Commercial Bakeries

1997

Issued November 1999

EC97M-3118B

1997 Economic Census *Manufacturing* Industry Series

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ACKNOWLEDGMENTS

The staff of the Manufacturing and Construction Division prepared this report. Judy M. Dodds, Assistant Chief for Census and Related Programs, was responsible for the overall planning, management, and coordination. Kenneth Hansen, Chief, Manufactured Durables Branch, assisted by Mike Brown, Renee Coley, Raphael Corrado, and Milbren Thomas, Section Chiefs, Michael Zampogna, Former Chief, Manufactured Nondurables Branch, assisted by Allen Foreman, Robert Miller, Robert Reinard, and Nat Shelton, Section Chiefs, and Tom Lee, Robert Rosati, and Tom Flood, Special Assistants, performed the planning and implementation. Stephanie Angel, Brian Appert, Stanis Batton, Carol Beasley, Chris Blackburn, Larry Blumberg, Vera Harris-Bourne, Brenda **Campbell, Suzanne Conard, Vance** Davis, Mary Ellickson, Matt Gaines, Merry Glascoe, Kay Hanks, Karen Harshbarger, Nancy Higgins, James Hinckley, Walter Hunter, Jim Jamski, Evelyn Jordan, Robert Lee, John Linehan, Paul Marck, Keith McKenzie, Philippe Morris, Joanna Nguyen, Betty Pannell, Joyce Pomeroy, Venita Powell, Cynthia Ramsey, Chris Savage, Aronda Stovall, Sue Sundermann, Thanos Theodoropoulos, Dora Thomas, Ann Truffa, Ronanne Vinson, Keeley Voor, Denneth Wallace, Tempie Whittington, Lissene Witt, and Mike Yamaner provided primary staff assistance.

Brian Greenberg, Assistant Chief for Research and Methodology Programs, assisted by Stacey Cole, Chief, Manufacturing Programs Methodology Branch, and Robert Struble, Section Chief, provided the mathematical and statistical techniques as well as the coverage operations. Jeffrey Dalzell and Cathy Ritenour provided primary staff assistance.

Mendel D. Gayle, Chief, Forms, Publications, and Customer Services Branch, assisted by Julius Smith Jr. and Baruti Taylor, Section Chiefs, performed overall coordination of the publication process. Kim Credito, Patrick Duck, Chip Murph, Wanda Sledd, and Veronica White provided primary staff assistance.

The Economic Planning and Coordination Division, Lawrence A. Blum, Assistant Chief for Collection Activities and Shirin A. Ahmed, Assistant Chief for Post-Collection Processing, assisted by Dennis Shoemaker, Chief, Post-Collection Census Processing Branch, Brandy Yarbrough, Section Chief, Sheila Proudfoot, Richard Williamson, Andrew W. Hait, and Jennifer E. Lins, was responsible for developing the systems and procedures for data collection, editing, review, correction and dissemination

The staff of the National Processing Center, **Judith N. Petty,** Chief, performed mailout preparation and receipt operations, clerical and analytical review activities, data keying, and geocoding review.

The Geography Division staff developed geographic coding procedures and associated computer programs.

The Economic Statistical Methods and Programming Division, **Charles P. Pautler Jr.,** Chief, developed and coordinated the computer processing systems. **Martin S. Harahush,** Assistant Chief for Quinquennial Programs, assisted by **Barbara Lambert** and **Christina Arledge** were responsible for design and implementation of the computer systems. **Gary T. Sheridan,** Chief, Manufacturing and Construction Branch, **Lori A. Guido** and **Roy A. Smith,** Section Chiefs, supervised the preparation of the computer programs.

Computer Services Division, **Debra Williams**, Chief, performed the computer processing.

The staff of the Administrative and Customer Services Division, **Walter C. Odom,** Chief, performed planning, design, composition, editorial review, and printing planning and procurement for publications, Internet products, and report forms. **Cynthia G. Brooks** provided publication coordination and editing.

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CONTENTS

	duction to the Economic Census	1 5
TAB	LES	
1. 2. 3. 4. 5. 6a. 6b. 7.	Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997 Industry Statistics for Selected States: 1997 Detailed Statistics by Industry: 1997 Industry Statistics by Employment Size: 1997 Industry Statistics by Industry and Primary Product Class Specialization: 1997 Products Statistics: 1997 and 1992 Product Class Shipments for Selected States: 1997 and 1992 Materials Consumed by Kind: 1997 and 1992	7 7 8 9 10 11 13
APP	ENDIXES	
A. B. C. E. F.	Explanation of Terms NAICS Codes, Titles, and Descriptions Coverage and Methodology Geographic Notes Metropolitan Areas Footnotes for Products Statistics and Materials Consumed by Kind Comparability of Product Classes and Product Codes: 1997 to 1992	A-1 B-1 C-1 G-1

-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

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

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

- Policymaking agencies of the Federal Government use the data to monitor economic activity and 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

1997 ECONOMIC CENSUS

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) 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 longterm 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.

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. 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.

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

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 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, semiindependent 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 on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

NAICS					oloyees	Pr	oduction work	ers				Total capital
or SIC code	Industry	Com- panies ¹	estab- lish- ments ²	Number	Payroll (\$1.000)	Number	Hours (1,000)	Wages (\$1.000)	Value added by manufacture (\$1.000)	Cost of materials (\$1,000)	Value of shipments (\$1.000)	expendi- tures (\$1,000)
		P			(+.,)		(1,000)	(+ - ,)	(+ !,••••)	(+.,)	(+ .,)	(+ .,)
311812 205100	Commercial bakeries Bread, cake, & related	2 403	2 766	164 189	4 666 944	87 708	170 197	2 185 728	14 009 220	7 445 413	21 459 322	725 028
205210	products Cookies & crackers (pt)	N N	2 753 13	163 937 252	4 659 124 7 820	87 517 191	169 915 282	2 181 648 4 080	13 985 567 23 653	7 425 214 20 199	21 415 741 43 581	724 502 526

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control. ²Includes establishments with payroll at any time during the year.

