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CH2

#1

1997

# 1992 Census of Manufactures

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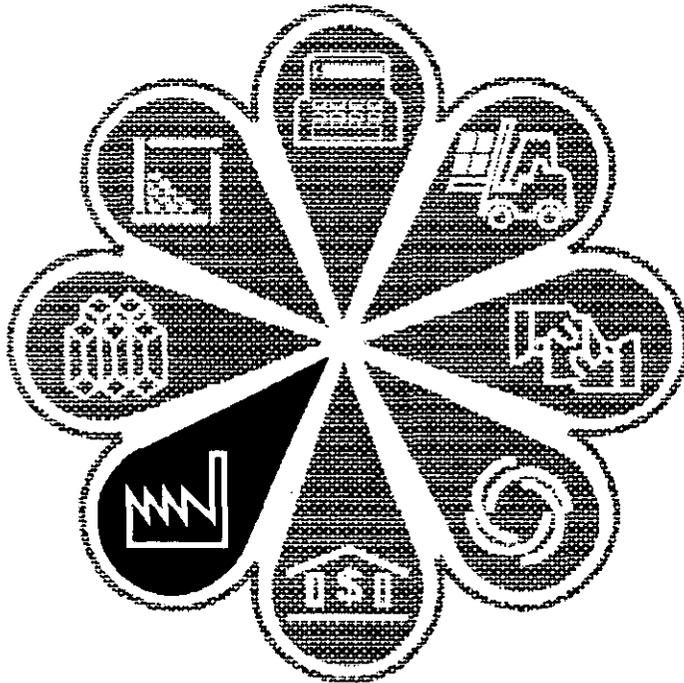
MC92-I-24B

INDUSTRY SERIES

## Millwork, Plywood, and Structural Wood Members, Not Elsewhere Classified

Industries 2431, 2434, 2435, 2436, and  
2439

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# 1992 Census of Manufactures

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**If you have any questions concerning the statistics in this report, call 301-457-4810.**



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# Introduction to the Economic Census

## PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public.

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

Policymaking agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.

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 and 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.

## AUTHORITY AND SCOPE

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 1992 Economic Census consists of the following eight censuses:

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Financial, Insurance, and Real Estate Industries
- Census of Transportation, Communications, and Utilities
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction Industries

MANUFACTURES—INDUSTRY SERIES

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1992 Census of Agriculture and 1992 Census of Governments are conducted separately.) The next economic census is scheduled to be taken in 1998 covering the year 1997.

## AVAILABILITY OF THE DATA

The results of the economic census are available in printed reports for sale by the U.S. Government Printing Office and on compact discs for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Bureau of the Census, Washington, DC 20233-8300. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State data centers in every State as well as business and industry data centers in many States also supply economic census statistics.

## WHAT'S NEW IN 1992

The 1992 Economic Census covers more of the economy than any previous census. New for 1992 are data on communications, utilities, financial, insurance, and real estate, as well as coverage of more transportation industries. The economic, agriculture, and governments censuses now collectively cover nearly 98 percent of all economic activity.

Among other changes, new 1992 definitions affect the boundaries of about a third of all metropolitan areas. Also, the Survey of Women-Owned Businesses has now been expanded to include all corporations.

## HISTORICAL INFORMATION

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

INTRODUCTION III

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 1840 and subsequent censuses to include mining and some commercial activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 Manufactures Census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade and construction industries, but it was broadened in 1933 to include some of the service trades.

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 Enterprise Statistics Program, which publishes combined data from the economic census, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The census of construction industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The census of transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks, but expanded in 1987 to cover business establishments in several transportation industries. For 1992, these statistics are incorporated into a broadened census of transportation, communications, and utilities. Also new for 1992 is the census of financial, insurance, and real estate industries. This is part of a gradual expansion in coverage of industries previously subjected to government regulation.

The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic census in 1972 along with the Survey of Women-Owned Businesses.

An economic census has also been taken in Puerto Rico since 1909, in the Virgin Islands of the United States and Guam since 1958, and in the Commonwealth of the Northern Mariana Islands since 1982.

Statistical reports from the 1987 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census data published since 1967 are still available for sale on microfiche from the Census Bureau.

#### AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

While the census provides complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, with the results appearing in publication series such as Current Business Reports (retail and wholesale trade and service industries), the Annual Survey of Manufactures, Current Industrial Reports, and the Quarterly Financial Report. Most of these surveys, while providing more frequent observations, yield less kind-of-business and geographic detail than the census. The County Business Patterns program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

#### 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 1992 Economic Census and Related Statistics*. More information on the methodology, procedures, and history of the census will be published in the *History of the 1992 Economic Census*. Contact Customer Services for information on availability.

# Census of Manufactures

## GENERAL

This report, from the 1992 Census of Manufactures, is one of a series of 83 industry reports, each of which provides statistics for individual industries or groups of related industries. Additional separate reports will be issued for each State and the District of Columbia and for special subjects such as manufacturers' shipments to the federal government and concentration ratios in manufacturing.

The industry reports include such statistics as number of establishments, employment, payroll, value added by manufacture, cost of materials consumed, capital expenditures, product shipments, etc.

State reports present similar statistics for each State and its important metropolitan areas (MA's), counties, and places. Selected statistical totals for "all manufacturing" have been shown in the State reports for MA's with 250 employees or more and for counties and places with 500 employees or more.

The *General Summary* report contains industry, product class, and geographic area statistics summarized in one report. The introduction to the *General Summary* discusses, at greater length, many of the subjects described in this introduction. For example, the *General Summary* text discusses the relationship of value added by manufacture to national income by industry of origin, the changes in statistical concepts over the history of the censuses, and the valuation problems arising from intracompany transfers between manufacturing plants of a company and between manufacturing plants and sales offices and sales branches of a company.

## SCOPE OF CENSUS AND DEFINITION OF MANUFACTURING

The 1992 Census of Manufactures covers all establishments with one paid employee or more primarily engaged in manufacturing as defined in the *1987 Standard Industrial Classification (SIC) Manual*<sup>1</sup>. This is the system of industrial classification developed by experts on classification in Government and private industry under the guidance of the Office of Information and Regulatory Affairs, Office of

<sup>1</sup>*Standard Industrial Classification Manual: 1987*. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

Management and Budget. This classification system is used by Government agencies as well as many organizations outside the Government.

The SIC Manual defines manufacturing as the mechanical or chemical transformation of substances or materials into new products. The assembly of component parts of products also is considered to be manufacturing if the resulting product is neither a structure nor other fixed improvement. These activities are usually carried on in plants, factories, or mills that characteristically use power-driven machines and materials-handling equipment.

Manufacturing production is usually carried on for the wholesale market, for transfers to other plants of the same company, or to the order of industrial users rather than for direct sale to the household consumer. Some manufacturers in a few industries sell chiefly at retail to household consumers through the mail, through house-to-house routes, or through salespersons. Some activities of a service nature (enameling, engraving, etc.) are included in manufacturing when they are performed primarily for trade. They are considered nonmanufacturing when they are performed primarily to the order of the household consumer.

## RELATIONSHIP BETWEEN ANNUAL SURVEY OF MANUFACTURES AND CENSUS OF MANUFACTURES

The Bureau of the Census conducts the annual survey of manufactures (ASM) in each of the 4 years between the censuses of manufactures. The ASM is a probability-based sample of approximately 62,000 establishments and collects the same industry statistics (employment, payroll, value of shipments, etc.) as the census of manufactures. In addition to collecting the information normally requested on the census form, the establishments in the ASM sample are requested to supply information on assets, capital expenditures, retirements, depreciation, rental payments, supplemental labor costs, costs of purchased services, and foreign content of materials consumed. Except for supplemental labor costs, the extra ASM items are collected only in census years.

## ESTABLISHMENT BASIS OF REPORTING

The census of manufactures is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each

location. 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 1992, 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. This report excludes information for separately operated administrative offices, warehouses, garages, and other auxiliary units that service manufacturing establishments of the same company (see Auxiliaries).

## MANUFACTURING UNIVERSE AND CENSUS REPORT FORMS

The 1992 Census of Manufactures universe includes approximately 380,000 establishments. 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. 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.** In the 1992 Census of Manufactures, approximately 143,000 small single-establishment companies were excused from filing reports. Selection of these small establishments was done on an industry-by-industry basis and was based on annual payroll and total shipments data as well as on the industry classification codes contained in the administrative records of Federal agencies. The cutoffs were selected so that these administrative-records cases would account for no more than 3 percent of the value of shipments for all manufacturing. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms.

Information on the physical location of the establishment, as well as information on payrolls, receipts (shipments), and industry classification, was obtained from the administrative records of other Federal agencies under special arrangements, which 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" (n.s.k.) categories.

The industry classification codes included in the administrative-records 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 at the four-digit SIC level. This was especially true whenever there was a relatively fine line of demarcation between industries or between manufacturing and nonmanufacturing activity.

