, and noninnerspring mattresses, including mattresses for waterbeds.

The data published with NAICS code 337910 include the following SIC industry:

2515 Mattresses and bedsprings (pt)

##### **33792 Blind and Shade Manufacturing**

This industry comprises establishments primarily engaged in manufacturing one or more of the following: venetian blinds, other window blinds, shades; curtain and drapery rods, poles; and/or curtain and drapery fixtures. The blinds and shades may be made on a stock or custom basis and may be made of any material.

##### **337920 Blind and Shade Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing one or more of the following: venetian blinds, other window blinds, shades; curtain and drapery rods, poles; and/or curtain and drapery fixtures. The blinds and shades may be made on a stock or custom basis and may be made of any material.

The data published with NAICS code 337920 include the following SIC industry:

2591 Drapery hardware, blinds, and shades

### **339 Miscellaneous Manufacturing**

Industries in the Miscellaneous Manufacturing subsector make a wide range of products that cannot readily be classified in specific NAICS subsectors in manufacturing. Processes used by these establishments vary significantly, both among and within industries. For example, a variety of manufacturing processes are used in manufacturing sporting and athletic goods that include products, such as tennis racquets and golf balls. The processes for these products differ from each other, and the processes differ significantly from the fabrication processes used in making dolls or toys, the melting and shaping of precious metals to make jewelry, and the bending, forming, and assembly used in making medical products.

The industries in this subsector are defined by what is made rather than how it is made. Although individual establishments might be appropriately classified elsewhere in the NAICS structure, for historical continuity, these product-based industries were maintained. In most cases, no one process or material predominates for an industry.

Establishments in this subsector manufacture products as diverse as medical equipment and supplies, jewelry, sporting goods, toys, and office supplies.

#### **3391 Medical Equipment and Supplies Manufacturing**

This NAICS industry group includes establishments classified in NAICS Industry 33911, Medical Equipment and Supplies Manufacturing.

##### **33911 Medical Equipment and Supplies Manufacturing**

This industry comprises establishments primarily engaged in manufacturing medical equipment and supplies. Examples of products made by these establishments are laboratory apparatus and furniture, surgical and medical instruments, surgical appliances and supplies, dental equipment and supplies, orthodontic goods, dentures, and orthodontic appliances.

##### **339111 Laboratory Apparatus and Furniture Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing laboratory apparatus and laboratory and hospital furniture (except dental). Examples of products made by these establishments are hospital beds, operating room tables, laboratory balances and scales, furnaces, ovens, centrifuges, cabinets, cases, benches, tables, and stools.

The data published with NAICS code 339111 include the following SIC industry:

3821 Laboratory apparatus and furniture



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This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339111 do not include establishments primarily engaged in the manufacture of hospital beds or operating tables. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **339112 Surgical and Medical Instrument Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing medical, surgical, ophthalmic, and veterinary instruments and apparatus (except electrotherapeutic, electromedical, and irradiation apparatus). Examples of products made by these establishments are syringes, hypodermic needles, anesthesia apparatus, blood transfusion equipment, catheters, surgical clamps, and medical thermometers.

The data published with NAICS code 339112 include the following SIC industries:

3829 Measuring and controlling devices, n.e.c. (pt)

3841 Surgical and medical instruments

### **339113 Surgical Appliance and Supplies Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing surgical appliances and supplies. Examples of products made by these establishments are orthopedic devices, prosthetic appliances, surgical dressings, crutches, surgical sutures, and personal industrial safety devices (except protective eyewear).

The data published with NAICS code 339113 include the following SIC industries:

2599 Furniture and fixtures, n.e.c. (pt)

3842 Surgical appliances and supplies (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339113 do not include establishments primarily engaged in the manufacture of rubber gloves and life jackets. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **339114 Dental Equipment and Supplies Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing dental equipment and supplies used by dental laboratories and offices of dentists, such as dental chairs, dental instrument delivery systems, dental hand instruments, and dental impression material.

The data published with NAICS code 339114 include the following SIC industries:

3699 Electrical equipment and supplies, n.e.c. (pt)

3843 Dental equipment and supplies

### **339115 Ophthalmic Goods Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing ophthalmic goods. Examples of products made by these establishments are prescription eyeglasses (except manufactured in a retail setting), contact lenses, sunglasses, eyeglass frames, and reading glasses made to standard powers.

The data published with NAICS code 339115 include the following SIC industry:

3851 Ophthalmic goods

### **339116 Dental Laboratories**

This U.S. industry comprises establishments primarily engaged in manufacturing dentures, crowns, bridges, and orthodontic appliances customized for individual application.