Table 2. Industry Statistics for Selected States: 1997

[States that are disclosures or with less than 100 employees are not shown. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

			All shments	All em	ployees	Pr	oduction work	ers				
Industry and geographic area	E1	Total	With 20 em- ploy- ees or more	Number	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)	Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
311812, COMMERCIAL BAKERIES												
United States	1	2 766	1 073	164 189	4 666 944	87 708	170 197	2 185 728	14 009 220	7 445 413	21 459 322	725 028
Alabama Arizona Arkansas California Colorado	- 1 - 2 1	27 39 14 385 50	19 19 7 169 14	3 023 1 966 1 203 20 375 2 067	88 067 50 578 28 683 613 745 62 081	1 747 1 226 739 11 277 1 227	3 833 2 301 1 522 21 609 2 390	41 964 26 730 15 977 282 631 34 864	214 494 159 001 75 526 1 644 642 127 769	215 347 74 333 50 612 823 275 72 312	429 852 233 323 126 272 2 467 079 200 019	9 733 5 256 5 308 83 066 5 453
Connecticut Florida Georgia Hawaii *	1 1 - 4 2	45 161 48 22 117	14 39 24 7 51	2 064 5 951 4 486 836 11 187	70 569 183 571 124 437 22 739 327 098	1 458 2 970 1 944 492 6 201	2 959 6 063 3 900 993 11 458	43 414 81 489 50 145 12 576 169 905	277 347 613 260 393 811 55 961 1 116 196	116 057 309 500 223 144 27 463 537 751	394 562 925 406 616 835 83 319 1 656 664	10 075 27 320 27 546 1 384 40 090
Indiana Iowa . Kansas Kentucky . Louisiana	- - - -	40 19 18 19 26	23 11 9 10 15	4 798 2 057 2 827 2 135 2 172	151 683 52 036 79 958 52 544 66 200	2 293 935 1 022 1 136 914	4 482 1 811 2 058 2 334 1 643	58 691 24 141 29 879 23 410 19 088	442 834 131 493 266 083 117 479 121 644	242 629 92 481 99 002 112 179 73 919	687 304 224 014 365 138 230 189 195 494	21 140 7 242 13 836 8 004 4 409
Maryland	3 1 2 1 -	54 121 81 42 8	23 44 32 18 4	2 914 4 371 3 995 2 586 770	72 776 109 652 113 244 57 798 18 902	1 955 2 757 2 214 1 243 435	4 475 5 120 4 271 2 390 865	46 671 65 695 55 361 29 787 9 951	322 769 453 649 383 210 163 644 39 211	141 508 199 441 151 786 106 627 24 892	464 748 652 957 534 840 270 199 65 165	8 671 25 413 13 501 8 913 1 247
Missouri Nevada New Hampshire New Jersey New Mexico	- 5 9 2 2	38 14 8 136 14	16 6 2 40 3	3 223 389 112 3 314 337	90 628 9 871 1 244 92 366 8 315	1 475 254 43 2 053 211	3 008 438 75 3 936 464	40 893 4 883 476 49 896 4 867	293 291 23 223 2 614 279 899 35 274	97 577 12 013 2 129 149 737 26 432	390 936 35 233 4 743 430 054 61 663	9 337 2 656 171 10 660 1 027
New York North Carolina Ohio Oklahoma Oregon	2 1 - -	374 45 76 9 49	89 23 31 6 22	11 148 4 493 6 515 1 318 2 669	347 128 119 088 207 168 40 024 77 820	6 581 2 194 3 602 504 1 555	13 057 5 100 6 588 822 2 735	161 704 46 981 93 098 13 761 41 967	968 934 381 100 653 906 96 426 211 489	477 470 190 979 313 281 46 899 150 771	1 447 753 571 807 967 120 142 882 362 313	51 754 35 270 19 619 5 273 13 467
Pennsylvania	2 2 - -	144 25 15 39 119	61 11 9 26 47	8 653 737 2 023 10 052 9 172	246 662 17 514 54 668 280 217 257 590	4 796 465 1 176 5 410 4 302	8 650 901 2 160 10 341 8 632	123 719 9 843 29 309 122 726 102 080	917 819 48 584 175 495 725 082 714 434	379 492 31 089 112 815 591 368 474 496	1 292 294 79 816 288 555 1 316 582 1 189 058	35 172 1 427 5 334 73 409 37 020
Utah Vermont Virginia Washington West Virginia Wisconsin	- 1 - 2 2 -	33 22 50 79 16 60	12 5 21 31 6 29	1 583 331 2 602 4 518 1 147 3 050	38 590 6 565 63 812 131 855 42 528 66 597	853 184 1 260 2 081 545 1 932	1 595 359 2 390 4 409 1 088 3 534	18 821 3 684 25 921 61 288 14 247 41 255	126 858 24 661 168 270 275 659 108 868 246 731	42 837 12 983 96 022 202 116 65 177 113 672	169 788 37 644 264 031 477 359 174 056 360 686	4 278 458 25 776 15 136 2 203 6 948

* Hawaii has no incorporated places in the sense of functioning governmental units; however, in agreement with Hawaiian law, the Bureau of the Census reports data for census designated places (CDPs) which have been designated as place equivalents. Those CDPs, only for the state of Hawaii, with 2,500 or more population are recognized.

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data 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.