Sometimes these administrative-records cases were only given a two- or three-digit SIC group. For the 1992 Census of Manufactures, 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 four-digit SIC level. Establishments that did not return the classification form were coded later to those four-digit SIC industries identified as "not elsewhere classified" (n.e.c.) within the given two- or three-digit industry groups.

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 over 237,000 establishments covered in the mail canvass were divided into three groups:
  - a. **ASM sample establishments.** This group consisted of approximately 62,000 establishments covering 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 (see Appendix B, Annual Survey of Manufactures).

In a census of manufactures 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 information on assets, capital expenditures, retirements, depreciation, rental payments, supplemental labor costs, and costs of purchased services. See appendix A, section 2, for an explanation of these items.

The census part of the report form is 1 of approximately 200 versions containing product, material, and special inquiries. The diversity of manufacturing activities necessitated the use of these many forms to canvass the 459 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 be performing. Respondents were requested to identify the products, the value of each product, and, in a large number of cases, the quantity of the product shipped during the survey year. Space also was provided for the respondent to describe products not specifically identified on the form.

The report form also contained a materials-consumed inquiry, which varied from form to form depending on the industries being canvassed. The respondents were asked to review a list of materials generally used in their production processes. From this list, each establishment was requested to identify those materials consumed during the survey year, the cost of each, and, in certain cases, the quantity consumed. Once again, space was provided for the respondent to describe significant material not identified on the form.

Finally, 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 112,000 establishments were included in this group. A variable cutoff, based on administrative-records payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the approximately 200 census of manufactures 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 consisted of approximately 63,000 establishments. For those industries where application of the variable cutoff for administrative-records 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 approximately 80 versions of the short form, which requested summary product and

material data and totals but no details on employment, payrolls, cost of materials, inventories, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics; the same data were collected on the short form as on the long form. However, detailed information on materials consumed was not collected on the short form; thus its use would increase the value of the n.s.k. categories.

## AUXILIARIES

In this industry report, the data on employment and payroll are limited to operating manufacturing establishments. The census report form filed for auxiliaries (ES-9200) requested a description of the activity of the establishments serviced. However, the manufacturing auxiliaries were coded only to the two-digit major group of the establishments they served; whereas, the operating establishments were coded to a four-digit manufacturing industry. Data for the approximately 11,000 separately operated auxiliaries are included in the geographic area series and in a report issued as part of the 1992 Enterprise Statistics Survey.

Auxiliaries are establishments whose employees are primarily engaged in performing supporting services for other establishments of the same company, rather than for the general public or for other business firms. They can be at different locations from the establishments served or at the same location as one of those establishments but not operating as an integral part thereof and serving two establishments or more. Where auxiliary operations are conducted at the same location as the manufacturing operation and operate as an integral part thereof, they usually are included in the report for the operating manufacturing establishment.

Included in the broad category of auxiliaries are administrative offices. Employees in administrative offices are concerned with the general management of multiestablishment companies, i.e., with the general supervision and control of two units or more, such as manufacturing plants, mines, sales branches, or stores. The functions of these employees may include the following:

1. Program planning, including sales research and coordination of purchasing, production, and distribution
2. Company purchasing, including general contracts and purchasing methods
3. Company financial policy and accounting
4. General engineering, including design of product machinery and equipment, and direction of engineering effort conducted at the individual operation locations
5. Company personnel matters
6. Legal and patent matters

Other types of auxiliaries serving the plants or central management of the company include purchasing offices, sales promotion offices, research and development organizations, etc.

## INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the census was classified in 1 of 459 manufacturing industries in accordance with the industry definitions in the 1987 SIC Manual. The 1987 edition of this manual represents a major revision for manufacturing industries from the 1972 edition and its 1977 supplement. Appendix A of the 1987 Manual notes the revisions in the four-digit industry levels between 1972/77 and 1987.

An industry is generally defined as a group of establishments producing the same product or a closely related group of products. The product groupings from which industry classifications are derived are based on considerations such as similarity of manufacturing processes, types of materials used, types of customers, and the like. The resulting group of establishments must be significant in terms of number, value added by manufacture, value of shipments, and number of employees. The system operates in such a way that the definitions progressively become narrower with successive additions of numerical digits. For 1992, there are 20 major groups (two-digit SIC), 139 industry groups (three-digit SIC), and 459 industries (four-digit SIC). This represents an expansion of four-digit industries from 452 in 1972/77 and a reduction of three-digit groups from 143 in 1972/77. Product classes and products of the manufacturing industries have been assigned codes based on the industry from which they originate. There are about 11,000 products identified by a seven-digit code. The seven-digit products are considered the primary products of the industry with the same four digits.

Accordingly, an establishment is usually classified in a particular industry on the basis of its major activity during a particular year, i.e., production of the products primary to that industry exceeds, in value, production of the products primary to any other single industry. In a few instances, however, the industry classification of an establishment is not only determined by the products it makes but also by the process employed in operations. Refining of nonferrous metals from ore or rolling and drawing of nonferrous metals (processes which involve heavy capitalization in specialized equipment) would be classified according to the process used during a census year. These establishments then would be "frozen" in that industry during the following ASM years.

In either a census or ASM year, establishments included in the ASM sample with certainty weight, other than those involved with heavily capitalized activities described above, 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 (see Appendix B, Annual Survey of Manufactures). 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, at the aggregate level, some industries comprise different mixes of establishments between survey years and establishment data for such industry statistics as employment and payroll may be tabulated in different industries between survey years. Hence, comparisons between prior-year and current-year published totals, particularly at the four-digit SIC 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-records 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.

While some establishments produce only the primary products of the industry in which they are classified, all establishments of an industry rarely specialize to this extent. The industry statistics (employment, inventories, value added by manufacture, total value of shipments including resales and miscellaneous receipts, etc.) shown in tables 1a through 5a, therefore, reflect not only the primary activities of the establishments in that industry but also their secondary activities. The product statistics in table 6a represent the output of all establishments whether or not they are classified in the same industry as the product. For this reason, in relating the industry statistics, especially the value of shipments to the product statistics, the composition of the industry's output shown in table 5b should be considered.

The extent to which industry and product statistics may be matched with each other is measured by two ratios which are computed from the figures shown in table 5b. The first of these ratios, called the primary product specialization ratio, measures the proportion of product shipments (both primary and secondary) of the establishments classified in the industry represented by the primary products of those establishments. The second ratio, called the coverage ratio, is the proportion of primary products shipped by the establishments classified in the industry to total shipments of such products by all manufacturing establishments.

However, establishments making products falling into the same industry category may use a variety of processes and materials to produce them. Also, the same industry classification (based on end products) may include both establishments that are highly integrated and those that

put only the finishing touches on an already highly fabricated item. For example, the refrigeration equipment industry includes instances of almost complete integration (production of the compressor, condensing unit, electric motor, casting, stamping of the case, and final assembly) all carried on at one plant. On the other hand, the condensing unit, the motor, and the case may be purchased and only assembled into the finished product.

In some instances, separate industry categories have been established for integrated and nonintegrated establishments. For other industries, the census provides separate statistics on the production of intermediate commodities made and used in the producing plant. For some industries characterized by many plants of the same company, separate figures on interplant transfers of products usually are shown.

Differences in the integration of production processes, types of operations, and alternatives in types of materials used should be considered when relating the industry statistics (employment, payrolls, value added, etc.) to the product and material data.

## VALUE OF SHIPMENTS FOR THE INDUSTRY COMPARED WITH VALUE OF PRODUCT SHIPMENTS

This report shows value of shipments data for industries and products. In tables 1a through 5b, 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 table 6a represents the total value of all products shipped that are classified as primary to an industry.

## CENSUS DISCLOSURE RULES

In accordance with Federal law governing census reports, no data are published that would disclose the data for an individual establishment or company. However, the number of establishments classified in a specific industry is not considered a disclosure, so this information may be released even though other information is withheld.

The disclosure analysis for the industry statistics in tables 1a through 5a of this report 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 new capital expenditures. However, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for new capital expenditures that can be suppressed even though value of shipments data are publishable.

## SPECIAL TABULATIONS

Special tabulations of data collected in the 1992 Census of Manufactures may be obtained on computer diskette or in tabular form. The data will be in summary form and 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) as are 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, Manufacturing and Construction Division, Bureau of the Census, Washington, DC 20233.

## ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

—	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards.
(X)	Not applicable.
(Z)	Less than half the unit shown.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
pt.	Part.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, doz, bbl, and s tons, are used in the customary sense.