The data published with NAICS code 339116 include the following SIC industry:

8072 Dental laboratories

### **3399 Other Miscellaneous Manufacturing**

This NAICS industry group includes establishments classified in the following NAICS Industries: 33991, Jewelry and Silverware Manufacturing; 33992, Sporting and Athletic Goods Manufacturing; 33993, Doll, Toy, and Game Manufacturing; 33994, Office Supplies (Except Paper) Manufacturing; 33995, Sign Manufacturing; and 33999, All Other Miscellaneous Manufacturing.

### **33991 Jewelry and Silverware Manufacturing**

This industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing, engraving, chasing, or etching jewelry; (2) manufacturing metal personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases); (3) manufacturing, engraving, chasing, or etching precious metal solid, precious metal clad, or pewter cutlery and flatware; (4) manufacturing, engraving, chasing, or etching personal metal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases); (5) stamping coins; (6) manufacturing unassembled jewelry parts and stock shop products, such as sheet, wire, and tubing; (7) cutting, slabbing, tumbling, carving, engraving, polishing, or faceting precious or semiprecious stones and gems; (8) recutting, repolishing, and setting gem stones; and (9) drilling, sawing, and peeling cultured and costume pearls.

### **339911 Jewelry (Except Costume) Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing, engraving, chasing, or etching precious metal solid or precious metal clad jewelry; (2) manufacturing, engraving, chasing, or etching personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases) made of precious solid or clad metal; and (3) stamping coins.

The data published with NAICS code 339911 include the following SIC industries:

3479 Metal coating and allied services (pt)

3911 Jewelry, precious metal

### **339912 Silverware and Holloware Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing, engraving, chasing, or etching precious metal solid, precious metal clad, or pewter flatware and other plated ware.

The data published with NAICS code 339912 include the following SIC industries:

3479 Metal coating and allied services (pt)

3914 Silverware and plated ware (pt)

### **339913 Jewelers' Material and Lapidary Work Manufacturing**

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing unassembled jewelry parts and stock shop products, such as sheet, wire, and tubing; (2) cutting, slabbing, tumbling, carving, engraving, polishing or faceting precious or semiprecious stones and gems; (3) recutting, repolishing, and setting gem stones; and (4) drilling, sawing, and peeling cultured pearls.

The data published with NAICS code 339913 include the following SIC industry:

3915 Jewelers' materials and lapidary work

### **339914 Costume Jewelry and Novelty Manufacturing**

This U.S. industry comprises establishments primarily engaged in (1) manufacturing, engraving, chasing, and etching costume jewelry; and/or (2) manufacturing, engraving, chasing, or etching nonprecious metal personal goods (i.e., small articles carried on or about the person, such as compacts or cigarette cases). This industry includes establishments primarily engaged in manufacturing precious plated jewelry and precious plated personal goods.

The data published with NAICS code 339914 include the following SIC industries:

3479 Metal coating and allied services (pt)

3499 Fabricated metal products, n.e.c. (pt)

3961 Costume jewelry

### **33992 Sporting and Athletic Goods Manufacturing**

This industry comprises establishments primarily engaged in manufacturing sporting and athletic goods (except apparel and footwear).

#### **339920 Sporting and Athletic Goods Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing sporting and athletic goods (except apparel and footwear).

The data published with NAICS code 339920 include the following SIC industry:

3949 Sporting and athletic goods, n.e.c.

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339920 do not include establishments primarily engaged in the manufacture of wet suits. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33993 Doll, Toy, and Game Manufacturing**

This industry comprises establishments primarily engaged in manufacturing dolls, toys, and games, such as complete dolls, doll parts, doll clothes, action figures, toys, games (including electronic), hobby kits, and children's vehicles (except metal bicycles and tricycles).

#### **339931 Doll and Stuffed Toy Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing complete dolls, doll parts, and doll clothes, action figures, and stuffed toys.

The data published with NAICS code 339931 include the following SIC industry:

3942 Dolls

#### **339932 Game, Toy, and Children's Vehicle Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing games (including electronic), toys, and children's vehicles (except bicycles and metal tricycles).

The data published with NAICS code 339932 include the following SIC industry:

3944 Games, toys, and children's vehicles (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339932 do not include

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establishments primarily engaged in the manufacture of rubber toys, except dolls or embroidery kits. The NAICS definitions will be fully implemented with the 2002 Economic Census.