Table 3. Detailed Statistics by Industry: 1997

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

Item	Value	Item	Value
311812, COMMERCIAL BAKERIES		311812, COMMERCIAL BAKERIES—Con.	
Companies ¹ number	2 403	Value added \$1,000	14 009 220
All establishments number. Establishments with 1 to 19 employees number. Establishments with 20 to 99 employees number. Establishments with 00 employees or more number.	2 766 1 693 693 380	Total inventories, beginning of year \$1,000 Finished goods inventories, beginning of year \$1,000 Work-in-process inventories, beginning of year \$1,000 Materials and supplies inventories, beginning of year \$1,000	431 898 102 055 7 076 322 767
All employees number. Total compensation ² \$1,000. Annual payroll \$1,000. Total finge benefits \$1,000.	164 189 5 948 550 4 666 944 1 281 606	Total inventories, end of year \$1,000. Finished goods inventories, end of year \$1,000. Work-in-process inventories, end of year \$1,000. Materials and supplies inventories, end of year \$1,000.	430 071 95 834 8 588 325 649
Production workers, average for year	87 708 86 893 87 116	Gross book value of total assets at beginning of year\$1,000 Total capital expenditures (new and used)	6 500 667 725 028
Production workers on August 12 number	88 389	(new and used)\$1,000 Capital expenditures for machinery and equipment (new	166 332
Production workers on November 12number Production-worker hours1,000 Production-worker wages\$1,000.	88 434 170 197 2 185 728	and used)\$1,000. Total retirements ² \$1,000. Gross book value of total assets at end of year\$1,000.	558 696 197 345 7 028 350
Total cost of materials\$1,000	7 445 413	Total depreciation during year ² \$1,000	479 189
Cost of materials, parts, containers, etc., consumed	5 538 453 5 538 458 1 567 760 148 986 167 576 22 633	Buildings and other structures rental payments ²	224 669 130 302 94 367
Quantity of electricity purchased for heat and power	2 736 948 16 975	structures ³ \$1,000. Response coverage ratio ⁴ percent Cost of ourchased services for the repair of machinery and	49 168 77
Total value of shipments \$1,000 Primary products value of shipments \$1,000	21 459 322 17 983 792	equipment ³ \$1,000 Response coverage ratio ⁴	132 897 77 29 7 <u>15</u>
Secondary products value of shipments	800 274 2 675 256 2 362 159 D	Cost of purchased legal services ³ \$1,000 Response coverage ratio ⁴ percent	77 13 204 77 7 052
Contract receipts\$1,000 Other miscellaneous receipts\$1,000	D	Response coverage ratio ⁴ percent Cost of purchased advertising services ³ \$1,000	7 052 77 123 912
Primary products specialization ratio percent Value of primary products shipments made in all industries \$1,000	95 18 464 864	Response coverage ratio ⁴ percent Cost of purchased software and other data processing	77
Value of primary products shipments made in the inidustries	17 983 792		10 960 77
Coverage ratio	401 072	services ³	10 876 77

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control. ²These items are collected in the ASM and estimated for the remaining establishments; therefore, the levels of estimation are higher than for other items in the table. ³Based on ASM sample data. ⁴A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those ASM establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

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

Table 4. Industry Statistics by Employment Size: 1997

			All shments	All emp	ployees	Pr	oduction work	ers				
Employment size class	E1	Total	With 20 em- ploy- ees or more	Number	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)	Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
311812, COMMERCIAL BAKERIES												
All establishments	1	2 766	1 073	164 189	4 666 944	87 708	170 197	2 185 728	14 009 220	7 445 413	21 459 322	725 028
Establishments with 1 to 4 employees Establishments with 5 to 9	9	854	_	1 752	28 488	1 168	1 739	14 714	76 899	48 458	125 374	3 983
employees Establishments with 10 to 19	9	419	-	2 856	42 631	1 625	2 606	21 844	112 371	72 287	184 582	5 908
employees Establishments with 20 to 49	7	420	-	5 814	90 948	3 321	5 208	47 359	238 478	151 706	390 084	11 590
employees Establishments with 50 to 99	3	468	468	14 434	279 523	9 061	16 339	158 274	703 441	450 452	1 155 148	37 781
employees Establishments with 100 to 249	2	225	225	15 784	375 411	10 620	20 347	223 172	1 172 301	671 510	1 843 863	81 101
employees Establishments with 250 to 499	1	206	206	33 041	970 056	21 198	42 328	529 333	3 095 027	1 900 597	4 998 353	155 890
employees Establishments with 500 to 999	-	116	116	41 712	1 286 753	20 155	41 771	579 537	3 892 471	1 963 428	5 860 043	206 767
employees	1	50	50	34 043	1 115 973	14 218	28 259	437 587	3 343 595	1 454 494	4 797 288	115 182
Establishments with 1,000 to 2,499 employees	-	7	7	D	D	D	D	D	D	D	D	D
Establishments with 2,500 employees or more	-	1	1	D	D	D	D	D	D	D	D	D
Administrative records ²	9	1 448	-	10 457	143 865	5 945	9 197	71 360	393 369	246 870	640 279	19 930

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

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a 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. ²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

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

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

NAICS		All	All employees		Pr	oduction work	ers	Value added			Total capital
industry or product class code	Industry or primary product class	estab- lish- ments	Number	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)	by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	expendi- tures (\$1,000)
311812	Commercial bakeries	2 766	164 189	4 666 944	87 708	170 197	2 185 728	14 009 220	7 445 413	21 459 322	725 028
3118121 3118124	Bread (white, wheat, and rye, etc.), including frozen Rolls (bread-type), muffins, bagels,	436	82 020	2 526 900	38 577	77 162	1 056 146	7 501 378	3 560 878	11 065 774	358 675
3118127 311812A	and croissants Soft cakes, except frozen Pies (fruit, cream, and custard),	270 65	28 943 16 607	836 787 501 547	18 156 9 635	36 532 18 691	460 016 249 120	2 755 564 1 569 677	1 547 056 942 199	4 304 035 2 509 959	159 171 106 725
311812D	except frozen Other sweet goods, except frozen, nec	23 156	1 083 18 482	25 137 496 043	846 10 699	1 390 20 683	15 420 262 413	71 964 1 408 856	67 781 893 030	139 609 2 303 641	3 763 58 084