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SIC's 357, 36-39	Bruce Goldhirsch	301-457-4817
Import/export publications	Foreign Trade Division	301-457-3041
Industry analysis and forecasting	International Trade Administration	202-377-4356

# Users' Guide for Locating Statistics in This Report by Table Number

[For explanation of terms, see appendixes]

Item	Four-digit industry statistics							Five-digit product class and seven-digit product statistics			
	Historical	Operating ratios	By geographic area	Summary and supplemental	By employment size	By industry and product class specialization	Materials consumed by kind	Industry-product analysis	Product shipments	Product class by geographic area	Historical product class
Number of companies .....	1a			3a					*6a		
Number of establishments .....	1a		2	3a	4	5a					
Employment and payroll:											
Number of employees .....	1a	1b	2	3a	4	5a					
Payroll .....	1a	1b	2	3a	4	5a					
Supplemental labor costs .....				3a							
Production workers .....	1a	1b	2	3a	4	5a					
Production-worker hours .....	1a	1b	2	3a	4	5a					
Production-worker wages .....	1a	1b	2	3a	4	5a					
Shipments, cost of materials, and value added:											
Value of shipments (four-digit) .....	1a	1b	2	3a	4	5a		5b			
Product class shipments (five-digit) .....									6a	6b	6c
Product shipments (seven-digit) .....									6a		
Value added by manufacture .....	1a	1b	2	3a	4	5a					
Cost of materials .....	1a	1b	2	3a	4	5a					
Fuels and electric energy .....				3a							
Materials consumed by kind .....							7				
Inventories:											
Total, end of year .....	1a			3a	4						
By stage of fabrication .....				3a							
Capital expenditures, assets, rental payments, and purchased services:											
New capital expenditures .....	1a		2	3b	4	5a					
Used plant and equipment expenditures .....				3b							
Gross assets .....				3b							
Depreciation .....				3b							
Retirements of buildings and machinery .....				3b							
Rental payments .....				3b							
Foreign content of materials consumed .....				3c							
Purchased services .....				3c							
Ratios:											
Specialization .....	1a							5b			
Coverage .....	1a							5b			

\* Number of companies with shipments of more than \$100 thousand.

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## Description of Industries and Summary of Findings

This report shows 1992 Census of Manufactures statistics for establishments classified in each of the following industries:

### SIC code and title

2431	Millwork
2434	Wood Kitchen Cabinets
2435	Hardwood Veneer and Plywood
2436	Softwood Veneer and Plywood
2439	Structural Wood Members, N.E.C.

The industry statistics (employment, payroll, cost of materials, value of shipments, inventories, etc.) are reported for each establishment as a whole. Aggregates of such data for an industry reflect not only the primary activities of the establishments but also their activities in the manufacture of secondary products as well as their miscellaneous activities (contract work on materials owned by others, repair work, etc.). This fact should be taken into account in comparing industry statistics (tables 1 through 5a) with product statistics (table 6) showing shipments by all industries of the primary products of the specified industry. The extent of the "product mix" is indicated in table 5b, which shows the value of primary and secondary products shipped by establishments classified in the specified industry and the value of primary products of the industry shipped as secondary products by establishments classified in other industries.

Establishment data were tabulated based on industry definitions included in the *1987 Standard Industrial Classification (SIC) Manual*<sup>1</sup>. The 1987 edition represents a major revision for manufacturing industries from the 1972 edition and its 1977 supplement. In addition to the 1987 SIC revision, changes were made to the product class (five-digit) and product code (seven-digit) categories. The product class and product code comparability between the 1992 and 1987 censuses is shown in appendix C. This appendix presents, in tabular form, the linkage from 1992 to 1987, and 1987 to 1992.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

<sup>1</sup>*Standard Industrial Classification Manual: 1987*. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

### INDUSTRY 2431, MILLWORK

This industry is made up of establishments primarily engaged in manufacturing fabricated millwork, including wood millwork covered with materials such as metal and plastics. Planing mills primarily engaged in producing millwork are included in this industry, but planing mills primarily producing standard workings or patterns of lumber are classified in industry 2421. Establishments primarily engaged in manufacturing wood kitchen cabinets and bathroom vanities are classified in industry 2434.

The 1992 definition of this industry is the same as that used in the 1987 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1992 Census of Manufactures, Industry 2431, Millwork, had employment of 86.3 thousand. The employment figure was 3 percent below the 89.0 thousand reported in 1987.

The leading States in employment in 1992 were Wisconsin, California, Minnesota, and Oregon. These same States were the leaders in 1987.

The total value of shipments for establishments classified in this industry was \$9.6 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry in which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 2431 shipped \$8.8 billion of millwork products considered primary to the industry, \$388.0 million of secondary products, and had \$486.2 million of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in this industry was 96 percent (specialization ratio). In 1987, the specialization ratio was 95 percent.

Establishments in this industry also accounted for 95 percent of products considered primary to the industry no matter where they were actually produced (coverage ratio). In 1987, the coverage ratio was 96 percent.

The products primary to industry 2431, no matter in what industry they were produced, appear in table 6a and aggregate to \$9.2 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and energy used by establishments classified in the millwork industry amounted to \$5.6 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with less than 5 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 15 percent of the total value of shipments.

### **INDUSTRY 2434, WOOD KITCHEN CABINETS**

This industry is made up of establishments primarily engaged in manufacturing wood kitchen cabinets and wood bathroom vanities, generally for permanent installation. Establishments primarily engaged in manufacturing free-standing cabinets and vanities are classified in major group 25. Establishments primarily engaged in building custom cabinets for individuals are classified in retail trade, industry 5712.

The 1992 definition of this industry is the same as that used in the 1987 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1992 Census of Manufactures, Industry 2434, Wood Kitchen Cabinets, had employment of 62.8 thousand. The employment figure was 6 percent below the 67.0 thousand reported in 1987. Compared with 1991, employment increased 10 percent. The 1991 data are based on the Census Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The leading States in employment in 1992 were California, Pennsylvania, Texas, and Indiana, accounting for approximately 31 percent of the industry's employment. This represents a shift from 1987 when California, Pennsylvania, Indiana, and Florida accounted for approximately 37 percent of the industry's employment.

The total value of shipments for establishments classified in this industry was \$4.9 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry in which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 2434 shipped \$4.6 billion of wood kitchen cabinet products considered primary to the industry, \$179.9 million of secondary products, and had \$116.4 million of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in this industry was 96 percent (specialization ratio). In 1987, the specialization ratio also was 96 percent.

Establishments in this industry also accounted for 97 percent of products considered primary to the industry no matter where they were actually produced (coverage ratio). In 1987, the coverage ratio was 98 percent.

The products primary to industry 2434, no matter in what industry they were produced, appear in table 6a and aggregate to \$4.8 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and energy used by establishments classified in the wood kitchen cabinets industry amounted to \$2.2 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with less than 5 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 14 percent of the total value of shipments.

### **INDUSTRY 2435, HARDWOOD VENEER AND PLYWOOD**

This industry is made up of establishments primarily engaged in producing commercial hardwood veneer and those primarily engaged in manufacturing commercial plywood or prefinished hardwood plywood. This includes nonwood backed or faced veneer and nonwood faced plywood, from veneer produced in the same establishment or from purchased veneer. Establishments primarily engaged in the production of veneer which is used in the same establishment for the manufacture of wood containers, such as fruit and vegetable baskets and wood boxes are classified in industry group 244.

The 1992 definition of this industry is the same as that used in the 1987 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1992 Census of Manufactures, Industry 2435, Hardwood Veneer and Plywood, had employment of 20.1 thousand. The employment figure was 2 percent below the 20.5 thousand reported in 1987. Compared with 1991, employment increased 16 percent. The 1991 data are based on the Census Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The leading States in employment in 1992 were North Carolina, Indiana, Wisconsin, and Oregon, accounting for approximately 49 percent of the industry's employment. This represents a shift from 1987 when North Carolina, Indiana, Wisconsin, and Virginia accounted for approximately 47 percent of the industry's employment.

The total value of shipments for establishments classified in this industry was \$2.2 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry in which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 2435 shipped \$1.9 billion of hardwood veneer and plywood products considered primary to the industry, \$196.2 million of secondary products, and had \$148.6 million of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in this industry was 91 percent (specialization ratio). In 1987, the specialization ratio was 92 percent.

Establishments in this industry also accounted for 94 percent of products considered primary to the industry no matter where they were actually produced (coverage ratio). In 1987, the coverage ratio was 96 percent.

The products primary to industry 2435, no matter in what industry they were produced, appear in table 6a and aggregate to \$2.0 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and energy used by establishments classified in the hardwood veneer and plywood industry amounted to \$1.4 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with less than 15 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 8 percent of the total value of shipments.

## **INDUSTRY 2436, SOFTWOOD VENEER AND PLYWOOD**

This industry is made up of establishments primarily engaged in producing commercial softwood veneer and plywood, from veneer produced in the same establishment or from purchased veneer. Establishments primarily engaged in producing commercial hardwood veneer and plywood are classified in industry 2435. Establishments primarily engaged in the production of veneer which is used in the same establishment for the manufacture of wood containers such as fruit and vegetable baskets and wood boxes are classified in industry group 244.

The 1992 definition of this industry is the same as that used in the 1987 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1992 Census of Manufactures, Industry 2436, Softwood Veneer and Plywood, had employment of 31.3 thousand. The employment figure was 20 percent below the 38.9 thousand reported in 1987.