### **33994 Office Supplies (Except Paper) Manufacturing**

This industry comprises establishments primarily engaged in manufacturing office supplies. Examples of products made by these establishments are pens, pencils, felt tip markers, crayons, chalk, pencil sharpeners, staplers, hand operated stamps, modeling clay, and inked ribbons.

### **339941 Pen and Mechanical Pencil Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing pens, ballpoint pen refills and cartridges, mechanical pencils, and felt tipped markers.

The data published with NAICS code 339941 include the following SIC industry:

3951 Pens and mechanical pencils

### **339942 Lead Pencil and Art Goods Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing nonmechanical pencils and art goods. Examples of products made by these establishments are pencil leads, crayons, chalk, framed blackboards, pencil sharpeners, staplers, artists' palettes and paints, and modeling clay.

The data published with NAICS code 339942 include the following SIC industries:

2531 Public building and related furniture (pt)

3579 Office machines, n.e.c. (pt)

3952 Lead pencils and art goods (pt)

### **339943 Marking Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing marking devices, such as hand operated stamps, embossing stamps, stamp pads, and stencils.

The data published with NAICS code 339943 include the following SIC industry:

3953 Marking devices

### **339944 Carbon Paper and Inked Ribbon Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing carbon paper and inked ribbons.

The data published with NAICS code 339944 include the following SIC industry:

3955 Carbon paper and inked ribbons

### **33995 Sign Manufacturing**

This industry comprises establishments primarily engaged in manufacturing signs and related displays of all materials (except printing paper and paperboard signs, notices, displays).

### **339950 Sign Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing signs and related displays of all materials (except printing paper and paperboard signs, notices, displays).

The data published with NAICS code 339950 include the following SIC industries:

3993 Signs and advertising specialties

### **33999 All Other Miscellaneous Manufacturing**

This industry comprises establishments primarily engaged in miscellaneous manufacturing (except medical equipment and supplies, jewelry and flatware, sporting and athletic goods, dolls, toys, games, office supplies (except paper), and signs).

### **339991 Gasket, Packing, and Sealing Device Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing gaskets, packing, and sealing devices of all materials.

The data published with NAICS code 339991 include the following SIC industry:

3053 Gaskets, packing and sealing devices

### **339992 Musical Instrument Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing musical instruments (except toys).

The data published with NAICS code 339992 include the following SIC industry:

3931 Musical instruments

### **339993 Fastener, Button, Needle, and Pin Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing fasteners, buttons, needles, pins, and buckles (except precious metals or precious and semiprecious stones and gems).

The data published with NAICS code 339993 include the following SIC industries:

3131 Footwear cut stock and findings (pt)

3965 Fasteners, buttons, needles, and pins

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### **339994 Broom, Brush, and Mop Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing brooms, mops, and brushes.

The data published with NAICS code 339994 include the following SIC industries:

2392 Housefurnishings, n.e.c. (pt)

3991 Brooms and brushes

### **339995 Burial Casket Manufacturing**

This U.S. industry comprises establishments primarily engaged in manufacturing burial caskets, cases, and vaults (except concrete).

The data published with NAICS code 339995 include the following SIC industry:

3995 Burial caskets

### **339999 All Other Miscellaneous Manufacturing**

This U.S. industry comprises establishments primarily engaged in miscellaneous manufacturing (except medical

equipment and supplies, jewelry and flatware, sporting and athletic goods, dolls, toys, games, office supplies (except paper), musical instruments, fasteners, buttons, needles, pins, brooms, brushes, mops, and burial caskets).

The data published with NAICS code 339999 include the following SIC industries:

2499 Wood products, n.e.c. (pt)

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

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Manufacturing did not fully implement the conversion to NAICS. Data for NAICS industry 339999 do not include establishments primarily engaged in the manufacture of electronic cigarette lighters. The NAICS definitions will be fully implemented with the 2002 Economic Census.