Table 6a. Products Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

			19	997		1992			
NAICS		Number of companies		Product	shipments	Number of companies		Product	shipments
product code	Product	with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)	with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)
311812	Commercial bakery products	N	х	х	18 464 864	N	x	x	N
3118121	Bread (white, wheat, and rye, etc.), including frozen	N	x	x	7 190 313	N	x	x	Ν
31181211 3118121111 3118121121	White pan breadmil lb White pan bread, except frozenmil lb Frozen white pan breadmil lb.	N 151 17	× × ×	X 5 609.4 ^p 273.4	3 586 903 3 480 995 105 908	N 129 7	x x x	X 95 790.7 921.1	N 2 886 581 6 472
31181212	White hearth bread (including french, italian, etc.)	N	x	x	1 275 686	N	x	х	N
3118121231	White hearth bread, except frozen _(including french, italian, etc.)	201	х	۹1 184.4	967 567	165	х	91 421.3	801 675
3118121241	Frozen white hearth bread (including french, italian, etc.)mil lb	50	х	403.1	308 119	40	x	9348.2	171 289
31181213	Whole wheat, cracked wheat, multigrain, and other dark wheat breads	N	x	x	1 312 829	N	x	x	N
3118121351	Whole wheat, cracked wheat, multigrain, and other dark wheat breads, except frozenmil lb	141	x	P1 581.7	1 268 830	126	x	2 207.6	1 264 096
3118121361	Frozen whole wheat, cracked wheat, multigrain, and other dark wheat breadsmil lb	19	x	P63.9	43 999	14	x	82.9	48 069
31181214	Other variety breads (rye, unleavened, raisin, potato, self-rising, salt-free,								
3118121471	canned, etc.)	N	Х	Х	880 586	N	х	х	Ν
3118121481	except frozen mil lb Frozen rye bread (including	99	Х	P385.1	307 850	88	х	361.4	264 114
3118121491 31181214A1 31181214G1	pumpernickel) mil lb Unleavened bread, except frozen mil lb Frozen unleavened bread mil lb Other variety breads (raisin, potato,	15 1 -	X X X	D D -	D D -	8 N N	X X X	13.6 N N	6 770 N N
31181214J1	self-rising, salt-free, canned, etc.), except frozenmil lb Other frozen variety breads (raisin,	136	х	^p 497.9	467 008	103	x	609.4	419 828
	potato, self-rising, salt-free, canned, etc.) mil lb	38	x	٩124.0	76 198	17	x	42.5	27 185
3118121Y	Bread: white, wheat, rye, etc. (including frozen), nsk, total	N	х	x	134 309	N	x	x	N
3118121YWV	Bread: white, wheat, rye, etc. (including frozen), nsk	N	×	x	134 309	N	x	x	N
3118124	Rolls (bread-type), muffins, bagels, and croissants	N	x	х	5 276 466	N	x	x	4 036 971
31181241 3118124111	Hamburger and wiener rolls	N	х	х	2 406 048	N	х	х	Ν
3118124111	frozen	142 24	X X	3 441.6 9195.7	2 294 522 111 526	120 14	××	93 147.6 202.7	1 910 905 79 229
31181242	All other rolls (bread-type), including		X	×				, v	
3118124231	muffins, bagels, and croissants Brown-and-serve rolls, except frozenmil b.	N 75 14	X X X X X	X P319.9	2 816 684 258 764	N 49	X X X X X	X 31 <u>7</u> .8	205 978
3118124241 3118124251	Frozen brown-and-serve rolls	37	X	915.8 378.8	13 922 416 170	4 31	X	7.1 365.9	4 799 360 486
3118124261 3118124271	Frozen english muffins	5 104	X X	931.9 9280.8	20 213 261 202	5 83	X X	15.6 9257.3	9 700 195 818
3118124281 3118124291	Frozen hearth rolls	23 97	X	962.0 9290.6	55 048 241 342	12 47	x	S ₽109.2	20 523 87 790
31181242A1	Frozen bagels mil lb	38 40	× × × ×	818.0	611 887	22 28	X X X X X	347.4	267 039
31181242B1 31181242C1	Croissants, except frozenmil lb Frozen croissantsmil lb	40 29	X	P20.8 P86.1	45 162 123 137	28 25	x	99.2 9121.4	17 406 141 958
31181242D1	Other bread-type rolls (kaiser except hearth-type, parkerhouse, etc.), except frozenmil lb	110	x	q388.8	369 185	98	x	٩467.3	326 032
31181242E1	Other frozen bread-type rolls (kaiser								
31181242F1	etc.)	23 36	x x	Р191.6 Р589.5	101 209 299 443	13 29	x x	۹103.5 ۹565.2	55 782 326 771
3118124Y	Rolls (bread-type), muffins, bagels, and croissants, nsk, total	N	х	х	53 734	N	x	x	N
3118124YWV	Rolls (bread-type), muffins, bagels, and croissants, nsk.	N	x	x	53 734	N	x	x	26 103
3118127	Soft cakes, except frozen	N	x	x	2 272 565	N	x	x	1 888 228
31181271 3118127111	Soft cakes, except frozen Snack cakes, except frozenmil lb	N 52	x x	X 1 522.2	2 262 693 1 732 094	N 52	x	X 1 267.8	N 1 436 949
3118127121 3118127131	Fruit cakes, holiday-type, except frozenmil lb All other soft cakes, except frozen	26	х	^p 60.0	139 878	24	x	S	70 143
	(including pound, layer, sheet, cheese, etc.)mil lb	131	х	^p 223.9	390 721	103	x	P221.2	367 302
3118127Y 3118127YWV	Soft cakes, except frozen, nsk, total	N N	X X	X X	9 872 9 872	N N	x x	x x	N 13 834

See footnotes at end of table.

Table 6a. Products Statistics: 1997 and 1992-Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

			19	997		1992			
NAICS		Number of companies		Product	shipments	Number of companies		Product	shipments
product code	Product	with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)	with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)
311812	Commercial bakery products— Con.								
311812A	Pies (fruit, cream, and custard), except frozen	N	х	x	544 407	N	x	х	415 243
311812A1	Pies (fruit, cream, and custard), except	N	х	x	501 071	N	x	x	N
311812A111	frozen Snack pies (fruit, cream, and custard),				531 971				
311812A121	except frozen mil lb All other pies (fruit, cream, and custard	24	Х	q232.1	313 234	27	Х	P178.2	248 259
01101010	types, etc.), except frozen mil lb	67	Х	116.4	218 737	57	Х	₽94.5	165 056
311812AY	Pies (fruit, cream, and custard), except frozen, nsk, total	N	х	х	12 436	N	х	х	N
311812AYWV	Pies (fruit, cream, and custard), except frozen, nsk	N	Х	х	12 436	N	х	х	1 928
311812D	Other sweet goods, except frozen, nec	N	Х	х	2 046 923	N	х	х	Ν
311812D1 311812D111 311812D131 311812D131 311812D151	Other sweet goods, except frozen	N 86 85	X X X	X 228.8 ¤415.5	2 020 919 308 632 578 508	N 74 81	X X X	X 9195.7 9363.5	N 159 055 498 359
311812D181	cream puffs, eclairs, lady fingers, french pastry, puff pastry) All other sweet goods containing yeast, except frozen (including sweet rolls	87	Х	P148.9	265 987	71	x	P76.3	144 891
311812D191	and coffeecake)mil lb All other sweet goods not containing veast, except forzen (including	81	x	P454.5	563 879	N	x	N	N
011010DV	danishes and muffins) mil lb	84	Х	P226.1	303 913	N	х	N	N
311812DY	Other sweet goods, except frozen, nsk, total	N	Х	х	26 004	N	X	Х	N
311812DYWV	Other sweet goods, except frozen, nsk	N N	X	X	26 004	N	X	X	12 527
311812W 311812WY	Commercial bakeries, nsk, total	N	x x	x x	1 134 190 1 134 190	N	x x	X X	N N
311812WYWW	Commercial bakeries, nsk, for nonadministrative-record		~	~			^	X	
311812WYWY	establishments Commercial bakeries, nsk, for administrative- record establishments	N N	x x	x x	486 155 648 035	N N	x x	x x	N N