The leading States in employment in 1992 were Oregon, Louisiana, Texas, and Arkansas, accounting for approximately 58 percent of the industry's employment. This represents a shift from 1987 when Oregon, Washington, Louisiana, and Texas accounted for approximately 63 percent of the industry's employment.

The total value of shipments for establishments classified in this industry was \$5.4 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry in which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 2436 shipped \$4.6 billion of softwood veneer and plywood products considered primary to the industry, \$672.6 million

of secondary products, and had \$194.6 million of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in this industry was 87 percent (specialization ratio). In 1987, the specialization ratio also was 87 percent.

Establishments in this industry also accounted for 96 percent of products considered primary to the industry no matter where they were actually produced (coverage ratio). In 1987, the coverage ratio was 95 percent.

The products primary to industry 2436, no matter in what industry they were produced, appear in table 6a and aggregate to \$4.8 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and energy used by establishments classified in the softwood veneer and plywood industry amounted to \$3.3 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with less than 10 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 2 percent of the total value of shipments.

## **INDUSTRY 2439, STRUCTURAL WOOD MEMBERS, N.E.C.**

This industry is made up of establishments primarily engaged in producing laminated or fabricated trusses, arches, and other structural members of lumber. Establishments primarily engaged in fabrication on the site of construction are classified in construction. Establishments primarily engaged in producing prefabricated wood buildings, sections, and panels are classified in industry 2452.

The 1992 definition of this industry is the same as that used in the 1987 Standard Industrial Classification (SIC) system. The SIC number and title also are the same.

In the 1992 Census of Manufactures, Industry 2439, Structural Wood Members, N.E.C., had employment of 24.3 thousand. The employment figure was 1 percent below the 24.6 thousand reported in 1987. Compared with 1991, employment increased 29 percent. The 1991 data are based on the Census Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The leading States in employment in 1992 were Florida, California, Oregon, and North Carolina. These same States were the leaders in 1987.

The total value of shipments for establishments classified in this industry was \$2.5 billion.

Establishments in virtually all industries ship secondary products as well as products primary to the industry in

which they are classified and have some miscellaneous receipts, such as resales and contract receipts. Industry 2439 shipped \$2.3 billion of structural wood products considered primary to the industry, \$101.2 million of secondary products, and had \$140.7 million of miscellaneous receipts, resales, and contract work. Thus, the ratio of primary products to the total of both secondary and primary products shipped by establishments in this industry was 96 percent (specialization ratio). In 1987, the specialization ratio was 97 percent.

Establishments in this industry also accounted for 97 percent of products considered primary to the industry no matter where they were actually produced (coverage ratio). In 1987, the coverage ratio was 95 percent.

The products primary to industry 2439, no matter in what industry they were produced, appear in table 6a

and aggregate to \$2.3 billion. For further explanation of specialization and coverage ratios, see table 5b and the appendixes.

The total cost of materials, services, and fuels and energy used by establishments classified in the structural wood members, not elsewhere classified, industry amounted to \$1.5 billion. Data on specific materials consumed appear in table 7.

Single-establishment companies in this industry with less than 5 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were obtained from administrative records of other agencies or developed from industry averages. These establishments accounted for 10 percent of the total value of shipments.