# 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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### OHIO

**Alliance** is in Mahoning and Stark Counties.

**Bellevue** is in Huron and Sandusky Counties.

**Blanchester** is in Clinton and Warren Counties.

**Bluffton** is in Allen and Hancock Counties.

**Buckeye Lake** is in Fairfield and Licking Counties; it annexed into Fairfield County in October 1995.

**Canal Winchester** is in Fairfield and Franklin Counties.

**Carlisle** is in Montgomery and Warren Counties.

**Columbiana** is in Columbiana and Mahoning Counties.

**Columbus** is in Delaware, Fairfield, and Franklin Counties.

**Crestline** is in Crawford and Richland Counties.

**Delphos** is in Allen and Van Wert Counties.

**Dublin** is in Delaware, Franklin, and Union Counties.

**Fairfield** is in Butler and Hamilton Counties.

**Fostoria** is in Hancock, Seneca, and Wood Counties.

**Huber Heights** is in Miami and Montgomery Counties.

**Kettering** is in Greene and Montgomery Counties.

**Loudonville** is in Ashland and Holmes Counties.

**Loveland** is in Clermont, Hamilton, and Warren Counties.

**Middletown** is in Butler and Warren Counties.

**Milford** is in Clermont and Hamilton Counties.

**Minerva** is in Carroll, Columbiana, and Stark Counties.

**Mogadore** is in Portage and Summit Counties.

**Monroe** is in Butler and Warren Counties.

**Norton** is in Summit and Wayne Counties.

**Pickerington** is in Fairfield and Franklin Counties.

**Plain City** is in Madison and Union Counties.

**Reynoldsburg** is in Fairfield, Franklin, and Licking Counties.

**Rittman** is in Medina and Wayne Counties.

**Sharonville** is in Butler and Hamilton Counties.

**Springboro** is in Montgomery and Warren Counties.

**Swanton** is in Fulton and Lucas Counties.

**Tallmadge** is in Portage and Summit Counties.

**Union** is in Miami and Montgomery Counties; it annexed into Miami County in March 1996.

**Vermilion** is in Erie and Lorain Counties.

**Westerville** is in Delaware and Franklin Counties.

**Youngstown** is in Mahoning and Trumbull Counties.

# Appendix E. Metropolitan Areas

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## **OHIO**

### **Akron, OH PMSA**

Portage County, OH  
Summit County, OH

### **Canton—Massillon, OH MSA**

Carroll County, OH  
Stark County, OH

### **Cincinnati, OH—KY—IN PMSA**

Dearborn County, IN  
Ohio County, IN  
Boone County, KY  
Campbell County, KY  
Gallatin County, KY  
Grant County, KY  
Kenton County, KY  
Pendleton County, KY  
Brown County, OH  
Clermont County, OH  
Hamilton County, OH  
Warren County, OH

### **Cincinnati—Hamilton, OH—KY—IN CMSA**

Cincinnati, OH—KY—IN PMSA  
Dearborn County, IN  
Ohio County, IN  
Boone County, KY  
Campbell County, KY  
Gallatin County, KY  
Grant County, KY  
Kenton County, KY  
Pendleton County, KY  
Brown County, OH  
Clermont County, OH

### **Cincinnati—Hamilton, OH—KY—IN CMSA—Con.**

Cincinnati, OH—KY—IN PMSA—Con.  
Hamilton County, OH  
Warren County, OH  
Hamilton—Middletown, OH PMSA  
Butler County, OH

### **Cleveland—Lorain—Elyria, OH PMSA**

Ashtabula County, OH  
Cuyahoga County, OH  
Geauga County, OH  
Lake County, OH  
Lorain County, OH  
Medina County, OH

### **Cleveland—Akron, OH CMSA**

Akron, OH PMSA  
Portage County, OH  
Summit County, OH  
Cleveland—Lorain—Elyria, OH PMSA  
Ashtabula County, OH  
Cuyahoga County, OH  
Geauga County, OH  
Lake County, OH  
Lorain County, OH  
Medina County, OH

### **Columbus, OH MSA**

Delaware County, OH  
Fairfield County, OH  
Franklin County, OH  
Licking County, OH  
Madison County, OH  
Pickaway County, OH

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**Dayton—Springfield, OH MSA**

Clark County, OH  
Greene County, OH  
Miami County, OH  
Montgomery County, OH

**Hamilton—Middletown, OH PMSA**

Butler County, OH

**Huntington—Ashland, WV—KY—OH MSA**

Boyd County, KY  
Carter County, KY  
Greenup County, KY  
Lawrence County, OH  
Cabell County, WV  
Wayne County, WV

**Lima, OH MSA**

Allen County, OH  
Auglaize County, OH

**Mansfield, OH MSA**

Crawford County, OH  
Richland County, OH

**Parkersburg—Marietta, WV—OH MSA**

Washington County, OH  
Wood County, WV

**Steubenville—Weirton, OH—WV MSA**

Jefferson County, OH  
Brooke County, WV  
Hancock County, WV

**Toledo, OH MSA**

Fulton County, OH  
Lucas County, OH  
Wood County, OH

**Wheeling, WV—OH MSA**

Belmont County, OH  
Marshall County, WV  
Ohio County, WV

**Youngstown—Warren, OH MSA**

Columbiana County, OH  
Mahoning County, OH  
Trumbull County, OH