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

Note: For some establishments, data have been estimated from central unit values which are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: P 10 to 19 percent estimated; 9 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

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

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product class	Product class and geographic area	Value of product shipments (\$1,000)				
code		1997	1992			
3118121	BREAD (WHITE, WHEAT, AND RYE, ETC.), INCLUDING FROZEN					
	United States	7 190 313	Ν			
	Alabama	159 341	N			
	Arizona	114 410	N			
	Arkansas	30 803	N			
	California	1 005 785	N			
	Colorado	81 437	N			
	Connecticut .	213 107	N			
	Florida .	326 560	N			
	Georgia .	123 832	N			
	Hawaii .	36 833	N			
	Illinois .	443 600	N			
	Indiana	176 093	N			
	Iowa .	114 862	N			
	Kansas	23 219	N			
	Kentucky	72 731	N			
	Louisiana	92 200	N			
	Maryland	170 161	N			
	Massachusetts	221 709	N			
	Michigan	201 377	N			
	Minnesota	121 822	N			
	Missouri	192 458	N			

See footnotes at end of table.

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

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product class	Product class and geographic area	Value of product shipmer (\$1,000)	ts
code		1997	1992
3118121	BREAD (WHITE, WHEAT, AND RYE, ETC.), INCLUDING FROZEN-Con.		
	Nevada New Jersey	11 061 68 957	1
	New York	361 476	
	Ohio	243 395 361 366	
	Oklahoma	73 778 113 503	
	Oregon Pennsylvania	471 308	
	Rhode IslandSouth Carolina	17 539 90 439	
	Tennessee	164 756	
	TexasUtah	427 202 100 523	
	Vermont Virginia	19 823 102 750	
	Washington	124 595	
	West Virginia Wisconsin	95 459 141 156	
118124	ROLLS (BREAD-TYPE), MUFFINS, BAGELS, AND CROISSANTS		
	United States	5 276 466	4 036 97
	Alabama Arizona	133 726 70 047	118 21 54 39
	California	582 654	491 22
	Colorado	45 894 139 328	41 62 105 32
	Florida	285 151	158 4
	Georgia Hawaii	93 961 22 289	61 74 16 5
	Illinois Indiana	472 431 177 540	377 19 88 79
	lowa .	86 705	61 08
	Kansas	32 451 46 628	32 74 34 64
	Maryland	173 861	175 3
	Massachusetts	160 702 111 891	81 46 88 85
	Minnesota	58 969 28 338	79 44
	Mississippi Missouri	82 740	55 65
	New Jersey	139 957 400 800	199 95 238 44
	North Carolina	105 901	89 54
	North Dakota Ohio	12 496 286 390	204 53
	Oklahoma	36 127	29 56
	Oregon Pennsylvania	82 163 255 289	77 90 212 5
	Rhode Island	37 605 68 274	42 7 51 7
	Tennessee	127 358	81 79
	TexasUtah	257 332 36 822	177 4
	Virginia	60 662 86 615	38 63 62 52
	West Virginia	45 077 97 787	41 72 73 90
18127			
10127	SOFT CAKES, EXCEPT FROZEN United States	2 272 565	1 888 22
	Arizona	2 429	
	California Colorado	162 243 11 139	160 44
	Georgia	144 387 2 159	117 2
	Illinois	320 147	114 00
	Indiana Kentucky	6 973 27 917	76 40
	Maryland . Minnesota .	11 994 12 419	
	New Jersey	81 237	124 3
	New York	122 839 46 030	155 9 ⁻ 38 30
	Oregon	8 238	3 43
	Pennsylvania	198 963	
	Texas Virginia	54 777 9 067	98 99
	Washington	51 486 13 402	7 39
1812A	PIES (FRUIT, CREAM, AND CUSTARD), EXCEPT FROZEN		
	United States	544 407	415 24
	California	61 427	32 83
	Illinois Minnesota	39 693 6 871	29 49
	New Jersey Pennsylvania	12 989 77 322	17 32 82 21

See footnotes at end of table.

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

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product class	Product class and geographic area	Value of product shipments (\$1,000)				
code		1997	1992			
311812A	PIES (FRUIT, CREAM, AND CUSTARD), EXCEPT FROZEN-Con.					
	Tennessee	4 826 22 345 3 423	3 980 12 643 N			
311812D	OTHER SWEET GOODS, EXCEPT FROZEN, NEC					
	United States	2 046 923	N			
	Alabama California Florida Georgia Hawaii	26 223 202 320 35 861 122 363 5 327	N N N N N			
	Illinois Iowa . Kentucky Maryland Massachusetts	110 552 5 826 78 112 41 654 22 360	N N N N			
	Michigan Minnesota Missouri New Jersey North Carolina	72 294 14 572 9 896 30 745 58 549	N N N N			
	Ohio	38 287 10 528 225 583 54 303 89 330	N N N N N			
	Virginia Washington Wisconsin	25 772 61 246 49 606	N N N			