**Table 1a. Historical Statistics for the Industry: 1992 and Earlier Years**

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

Year <sup>1</sup>	Com- panies <sup>2</sup> (no.)	All establishments <sup>3</sup>		All employees		Production workers			Value added by manufac- ture <sup>4</sup> (million dollars)	Cost of materials <sup>5</sup> (million dollars)	Value of shipments <sup>6</sup> (million dollars)	New capital expendi- tures <sup>7</sup> (million dollars)	End-of- year inventories <sup>8</sup> (million dollars)	Ratios	
		Total (no.)	With 20 employ- ees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Spe- ciali- zation <sup>9</sup> (per- cent)	Cover- age <sup>10</sup> (per- cent)
<b>INDUSTRY 2431, MILLWORK</b>															
1992 Census	3 009	3 155	799	88.3	1 983.9	68.8	136.9	1 395.9	4 048.4	5 627.6	9 639.8	190.7	1 284.7	96	95
1991 ASM	(NA)	(NA)	(NA)	84.9	1 835.9	66.7	130.9	1 304.1	3 732.9	5 235.4	8 969.4	140.6	1 266.8	(NA)	(NA)
1990 ASM	(NA)	(NA)	(NA)	90.5	1 960.9	72.1	140.1	1 377.5	3 851.6	5 855.3	9 524.7	197.5	1 249.1	(NA)	(NA)
1989 ASM	(NA)	(NA)	(NA)	90.9	1 978.7	73.5	140.2	1 433.2	3 864.7	5 755.1	9 654.3	205.4	1 208.2	(NA)	(NA)
1988 ASM	(NA)	(NA)	(NA)	90.7	2 013.7	73.0	141.3	1 484.1	3 899.6	5 553.1	9 385.2	155.9	1 258.4	(NA)	(NA)
1987 Census	2 640	2 783	856	89.0	1 809.2	71.6	140.6	1 303.6	3 932.9	5 487.3	9 326.9	184.4	1 226.5	95	96
1986 ASM	(NA)	(NA)	(NA)	77.2	1 493.4	61.1	119.8	1 054.9	3 091.0	4 692.9	7 748.9	184.9	1 052.5	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	73.1	1 359.5	59.2	115.5	961.2	2 637.6	4 188.7	6 812.8	137.4	953.2	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	74.1	1 277.0	60.3	115.4	905.8	2 641.5	3 860.8	6 489.3	139.1	938.3	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	67.9	1 125.6	54.7	106.5	819.4	2 268.7	3 437.6	5 627.3	103.1	930.6	(NA)	(NA)
1982 Census	2 192	2 321	642	58.8	895.4	44.7	83.5	645.6	1 712.6	2 502.0	4 248.3	79.9	731.2	93	94
1981 ASM	(NA)	(NA)	(NA)	65.2	944.8	52.2	99.5	672.1	1 924.5	2 951.0	4 859.7	105.0	775.1	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	65.5	878.7	51.9	98.8	620.4	1 770.8	2 787.6	4 589.0	99.0	775.5	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	73.0	893.1	59.4	113.5	850.2	1 980.2	2 971.6	4 898.0	103.5	758.6	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	72.0	835.7	59.5	114.4	808.9	1 787.8	2 872.2	4 617.1	82.5	728.1	(NA)	(NA)
1977 Census	2 209	2 333	692	68.6	742.2	58.6	108.4	542.0	1 497.9	2 480.4	3 928.1	81.0	605.0	94	94
<b>INDUSTRY 2434, WOOD KITCHEN CABINETS</b>															
1992 Census	4 273	4 323	627	62.8	1 307.5	49.8	99.7	926.6	2 728.3	2 214.7	4 933.5	89.1	468.8	96	97
1991 ASM	(NA)	(NA)	(NA)	57.1	1 037.0	46.2	91.3	807.2	2 277.5	1 877.9	4 184.9	60.5	419.5	(NA)	(NA)
1990 ASM	(NA)	(NA)	(NA)	62.8	1 217.4	51.0	101.4	866.7	2 540.1	2 066.7	4 610.0	92.0	462.6	(NA)	(NA)
1989 ASM	(NA)	(NA)	(NA)	61.6	1 196.7	49.6	98.3	846.4	2 437.5	1 967.2	4 393.2	108.8	469.3	(NA)	(NA)
1988 ASM	(NA)	(NA)	(NA)	67.3	1 214.0	54.1	105.6	882.0	2 581.9	1 914.9	4 484.0	88.2	468.3	(NA)	(NA)
1987 Census	3 644	3 714	669	67.0	1 185.0	53.7	107.9	833.4	2 495.9	1 909.4	4 378.2	101.0	447.0	96	98
1986 ASM	(NA)	(NA)	(NA)	53.4	901.7	42.3	85.8	623.1	1 842.9	1 501.9	3 342.2	81.9	363.4	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	54.5	883.5	44.6	89.1	611.0	1 859.4	1 425.9	3 083.6	67.3	358.2	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	58.4	841.1	48.1	98.1	601.0	1 845.9	1 434.2	3 061.4	74.5	365.1	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	49.5	678.4	40.7	79.0	506.9	1 421.9	1 067.8	2 482.7	52.5	337.0	(NA)	(NA)
1982 Census	2 802	2 964	489	43.6	606.9	34.6	67.1	442.5	1 144.3	906.8	2 060.7	43.8	287.3	96	97
1981 ASM	(NA)	(NA)	(NA)	49.9	637.5	39.7	77.8	444.9	1 290.6	901.8	2 195.8	49.1	241.4	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	55.1	646.3	43.3	83.0	468.3	1 209.6	974.6	2 183.6	42.6	239.7	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	56.7	633.1	46.5	88.8	450.7	1 181.6	989.4	2 145.3	70.1	233.6	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	54.2	587.4	45.2	85.5	424.3	1 062.2	928.2	1 978.3	60.1	253.9	(NA)	(NA)
1977 Census	2 541	2 583	510	46.2	481.1	38.7	72.3	352.3	868.8	730.6	1 590.8	36.7	212.3	96	96
<b>INDUSTRY 2435, HARDWOOD VENEER AND PLYWOOD</b>															
1992 Census	283	318	213	20.1	394.7	17.0	35.1	285.0	856.4	1 401.9	2 247.5	47.0	331.1	91	94
1991 ASM	(NA)	(NA)	(NA)	17.3	320.1	14.8	29.4	236.1	683.4	1 203.3	1 896.5	45.5	281.6	(NA)	(NA)
1990 ASM	(NA)	(NA)	(NA)	18.7	334.5	15.7	31.6	247.5	706.6	1 350.4	2 051.7	40.8	311.0	(NA)	(NA)
1989 ASM	(NA)	(NA)	(NA)	20.1	358.2	17.0	34.3	259.9	741.0	1 445.1	2 184.6	47.2	321.1	(NA)	(NA)
1988 ASM	(NA)	(NA)	(NA)	20.6	347.5	17.3	35.1	252.8	702.9	1 415.4	2 100.3	37.2	306.8	(NA)	(NA)
1987 Census	274	311	214	20.5	340.1	17.4	35.3	248.9	751.4	1 322.4	2 080.5	31.3	288.1	92	96
1986 ASM	(NA)	(NA)	(NA)	17.0	268.7	14.3	29.7	197.4	632.0	946.9	1 585.2	38.0	211.3	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	17.3	273.8	14.8	29.2	194.8	552.0	938.3	1 510.0	34.9	213.7	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	18.3	272.8	15.6	31.2	198.5	571.0	1 010.7	1 578.8	40.3	223.1	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	19.3	271.2	16.5	32.7	202.7	553.8	978.6	1 537.1	17.3	223.0	(NA)	(NA)
1982 Census	264	306	213	17.8	241.0	15.1	28.5	177.0	441.3	844.9	1 304.4	22.2	194.0	93	94
1981 ASM	(NA)	(NA)	(NA)	22.7	279.2	19.6	37.5	216.4	526.1	1 016.5	1 534.7	33.4	235.3	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	23.6	285.4	20.4	38.3	205.0	466.3	1 014.1	1 493.5	41.9	231.8	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	24.2	258.9	21.2	41.5	202.6	475.9	1 091.3	1 554.3	32.5	239.2	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	22.7	228.5	19.7	38.4	178.0	452.4	933.4	1 381.2	27.6	198.9	(NA)	(NA)
1977 Census	274	321	227	22.3	211.5	19.1	37.9	162.0	420.4	860.4	1 272.3	29.8	197.7	91	93
<b>INDUSTRY 2436, SOFTWOOD VENEER AND PLYWOOD</b>															
1992 Census	123	201	159	31.3	827.4	28.0	63.5	704.7	2 185.9	3 265.3	5 447.0	98.7	294.0	87	96
1991 ASM	(NA)	(NA)	(NA)	31.7	810.4	28.6	63.8	685.9	1 473.9	3 114.7	4 592.4	86.7	278.6	(NA)	(NA)
1990 ASM	(NA)	(NA)	(NA)	35.6	880.6	32.2	71.5	748.8	1 669.2	3 378.0	5 030.4	103.0	285.0	(NA)	(NA)
1989 ASM	(NA)	(NA)	(NA)	36.5	887.5	32.9	73.3	757.9	2 017.3	3 282.5	5 310.0	139.8	283.1	(NA)	(NA)
1988 ASM	(NA)	(NA)	(NA)	38.4	900.4	34.7	76.6	772.6	1 766.9	3 083.5	4 848.4	126.1	242.3	(NA)	(NA)
1987 Census	131	232	191	38.9	889.1	35.2	77.0	787.6	1 945.2	2 968.8	4 919.8	110.2	237.1	87	95
1986 ASM	(NA)	(NA)	(NA)	35.9	828.1	32.3	71.9	711.3	1 678.4	2 727.6	4 401.1	95.8	251.1	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	35.7	798.7	32.1	70.0	691.5	1 495.4	2 578.4	4 091.2	130.9	241.3	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	37.5	823.4	33.7	72.2	712.8	1 332.6	2 773.5	4 108.4	101.8	284.1	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	38.1	785.9	34.4	72.4	681.1	1 333.9	2 747.7	4 062.7	86.5	294.3	(NA)	(NA)
1982 Census	135	250	199	34.9	667.3	31.1	63.7	588.6	831.5	2 363.9	3 221.5	99.7	283.3	84	94
1981 ASM	(NA)	(NA)	(NA)	38.4	721.5	35.3	69.6	614.6	997.7	2 681.2	3 687.8	187.1	321.7	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	41.9	711.1	37.5	73.3	608.4	1 179.9	2 556.8	3 731.0	201.0	321.1	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	47.8	775.3	43.3	87.8	679.9	1 483.3	2 791.9	4 295.3	144.0	301.6	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	47.5	731.0	42.7	91.2	641.2	1 830.9	2 647.3	4 463.8	182.8	281.4	(NA)	(NA)
1977 Census	129	256	224	48.2	634.6	41.9	88.4	556.9	1 583.7	2 231.1	3 804.8	105.6	242.6	86	91
<b>INDUSTRY 2439, STRUCTURAL WOOD MEMBERS, N.E.C.</b>															
1992 Census	829	895	408	24.3	515.1	18.1	35.7	315.9	1 034.2	1 483.5	2 505.3	42.5	197.5	96	97
1991 ASM	(NA)	(NA)	(NA)	18.9	381.7	14.5	28.4	242.1	717.6	1 104.7	1 825.0	25.1	166.9	(NA)	(NA)
1990 ASM	(NA)	(NA)	(NA)	21.6	429.4	17.0	33.2	275.9	810.1	1 219.9	2 028.4	37.8	173.2	(NA)	(NA)
1989 ASM	(NA)	(NA)	(NA)	23.9	449.3	18.9	36.5	296.0	1 294.4	1 294.4	2 134.9	82.0	187.5	(NA)	(NA)
1988 ASM	(NA)	(NA)	(NA)	24.2	448.1	18.0	35.5	283.3	769.1	1 259.6	2 04				

**Table 1a. Historical Statistics for the Industry: 1992 and Earlier Years—Con.**

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

Year <sup>1</sup>	Companies <sup>2</sup> (no.)	All establishments <sup>3</sup>		All employees		Production workers			Value added by manufacture <sup>4</sup> (million dollars)	Cost of materials <sup>5</sup> (million dollars)	Value of shipments <sup>6</sup> (million dollars)	New capital expenditures <sup>6</sup> (million dollars)	End-of-year inventories <sup>4</sup> (million dollars)	Ratios	
		Total (no.)	With 20 employees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Specialization <sup>7</sup> (percent)	Coverage <sup>8</sup> (percent)
<b>INDUSTRY 2439, STRUCTURAL WOOD MEMBERS, N.E.C.—Con.</b>															
1978 ASM.....	(NA)	(NA)	(NA)	16.4	188.3	13.2	24.3	127.9	436.0	638.6	1 078.1	40.7	108.9	(NA)	(NA)
1977 Census....	620	656	225	13.8	147.0	11.0	20.8	101.6	330.0	484.4	807.7	19.7	87.3	94	93

<sup>1</sup>In annual survey of manufactures (ASM) years, data are estimates based on a representative sample of establishments canvassed annually and may differ from results of a complete canvass of all establishments. ASM publication shows percentage standard errors. Unless otherwise noted, for data prior to 1977, see 1977 Census of Manufactures, vol. II, table 1 of the industry chapter.

<sup>2</sup>For the Census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Beginning in 1982, all respondents were requested to report their inventories at cost or market prior to adjustment to LIFO cost. This is a change from prior years when respondents were permitted to value their inventories using any generally accepted accounting method. Consequently, 1982 data for inventories and value added by manufacture are not comparable to prior-year data.

<sup>5</sup>Cost of materials is the sum of five components: the cost of (1) parts used in the manufacture of finished goods (materials, parts, containers, and supplies incorporated into products or otherwise directly consumed in the process); (2) purchased items later resold without further manufacture; (3) fuels; (4) electricity; and (5) commissions or fees to outside parties for contract manufacturing. A separate cost for each of the five components is shown in table 3a. Detailed data on materials consumed by type, are shown in table 7.

<sup>6</sup>Detailed data on new machinery and equipment expenditures are provided in table 3c.

<sup>7</sup>Represents ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for establishments classified in the industry.

<sup>8</sup>Represents ratio of primary products shipped by establishments classified in industry to total shipments of such products by all manufacturing establishments, wherever classified.