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

Table 7. Materials Consumed by Kind: 1997 and 1992

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

NAICS		19	97	199	92
material code	Material consumed	Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
311812	COMMERCIAL BAKERIES				
31121111 31121109 31121103 31122121 31122121 31122105	White bread-type wheat flour (except prepared mixes) mil b. Cake-type wheat flour (except prepared mixes) mil b. Cookie and cracker-type wheat flour (except prepared mixes) mil b. Wheat gluten mil b. Other wheat flour, including whole wheat, and clear flour (except prepared mixes) mil b. Other wheat flour, including whole wheat, and clear flour (except prepared mixes) mil b.	P9 704.1 548.1 P182.2 334.6 P776.4	1 278 036 77 386 26 232 103 204 118 932		N N N N
31100005 31100007 31100009 31100011 31131001	Prepared doughnut mixes, cake and yeast types	P235.7 P93.5 P65.3 P92.9 608.5	81 866 40 337 24 615 37 444 239 434	N N N N N N	N N N N N
31122111 31122103 31100003 32510057 31120011	Glucose syrup (corn syrup), conventional or regular (in terms of solids) mil lb High fructose corn syrup (HFCS)(in terms of solids)	318.7 767.4 250.8 ^{P3.8} 685.9	49 634 106 576 70 636 2 015 199 997		N N N N N
31100023 31161115 31100025 31199903 31199905	Animal and blends of animal and vegetable shortening	69.6 P6.8 269.7 333.3 9114.0	22 527 2 567 108 827 100 245 43 221	N N N N N N	N N N N N
31141107 31142305 31134001	Frozen fruits met nuts, including raisins	72.7 0.5	54 149 104 406	N N	N N
31142101 31199901	substances	11.8 39.2 89.5	10 191 25 859 78 366	N N N	N N N
31151305 31151405	Cheese, process	34.6	26 152	N	Ν
31132001	others	83.9	53 078	N	Ν
33299901 001900A1	flavoring, etc.)	100.5 X X	51 044 27 715 168 061	N X X	N N N

See footnotes at end of table.

Table 7. Materials Consumed by Kind: 1997 and 1992-Con.

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

NAICS		19	97	1992		
material code	Material consumed	Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)	
311812	COMMERCIAL BAKERIES-Con.					
001900A3 32222401 32221001 00970099 00971000	Bags; plastics, foil, and coated paper Bags; uncoated paper and multiwall Paperboard containers, boxes, and corrugated paperboard All other materials and components, parts, containers, and supplies Materials, ingredients, containers, and supplies, n.s.k.	x x x x x x	275 263 32 343 259 718 877 187 761 195	x x x x x x	N N N N N	

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

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

Appendix A. Explanation of Terms

BEGINNING- AND END-OF-YEAR INVENTORIES

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

Inventory Data by Stage of Fabrication

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

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

COST OF MATERIALS

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

Included in this item are:

- 1. Cost of parts, components, containers, etc.—Includes all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year.
- 2. Cost of products bought and sold in the same condition.

- 3. Cost of fuels consumed for heat and power—Includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
- 4. Cost of purchased electricity—The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.
- 5. Cost of contract work—This term applies to work done by others on materials furnished by the manufacturing establishment. The actual cost of the material is to be reported on the cost of materials, parts, and containers line of this item. The term "Contract Work" refers to the fee a company pays to another company to perform a service.

Specific Materials Consumed

In addition to the total cost of materials, which every establishment was required to report, information also was collected for most manufacturing industries on the consumption of major materials used in manufacturing. The inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers' records. If less than \$25,000 of a listed material was consumed by an establishment, the cost data could be reported in the "Cost of all other materials...," Census material code 00970099. Also, the cost of materials for small establishments for which administrative records or short forms were used was imputed into the "Materials not specified by kind," Census materials code 00971000.

Duplication in Cost of Materials and Value of Shipment

The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive

1997 ECONOMIC CENSUS

stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries. Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the survey.

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

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

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

COST OF PURCHASED SERVICES

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

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

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

Included in the cost of purchased software and other data processing services are all purchases by the establishment from other companies. Excluded are services provided by other establishments of the same company (such as by a separate data processing unit). Included in the cost of purchased refuse removal services are all costs of refuse removal services paid by the establishment, including costs for hazardous waste removal or treatment. Excluded are all costs included in rental payments or as capital expenditures.

Response Coverage Ratio

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

DEPRECIATION CHARGES FOR FIXED ASSETS

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

EMPLOYEES

This item includes all full-time and part-time employees on the payrolls of operating manufacturing establishments during any part of the pay period which included the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average for the payroll periods including the 12th of March, May, August, and November.

Production Workers

This item includes workers (up through the linesupervisor 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 companyoperated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

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

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

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

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

NUMBER OF ESTABLISHMENTS AND COMPANIES

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

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

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

PAYROLL

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

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

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

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a sixdigit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each

1997 ECONOMIC CENSUS

product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

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

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

In the new system, there are about 1,500 product classes (seven-digit codes), about 6,000 census products (ten-digit codes), and an additional 3,700 CIR products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

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

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

PRIMARY PRODUCT CLASS CODE

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

PRODUCTION-WORKER HOURS

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

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the cost of purchased electric energy were collected on all census forms. However, data on the quantity of purchased electric energy were collected only on the Annual Survey of Manufactures (ASM) form. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

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

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these companyowned 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 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 beginningand end-of-year inventories.

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

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

VALUE OF SHIPMENTS

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

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

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

- 1. Reported contract work—Receipts for work or services that a plant performed for others on their materials.
- 2. Value of resales—Sales of products brought and sold without further manufacture, processing, or assembly.
- 3. Other miscellaneous receipts—Such as repair work, installation, sales of scrap, etc.

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

- 1. Primary products value of shipments.
- 2. Secondary product value of shipments.
- 3. Total miscellaneous receipts.

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

Duplication in Cost of Materials and Value of Shipment

The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries. Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the annual survey.

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

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry. Before 1962, cost of materials and value of shipments were not published for some industries which included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

Specialization and Coverage Ratios

These items are not collected on the report forms but are derived from the data shown in Table 3. An establishment is classified in a particular industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment's shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). Specialization and coverage ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in Tables 1a through 5 and data on product shipments shown in Tables 6a and 6b.

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

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

Appendix B. NAICS Codes, Titles, and Descriptions

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)

Appendix C. Coverage and Methodology

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" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a fourdigit 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 materialsconsumed 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 supplybased 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 SICbased 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.