**Table 1b. Selected Operating Ratios for the Industry: 1992 and Earlier Years**

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

Year	Payroll per employee (dollars)	Production workers as percent of total employment (percent)	Annual hours of production workers (number)	Average hourly earnings of production workers (dollars)	Cost of materials as percent of value of shipments (percent)	Cost of materials and payroll as percent of value of shipments (percent)	Value added per employee (dollars)	Payroll as percent of value added (percent)	Value added per production worker hour (dollars)
<b>INDUSTRY 2431, MILLWORK</b>									
1992 Census.....	22 988	80	1 990	10.20	58	79	46 911	49	29.57
1991 ASM.....	21 624	79	1 963	9.96	58	79	43 968	49	28.52
1990 ASM.....	21 687	80	1 943	9.83	59	80	42 559	51	27.49
1989 ASM.....	21 746	81	1 907	10.22	60	80	42 516	51	27.57
1988 ASM.....	22 202	80	1 936	10.38	59	81	42 994	52	27.60
1987 Census.....	20 328	80	1 964	9.27	59	78	44 190	46	27.87
1986 ASM.....	19 345	79	1 961	8.81	61	80	40 039	48	25.80
1985 ASM.....	18 598	81	1 951	8.32	61	81	38 082	52	22.84
1984 ASM.....	17 233	81	1 914	7.85	61	79	35 848	48	22.89
1983 ASM.....	16 577	81	1 947	7.69	61	81	33 412	50	21.30
1982 Census.....	15 764	79	1 888	7.73	59	80	30 151	52	20.51
1981 ASM.....	14 491	80	1 906	6.75	61	80	29 517	49	19.34
1980 ASM.....	13 385	79	1 904	6.28	61	80	27 032	50	17.92
1979 ASM.....	12 234	81	1 911	5.73	61	79	26 852	46	17.27
1978 ASM.....	11 607	83	1 923	5.32	62	80	24 969	46	15.72
1977 Census.....	10 819	83	1 915	5.00	63	82	21 835	50	13.82
<b>INDUSTRY 2434, WOOD KITCHEN CABINETS</b>									
1992 Census.....	20 820	79	2 002	9.29	45	71	43 444	48	27.37
1991 ASM.....	19 947	81	1 976	8.84	45	72	39 886	50	24.95
1990 ASM.....	19 385	81	1 988	8.55	45	71	40 447	48	25.05
1989 ASM.....	19 427	81	1 982	8.61	45	72	39 570	49	24.60
1988 ASM.....	18 039	80	1 952	8.16	43	70	38 364	47	24.45
1987 Census.....	17 687	80	2 009	7.72	44	71	37 252	47	23.13
1986 ASM.....	16 886	79	2 028	7.28	45	72	34 511	49	21.48
1985 ASM.....	15 844	82	1 998	6.86	46	74	30 448	52	18.62
1984 ASM.....	14 402	82	2 040	6.13	47	74	28 183	51	16.76
1983 ASM.....	13 705	82	1 941	6.42	43	70	28 725	48	18.00
1982 Census.....	13 920	79	1 939	6.59	44	73	26 245	53	17.05
1981 ASM.....	12 776	80	1 960	5.72	41	70	25 864	49	16.59
1980 ASM.....	11 730	79	1 917	5.64	45	74	21 953	53	14.57
1979 ASM.....	11 166	82	1 910	5.08	46	76	20 487	55	13.08
1978 ASM.....	10 838	83	1 892	4.96	47	77	19 588	55	12.42
1977 Census.....	10 413	84	1 868	4.87	46	76	18 805	55	12.02
<b>INDUSTRY 2435, HARDWOOD VENEER AND PLYWOOD</b>									
1992 Census.....	19 637	85	2 065	8.12	62	80	42 807	46	24.40
1991 ASM.....	18 503	86	1 986	8.03	63	80	39 503	47	23.24
1990 ASM.....	17 888	84	2 013	7.83	66	82	37 786	47	22.36
1989 ASM.....	17 721	85	2 018	7.58	66	82	36 866	48	21.60
1988 ASM.....	16 869	84	2 029	7.20	67	84	34 121	49	20.03
1987 Census.....	16 590	85	2 029	6.99	64	81	38 654	45	21.29
1986 ASM.....	15 806	84	2 077	6.65	60	77	37 178	43	21.28
1985 ASM.....	15 827	86	1 973	6.67	62	80	31 908	50	18.90
1984 ASM.....	14 907	85	2 000	6.36	64	81	31 202	48	18.30
1983 ASM.....	14 052	85	1 982	6.20	64	81	28 694	48	16.94
1982 Census.....	13 539	85	1 887	6.21	65	83	24 792	55	15.48
1981 ASM.....	12 300	86	1 913	5.77	66	84	23 176	53	14.03
1980 ASM.....	11 246	86	1 877	5.35	68	86	19 758	57	12.17
1979 ASM.....	10 698	88	1 958	4.88	70	87	19 665	54	11.47
1978 ASM.....	10 066	87	1 949	4.58	68	84	19 930	51	11.78
1977 Census.....	9 484	86	1 984	4.27	68	84	18 852	50	11.09

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**Table 1b. Selected Operating Ratios for the Industry: 1992 and Earlier Years—Con.**

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

Year	Payroll per employee (dollars)	Production workers as percent of total employment (percent)	Annual hours of production workers (number)	Average hourly earnings of production workers (dollars)	Cost of materials as percent of value of shipments (percent)	Cost of materials and payroll as percent of value of shipments (percent)	Value added per employee (dollars)	Payroll as percent of value added (percent)	Value added per production worker hour (dollars)
<b>INDUSTRY 2436, SOFTWOOD VENEER AND PLYWOOD</b>									
1992 Census	28 435	89	2 288	11.10	80	75	69 837	38	34.42
1991 ASM	25 565	90	2 224	10.78	88	85	46 495	55	23.17
1990 ASM	24 736	90	2 220	10.44	87	85	46 888	53	23.35
1989 ASM	24 315	90	2 228	10.34	82	79	55 298	44	27.52
1988 ASM	23 448	90	2 207	10.09	84	82	46 013	51	23.07
1987 Census	22 856	90	2 188	9.97	80	78	50 005	48	25.26
1986 ASM	23 011	90	2 226	9.89	82	81	46 752	49	23.34
1985 ASM	22 373	90	2 181	9.88	83	83	41 888	53	21.36
1984 ASM	21 957	90	2 142	9.87	88	88	35 536	62	18.46
1983 ASM	20 627	90	2 105	9.41	88	87	35 011	59	18.42
1982 Census	19 120	89	2 048	8.93	73	94	23 825	80	13.05
1981 ASM	18 312	90	1 872	8.83	73	92	25 322	72	14.33
1980 ASM	18 971	89	1 955	8.30	69	88	28 160	80	16.10
1979 ASM	16 286	81	2 028	7.74	85	83	31 162	52	16.89
1978 ASM	15 389	90	2 136	7.03	59	78	38 545	40	20.08
1977 Census	13 738	91	2 134	6.23	59	75	34 279	40	17.71
<b>INDUSTRY 2439, STRUCTURAL WOOD MEMBERS, N.E.C.</b>									
1992 Census	21 198	74	1 972	8.85	59	80	42 560	50	28.97
1991 ASM	20 196	77	1 959	8.52	61	81	37 968	53	25.27
1990 ASM	19 697	78	1 953	8.31	60	81	37 161	53	24.40
1989 ASM	18 799	79	1 931	8.11	61	82	35 556	53	23.28
1988 ASM	18 434	74	1 972	7.98	62	84	31 781	58	21.86
1987 Census	17 671	75	1 897	7.76	60	83	31 333	58	21.96
1986 ASM	17 503	71	1 882	8.21	64	86	28 341	62	21.13
1985 ASM	17 232	72	1 830	7.80	61	83	30 174	57	22.81
1984 ASM	15 524	75	1 982	6.36	60	78	34 075	46	22.98
1983 ASM	15 364	80	1 927	6.94	63	84	27 922	55	18.14
1982 Census	15 205	76	1 914	7.08	61	83	27 090	56	18.57
1981 ASM	13 970	76	1 910	5.95	58	79	27 561	51	19.05
1980 ASM	12 618	77	1 828	5.70	58	79	25 031	50	17.85
1979 ASM	11 619	78	1 901	5.13	60	78	24 972	47	16.87
1978 ASM	11 482	80	1 841	5.26	59	77	26 585	43	17.94
1977 Census	10 652	80	1 891	4.88	60	78	23 913	45	15.87

Note: For qualifications of data, see footnotes on table 1a.

**Table 2. Industry Statistics for Selected States: 1992 and 1987**

[Excludes data for auxiliaries. States with 100 employees or more are shown. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and geographic area	E <sup>1</sup>	1992										1987		
		All establishments		All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	All employees <sup>2</sup> (1,000)	Value added by manufacture (million dollars)
		Total (no.)	With 20 employees or more (no.)	Number <sup>2</sup> (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						
<b>INDUSTRY 2431, MILLWORK</b>														
United States	E1	3 155	799	86.3	1 983.9	68.8	136.9	1 395.9	4 048.4	5 627.6	9 639.8	190.7	89.0	3 932.9
Alabama	E2	81	19	1.9	34.7	1.5	2.9	22.2	74.8	129.4	203.4	4.3	2.0	69.7
Arizona	E2	78	24	1.5	28.8	1.2	2.3	18.5	57.7	66.8	123.3	2.0	1.5	54.2
Arkansas	E2	31	9	.5	8.6	.4	.8	6.5	18.9	29.5	48.2	.7	.4	14.5
California	E1	418	99	8.3	186.9	6.8	13.4	129.0	374.5	649.2	1 018.8	12.2	10.6	402.1
Colorado	E1	61	10	.8	17.6	.6	1.3	11.1	33.9	39.7	75.1	.9	1.0	38.9
Connecticut	E4	54	3	.4	12.1	.4	.8	9.0	23.6	20.7	44.2	.7	.7	23.0
Delaware	E4	8	2	.1	2.6	.1	.2	2.1	4.8	8.3	12.9	.1	(NA)	(NA)
Florida	E3	156	20	1.7	32.5	1.3	2.6	21.8	64.1	78.2	141.3	2.3	3.1	97.2
Georgia	E1	107	27	2.2	53.3	1.7	3.4	32.6	107.6	147.4	255.4	5.3	1.3	69.5
Idaho	E5	25	8	1.3	26.9	1.1	2.1	18.9	56.6	112.5	168.2	(D)	G	(D)
Illinois	E2	125	24	2.8	76.0	2.2	4.6	52.6	133.4	147.5	282.0	6.8	2.6	123.2
Indiana	E1	85	28	2.4	48.6	2.0	3.9	34.6	113.0	138.3	250.4	4.0	2.3	82.7
Iowa	E1	20	7	3.9	105.9	3.2	6.2	78.7	174.3	189.7	355.9	24.7	H	(D)
Kansas	E1	31	7	.6	11.8	.5	.9	7.1	31.4	32.3	63.2	(D)	F	(D)
Kentucky	E1	37	9	.7	13.8	.5	1.1	9.6	32.4	35.1	66.6	1.4	.6	29.0
Louisiana	E3	28	8	.3	5.2	.3	.5	3.8	11.0	10.4	21.3	.4	.4	11.6
Maine	E2	22	4	.3	6.0	.2	.5	4.4	11.5	14.5	25.3	.5	.4	12.9
Maryland	E2	41	15	1.0	22.9	.6	1.3	12.8	39.4	66.6	108.1	1.1	1.2	48.1
Massachusetts	E2	73	14	.9	22.1	.6	1.2	13.1	48.0	59.5	104.9	1.3	1.5	69.0
Michigan	E2	106	29	2.2	51.2	1.6	3.3	32.0	100.5	143.3	242.9	3.4	2.1	86.6
Minnesota	E1	51	17	.1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	22.5	H	(D)
Mississippi	E1	27	4	.4	6.5	.3	.6	4.5	13.6	24.2	36.7	.9	.4	15.6
Missouri	E1	53	10	.7	15.1	.6	1.2	10.2	31.5	38.0	66.5	1.1	1.1	48.2
Montana	E1	11	2	.3	6.7	.2	.4	4.6	12.8	14.3	26.5	(D)	.3	13.1
Nebraska	E1	18	2	.3	6.3	.2	.5	3.8	17.8	30.2	47.4	(D)	E1	(D)

See footnotes at end of table.

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Table 2. Industry Statistics for Selected States: 1992 and 1987—Con.

[Excludes data for auxiliaries. States with 100 employees or more are shown. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and geographic area	E1	1992							1987					
		All establishments		All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	All employees (1,000)	Value added by manufacture (million dollars)
		Total (no.)	With 20 employees or more (no.)	Number <sup>2</sup> (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						
<b>INDUSTRY 2431, MILLWORK—Con.</b>														
Nevada	E2	14	4	.2	5.1	.1	.3	2.9	8.3	8.3	15.5	.5	(NA)	(NA)
New Hampshire	E2	25	7	.8	12.2	.4	.8	6.8	17.0	33.9	50.8	.7	.8	42.3
New Jersey	E2	80	10	.7	17.8	.5	.9	11.8	32.7	48.2	78.8	1.6	1.2	51.8
New Mexico	E2	26	6	.5	9.7	.4	.8	7.2	20.9	51.5	69.9	1.0	.3	15.7
New York	E3	158	32	2.1	54.0	1.5	3.2	35.2	85.6	123.9	218.2	3.3	3.4	139.6
North Carolina	E1	105	31	2.3	42.4	1.8	3.7	29.1	87.7	150.2	237.9	7.3	2.1	83.3
Ohio	E3	109	40	4.0	84.5	3.3	6.6	61.5	162.1	211.2	365.9	7.3	H	(D)
Oklahoma	E7	21	5	.4	8.6	.3	.6	6.1	15.8	19.6	35.3	1.1	E	(D)
Oregon	E1	88	42	5.7	123.7	4.7	9.2	89.8	221.6	428.3	644.9	10.6	6.6	222.4
Pennsylvania	E1	148	36	3.3	72.1	2.6	5.0	51.6	146.3	187.9	332.9	4.5	2.3	101.5
Rhode Island	E2	17	1	.1	3.2	.1	.2	1.9	5.8	4.9	10.1	(D)	.3	13.8
South Carolina	E2	36	13	1.0	19.1	.8	1.7	13.6	39.4	76.6	116.4	2.1	.6	23.0
Tennessee	E3	58	16	1.4	23.8	1.1	2.1	15.7	48.0	64.2	112.9	5.4	1.3	47.1
Texas	E3	185	47	4.9	88.5	4.0	8.5	61.2	182.3	265.2	449.2	7.2	H	(D)
Utah	E1	34	4	.8	9.5	.5	.9	7.8	10.3	26.2	36.5	.5	.5	11.1
Vermont	E1	15	3	.2	3.1	.1	.3	2.5	6.7	11.2	17.8	.2	(NA)	(NA)
Virginia	E2	78	20	2.7	57.6	2.0	4.3	39.1	123.6	130.7	252.3	5.3	2.4	110.8
Washington	E1	118	30	3.2	76.6	2.7	5.2	56.4	151.8	228.4	381.0	5.9	2.8	121.8
West Virginia	E1	18	7	.7	14.2	.8	1.2	11.5	23.4	20.1	42.7	(D)	E	(D)
Wisconsin	E1	110	42	8.9	204.8	7.4	14.4	156.4	402.8	617.5	1 016.5	19.4	7.3	313.6
Wyoming	E1	4	2	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
<b>INDUSTRY 2434, WOOD KITCHEN CABINETS</b>														
United States	E1	4 323	627	62.8	1 307.5	49.6	99.7	926.6	2 726.3	2 214.7	4 933.5	89.1	67.0	2 495.9
Alabama	E1	121	17	1.6	29.4	1.3	2.6	22.3	55.2	53.7	106.8	6.0	1.1	27.1
Arizona	E1	73	9	1.1	22.3	.9	1.7	15.3	59.2	29.9	88.0	.5	1.7	60.7
Arkansas	E1	36	5	.6	9.4	.5	.9	6.5	24.3	15.4	39.6	.4	.5	14.0
California	E2	791	79	7.3	155.5	5.3	10.4	105.6	281.7	191.9	475.5	5.5	8.8	338.5
Colorado	E1	81	8	.8	13.8	.5	.9	8.0	25.7	19.1	44.8	.9	.5	15.3
Connecticut	E1	53	9	.7	19.5	.5	1.0	12.8	33.4	22.4	55.6	(D)	1.1	39.7
Florida	E2	337	35	3.1	53.4	2.3	4.7	36.0	95.6	77.3	171.1	2.1	4.6	122.6
Georgia	E1	175	18	1.7	31.5	1.5	2.7	24.8	93.9	50.9	143.5	1.5	1.8	69.7
Hawaii	E4	20	2	.2	3.8	.1	.2	2.8	8.8	7.2	15.7	.2	(NA)	(NA)
Idaho	E1	32	1	.2	3.8	.2	.4	2.9	7.7	4.7	12.3	(D)	C	(D)
Illinois	E1	128	23	2.2	48.6	1.8	3.8	35.8	100.6	78.5	178.6	2.6	G	(D)
Indiana	E1	84	32	3.3	71.2	2.6	5.7	53.8	155.9	201.2	360.2	5.2	5.2	201.5
Iowa	E1	30	6	1.4	31.3	1.1	2.3	23.6	70.4	52.7	122.8	7.1	G	(D)
Kansas	E1	38	12	1.2	22.5	.9	1.8	15.6	45.1	43.6	88.4	3.1	G	(D)
Kentucky	E1	43	7	.5	10.8	.4	.8	7.4	17.1	14.4	31.5	.5	.9	26.0
Louisiana	E2	35	5	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	C	(D)
Maryland	E1	48	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.9	.4	11.1
Massachusetts	E1	70	11	.8	21.6	.6	1.3	14.1	52.7	44.2	97.9	.8	F	(D)
Michigan	E1	67	10	.9	18.6	.7	1.3	13.6	44.3	48.3	92.6	(D)	1.0	63.9
Minnesota	E1	115	17	2.9	61.1	2.4	5.2	46.5	159.0	144.4	302.7	3.2	G	(D)
Mississippi	E2	33	7	.5	7.1	.4	.8	5.0	11.7	10.6	22.3	.4	F	(D)
Missouri	E3	93	15	1.5	30.9	1.1	2.2	19.9	50.4	36.6	88.7	1.4	1.0	35.0
Nebraska	E1	27	6	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.9	E	(D)
Nevada	E1	18	4	.4	8.9	.3	.7	6.8	16.1	24.9	40.3	(D)	.4	21.7
New Hampshire	E1	16	3	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
New Jersey	E1	108	11	.9	24.0	.7	1.4	15.0	41.6	29.0	70.5	.8	2.0	67.6
New Mexico	E1	35	4	.3	4.9	.2	.5	3.3	9.3	5.1	14.4	.1	.3	6.1
New York	E1	178	17	1.8	40.0	1.4	2.9	28.5	75.1	56.4	131.2	2.0	2.4	93.8
North Carolina	E1	105	15	1.7	33.2	1.4	2.9	24.8	65.6	63.0	131.0	5.0	1.6	55.7
North Dakota	E1	17	4	.4	7.3	.2	.5	5.3	13.7	11.8	25.5	1.5	C	(D)
Ohio	E1	135	22	2.9	72.2	2.4	5.0	45.4	175.8	145.4	322.8	11.2	G	(D)
Oklahoma	E1	27	9	.5	8.2	.4	.8	6.2	15.9	12.3	28.1	(D)	.4	10.1
Oregon	E1	91	19	1.6	34.3	1.3	2.5	25.9	78.1	60.2	136.3	1.5	1.3	40.8
Pennsylvania	E1	202	45	4.9	112.1	4.0	7.8	82.2	212.9	150.7	360.4	4.4	6.4	278.5
South Carolina	E1	42	4	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.7	18.4
South Dakota	E1	11	4	.6	10.7	.5	.9	6.4	24.7	18.3	42.9	.8	.3	12.8
Tennessee	E1	111	14	1.3	23.9	1.0	2.1	18.3	48.0	50.7	98.4	.8	1.3	43.3
Texas	E1	228	38	4.1	72.7	3.4	6.6	50.3	145.5	129.7	273.1	5.6	H	(D)
Utah	E1	63	15	1.1	23.2	.9	1.7	15.7	50.1	36.7	84.0	1.0	1.1	35.1
Vermont	E1	12	1	.2	3.6	.2	.4	3.0	7.4	3.4	10.7	(D)	(NA)	(NA)
Virginia	E1	128	13	2.2	45.9	1.8	3.5	34.7	136.5	99.4	234.7	2.1	1.7	109.8
Washington	E1	118	22	1.9	41.9	1.5	2.9	29.9	81.1	58.2	139.5	2.3	1.2	44.8
West Virginia	E1	14	2	.2	3.4	.1	.2	1.6	4.5	4.5	9.3	.1	(NA)	(NA)
Wisconsin	E1	106	19	1.6	33.4	1.2	2.6	23.0	59.2	43.7	102.5	2.1	1.1	35.6