MANUFACTURING

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 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, completecoverage 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 broaderbased annual survey of manufactures and the economic

MANUFACTURING

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

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

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

Not applicable for this report.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
3111111	20473	20473 2047321	3112111561	2041117 2041121		3112217	20463 2046353	
3111111121	2047323	2047323	3112111681	2041123	2041123	3112217121	2046354	2046354
3111111231		2047326	3112111791	2041126	2041126	3112217131	2046356	
3111111341	2047338	2047338 2047300	31121117A1	2041129 2041128	2041129 2041128	3112217141 3112217YWV	2046359 2046300	
			31121118C1	2041131	2041131			
3111114		20474 2047441		2041151		311221A 311221A111	20464	
3111114221	2047443	2047443	31121118E1 31121118F1			311221A221	2046465	2046465
3111114231 3111114341	2047445 2047454	2047445 2047454	3112111YWV	2041100	2041100	311221A231	2046472 2046475	2046472 2046475
3111114351	2047457	2047454 2047457	3112114	20412	20412	311221A241 311221AYWV	2046400	2046400
3111114YWV	2047400	2047400	3112114111			311221W	20460	20460
311111W 311111WYWW	20470	20470	3112114121	2041219 2041200	2041219 2041200	311221WYWW	2046000	2046000
311111WYWW 311111WYWY	2047000 2047002	2047000 2047002	3112117		20413	311221WYWY	2046002	2046002
			3112117111	2041311	2041311	3112221	20751	20751
3111191 3111191111		20481 2048111	3112117121	2041315	2041315	3112221111	2075113	2075113 2075115
3111191121	2048115	2048115	3112117131 3112117141	2041321 2041323	2041321 2041323	3112221231	2075121	2075121
3111191231 3111191341		2048116 2048118	3112117151	2041365	2041365	3112221241	2075131 2075100	2075131
3111191351	2048121	2048121	3112117161	2041393 2041395	2041393 2041395			
3111191361	2048122	2048122	3112117181	2041397	2041397	3112224	20752 pt 2075211	
3111191371 3111191381	2048123 2048124	2048123 2048124	3112117YWV	2041300	2041300	3112224221	2075231	2075231
3111191391	2048131	2048131	311211A			3112224231	2075251 2075261	2075251 2075261
31111913A1 31111913B1		2048132 2048133	311211A111	2041511	2041511 2041513	3112224261	2075297	2075297
31111913C1	2048134	2048134	311211A131	2041515	2041515	3112224261 3112224YWV	2075297 2075200 pt	2075200 pt
3111191YWV	2048100	2048100	311211A141	2041521	2041521 2041517	311222W	20750 pt	20750 pt
3111194	20482	20482	311211A151 pt	2041530 pt 2041530 pt	2041517 2041519	311222WYWW 311222WYWY	2075000 pt 2075002 pt	2075000 pt
3111194100		2048200	311211A151 pt	2041530 pt	2041525		•	•
3111197	20483	20483		2041590 pt 2041590 pt		3112231	20741 2074100	
3111197111	2048301 2048302	2048301 2048302	311211A161 pt	2041590 pt	2041586			
3111197121 3111197YWV	2048300	2048300	311211A161 pt	2041590 pt	2041588	3112234	20742	
311119A		20484	311211A161 pt	2041590 pt		3112237	20743	20743
311119A100	2048400	2048400		2041596 pt 2041596 pt		3112237100	2074300	
311119D		20485	311211A171 pt	2041596 pt	2041595	311223A	20744 pt	20744 pt
311119D111 311119D121		2048503 2048504	311211AYWV	2041500		311223A111	2074414	2074414
311119DYWV	2048500	2048500	311211D pt	20343 pt	20343 pt	311223A221	2074451	2074451 2074498
311119G	20486	20486	311211D pt			311223AYWV	2074498 2074400 pt	2074400 pt
311119G100	2048600	2048600	311211D111 pt	2034338 2041613	2034339 pt 2041613	311223D	20761	20761
311119J		20487	311211D121	2041627	2041627	311223D111		
311119J111	2048705	2048705 2048706	311211DYWV pt	2034300 pt 2041600	2034300 pt	311223D121	2076133	2076133 2076100
311119J121 311119JYWV	2048700					311223G	20762	20762
311119M		20488	311211W pt	20340 pt	20340 pt	311223G111	2076223	2076223
311119M111			311211W pt	20410	20410	311223G121	2076252	2076252
311119M121 311119M131			311211WYWW pt			311223G131 311223G141	2076257 2076262	2076257 2076262
311119M141	2048816	2048816	311211WYWY pt	2041000 2034002 pt	2034002 pt	311223G151	2076263	2076263
311119M151	2048821	2048821	311211WYWY pt	2041002	2041002	311223G161 311223G171	2076264 2076265	2076264 2076265
311119M161 311119M171		2048823 2048825	3112120	20440	20440	311223G181	2076268	2076268
311119M181	2048831	2048831	3112120111	2044011	2044011	311223G191 311223GYWV	2076273 2076200	2076273 2076200
311119M191 311119MYWV	2048833 2048800	2048833 2048800	3112120221	2044015 2044017	2044015 2044017			
			3112120441	2044021	2044021	311223J 311223J111	20763 pt 2076311	20763 pt 2076311
311119P	20489 pt 2048911	20489 pt 2048911	3112120451	2044035 2044051	2044035 2044051	311223J121	2076351	2076351
311119P121	2048922	2048922	3112120471	2044098	2044098	311223J131	2076361 2076397	2076361 2076397
311119P131 311119P141	2048935	2048935 2048939	3112120481 3112120YWW	2044093 2044000	2044093 2044000	311223JYWV	2076300 pt	2076300 pt
311119P151	2048943	2048941 pt	3112120YWY	2044000		311223W pt	20740 pt	20740 pt
311119PYWV	2048900 pt	2048900 pt	3112130	20830	20830		20760 pt	
311119T	2048A	2048A	3112130100	2083000 pt	2083000 pt	311223W pt 311223WYWW pt	2074000 pt	2074000 pt
311119T111 311119T121	2048A01 2048A03	2048A01 2048A03	3112130YWW 3112130YWY	2083000 pt 2083002	2083000 pt 2083002	311223WYWW pt 311223WYWY pt	2076000 pt 2074002 pt	2076000 pt 2074002 pt
311119T131	2048A05	2048A05				311223WYWY pt	2076002 pt	
311119T141	2048A07	2048A07	3112211	20461		3112251 pt		
311119T151 311119T161	2048A11	2048A09 2048A11		2046103		3112251 pt		
311119T171	2048A12	2048A12	3112211131 pt	2046114 pt	2046113		•	•
311119T181 311119TYWV	2048A19 2048A00	2048A19 2048A00	3112211131 pt	2046114 pt 2046118		3112251 pt	20763 pt	20763 pt
			3112211251	2046123	2046123	3112251 pt	20773 pt	20773 pt
311119W 311119WYWW	20480 pt 2048000 pt	20480 pt 2048000 pt	3112211261			3112251 pt	20791	20791
311119WYWY				2046129	2046129	3112251111	2079113	2079113
	•	•		20462		3112251221 3112251331	2079115	2079115
3112111 3112111111	20411	2041105	3112214111	2046211	2046211	3112251441	2079151	2079151
3112111221	2041107	2041107	3112214221	2046213	2046213	3112251551	2079152	2079152
3112111331 3112111441	2041111 2041113		3112214331 pt	2046218 pt 2046218 pt	2046215 2046217	3112251561	2079153 2079154	
3112111551	2041115	2041115	3112214YWV	2046200	2046200	3112251581	2079159	2079159

MANUFACTURING-INDUSTRY SERIES

APPENDIX G G-1

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
3112251591 31122515A1 31122515B1 31122515B1 31122515D1 31122515D1 3112251701 3112251701	2079183 2079185 2079198 2077313 2074499 2075299	2079171 2079183 2079185 2079198 2077311 pt 2074499 2075299	3113207 3113207111 3113207221 3113207231 3113207231 3113207251 3113207251 3113207251 3113207360	20669	2066911 2066971 2066975 2066963 2066981	3114121 3114121111 3114121221 3114121331 3114121341 3114121451 3114121561	2038213 2038215 2038219 2038221 2038223	20382 2038211 2038213 2038215 2038219 2038221 2038223
3112251711 3112251721 3112251731 3112251741 3112251751 31122517WV pt	2076394 2076395 2076396 2076398 2074400 pt	2076391 2076394 2076395 2076396 2076398 2076398 2074400 pt	3113207371 3113207381 3113207391 3113207YWV 3113207YWV 311320W 311320W	2066992 2066993 2066995 2066900 20660 20660	2066993 2066995 2066900 20660 2066000	3114121671 3114121781 3114121791 3114121791 31141217A1 31141217A1 31141217B1 31141217C1	2038228 2038231 2038235 2038237 2038238	2038240 2038228 2038231 2038235 2038237 2038237 2038238
3112251YWV pt 3112251YWV pt 3112251YWV pt 3112254	2075200 pt 2076300 pt 2077300 pt 2079100 20792 2079200	2075200 pt 2076300 pt 2077300 pt 2079100 20792 2079200	311320WYWY 3113301 3113301000 3113302 3113302	54410 pt	20642 2064200 54410 pt	31141217D1 31141217E1 31141217F1 31141217F1 31141217F1 31141217F1 31141217F1 31141217F1	2038247 2038250 pt 2038250 pt 2038250 pt	2038239 2038247 2038243 2038245 2038245 2038249 2038200
311225W pt 311225W pt	20740 pt 20750 pt 20760 pt 20770 pt	20750 pt 20760 pt	311330W pt 311330W pt 311330WYWW pt 311330WYWW pt	20640 pt 54410 pt 2064000 pt 5441000 pt	20640 pt 54410 pt 2064000 pt 5441000 pt	3114124 3114124111 3114124221 3114124231 3114124441 31141244YWV	2038451 2038459 2038463 2038469	20384 2038451 2038459 2038463 2038469 2038409
311225W pt	20790	20790	311330WYWY pt 311330WYWY pt 3113401 3113401000 3113402	5441002 pt 20643 2064300 54410 pt	5441000 pt 20643 2064300 54410 pt	311412W 311412WYWW 311412WYWY 311412WYWY 3114211 3114211	2038002 20331 2033112	20380 2038000 2038002 20331 2033112
			3113402000 3113404 3113404110 3113404320 3113404530 3113404YWV	5441015 20648 2064811 2064814 2064815 2064800	5441000 pt 20648 2064811 2064814 2064815	3114211121 3114211131 3114211131 3114211141 3114211161 3114211161 3114211171	2033113 2033115 2033122 2033124 2033124 2033128 2033132	2033113 2033115 2033122 2033124 2033128 2033132
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3112301471 3112301481 3112301591 31123015A1 3112301YWV 3112304	20432 pt	2043113 2043116 2043118 2043119 2043100 20432 pt	3113407241 3113407YWV pt 3113407YWV pt 311340W pt 311340W pt	2064900 2099G00 pt	2064900 2099G00 pt 20640 pt	31142111F1 31142111G1 31142111H1 31142111WV 3114214	2033163 2033165 2033169 2033100 20332	2033161 2033163 2033165 2033169 2033100 20332
3112304111 3112304121 3112304131 3112304141 3112304151 3112304YWV 311230W	2043203 2043205 2043207 2043213 2043200 pt	2043201 2043203 2043205 2043207 2043207 2043209 pt 2043200 pt 20430 pt	311340W pt 311340WYWW pt 311340WYWW pt 311340WYWW pt 311340WYWY pt 311340WYWY pt 311340WYWY pt	54410 pt 2064000 pt 2099000 pt 5441000 pt 2099002 pt 5441002 pt	2064000 pt 2099000 pt 5441000 pt 2064002 pt 2099002 pt	3114214111 3114214121 3114214131 3114214141 3114214141 3114214151 3114214161 3114214181	2033205 2033215 2033235 2033237 2033237 2033239 2033253	2033205 2033215 2033235
3113110 3113110111 3113110221 3113110231	2043002 pt 20610 2061011 2061065 2061085	2043000 pt 2043002 pt 20610 2061011 2061065 2061085	3114111 311411111 3114111111 3114111121 3114111131 3114111141 3114111141	20371 2037135 2037141 2037155 2037155 2037157	20371 2037135 2037141 2037155 2037157	3114214191 3114214191 31142141A1 31142141B1 31142141C1 31142141D1 31142141D1	2033274 2033275 2033276 2033291 2033293	2033274 2033275 2033276 2033291 2033293
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G-2 APPENDIX G

MANUFACTURING-INDUSTRY SERIES

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
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MANUFACTURING-INDUSTRY SERIES

APPENDIX G G-3

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
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G-4 APPENDIX G

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
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	20430 pt		311942W pt	•	20990 pt	311999W pt	20870 pt	
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