See footnotes at end of table.

Table 2. Industry Statistics for Selected States: 1992 and 1987—Con.

[Excludes data for auxiliaries. States with 100 employees or more are shown. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and geographic area	1992										1987		
	All establishments		All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	All employees (1,000)	Value added by manufacture (million dollars)
	Total (no.)	With 20 employees or more (no.)	Number <sup>2</sup> (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						
<b>INDUSTRY 2435, HARDWOOD VENEER AND PLYWOOD</b>													
United States .....	318	213	20.1	394.7	17.0	35.1	285.0	856.4	1 401.9	2 247.5	47.0	20.5	751.4
Alabama .....	E1 12	11	.5	9.4	.5	1.0	7.1	15.3	38.1	50.9	1.2	.7	16.7
Arkansas .....	10	8	1.5	7.7	.5	.9	6.1	21.4	52.9	73.7	.8	.8	8.4
California .....	E1 24	13	1.3	32.0	1.1	2.3	23.8	64.3	171.3	234.4	(D)	1.6	79.6
Florida .....	8	4	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	C	(D)
Georgia .....	8	7	.8	14.3	.7	1.6	10.8	34.0	90.6	123.7	(D)	.9	27.1
Indiana .....	34	27	2.4	51.5	1.9	3.9	32.6	114.2	119.8	233.7	7.6	2.6	100.8
Kentucky .....	5	4	.4	7.0	.3	.6	4.4	9.6	16.2	25.4	.3	.4	7.4
Maine .....	2	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	C	(D)
Michigan .....	10	7	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Mississippi .....	6	4	.2	3.8	.2	.3	1.9	9.8	14.0	24.1	.6	(NA)	(NA)
Missouri .....	2	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
New Jersey .....	5	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
New York .....	E3 7	3	.2	3.6	.2	.3	2.6	8.1	9.7	17.9	(D)	.2	19.2
North Carolina .....	E1 67	45	3.9	69.2	3.5	6.9	52.1	142.8	161.2	300.6	6.3	3.6	110.7
Ohio .....	E6 7	4	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Oregon .....	11	9	1.6	40.3	1.4	3.0	31.8	69.6	223.7	313.1	2.9	1.3	71.1
Pennsylvania .....	6	4	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.3	26.3
South Carolina .....	14	11	.8	9.9	.7	1.2	6.8	17.9	27.7	45.4	1.2	1.5	24.9
Tennessee .....	5	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	13.8
Texas .....	4	2	.1	1.7	.1	.3	1.3	4.5	8.7	13.2	(D)	(NA)	(NA)
Vermont .....	4	4	.6	12.1	.5	1.1	9.4	22.7	27.1	50.5	(D)	.8	19.0
Virginia .....	19	13	1.4	27.1	1.2	2.4	18.6	64.9	150.7	214.9	5.0	1.6	67.1
Washington .....	6	4	.3	6.2	.3	.5	4.0	11.8	18.1	26.3	(D)	(NA)	(NA)
West Virginia .....	1	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	C	(D)
Wisconsin .....	21	15	2.0	34.7	1.7	3.4	25.2	72.7	69.6	141.7	5.6	1.8	53.3
<b>INDUSTRY 2436, SOFTWOOD VENEER AND PLYWOOD</b>													
United States .....	201	159	31.3	827.4	28.0	63.5	704.7	2 185.9	3 265.3	5 447.0	98.7	38.9	1 945.2
Alabama .....	8	8	1.8	43.5	1.4	3.3	36.2	129.2	172.8	302.9	2.3	1.8	103.4
Arkansas .....	6	4	2.4	67.4	2.1	5.3	57.9	198.2	221.9	420.4	11.0	2.4	133.2
California .....	E1 9	6	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.4	17.1
Florida .....	4	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Georgia .....	8	7	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.2	56.0
Idaho .....	5	5	.9	27.3	.8	1.8	23.9	64.5	105.5	166.6	3.6	.8	41.1
Louisiana .....	13	12	3.6	90.9	3.2	7.7	78.1	269.6	328.5	597.0	11.9	3.1	150.1
Michigan .....	E2 4	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Mississippi .....	10	8	1.8	47.0	1.6	3.9	39.9	132.8	175.6	309.8	4.0	G	(D)
Montana .....	3	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
North Carolina .....	7	5	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.6	70.4
Oklahoma .....	1	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	C	(D)
Oregon .....	70	59	9.3	251.5	8.3	18.1	217.3	601.0	1 235.5	1 832.6	23.1	14.7	786.1
South Carolina .....	3	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.2	55.8
Texas .....	10	9	2.7	69.5	2.4	6.0	60.1	195.4	239.3	433.3	2.0	3.0	136.3
Virginia .....	3	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Washington .....	E1 22	16	2.3	60.6	2.0	4.4	50.9	113.5	219.9	331.6	10.0	3.7	142.6
<b>INDUSTRY 2439, STRUCTURAL WOOD MEMBERS, N.E.C.</b>													
United States .....	E1 895	408	24.3	515.1	18.1	35.7	315.9	1 034.2	1 483.5	2 505.3	42.5	24.6	770.8
Alabama .....	E1 19	9	.5	8.2	.3	.5	4.7	11.3	19.5	31.0	.2	.3	8.5
Arizona .....	25	12	.7	11.6	.6	1.0	8.0	26.1	36.2	62.1	.9	.5	14.2
Arkansas .....	E2 24	3	.4	6.4	.3	.5	4.1	15.1	17.3	32.8	.6	.3	7.3
California .....	E1 92	40	2.2	47.7	1.6	3.1	29.1	85.0	112.3	197.5	1.9	2.9	97.1
Colorado .....	E1 22	8	.5	10.3	.4	.6	5.7	18.3	19.9	38.0	(D)	E	(D)
Florida .....	E1 102	59	3.2	52.7	2.5	4.6	33.1	89.4	115.4	204.3	3.1	3.8	93.4
Georgia .....	35	10	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.2	35.9
Idaho .....	14	9	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.8	13.7
Illinois .....	18	10	.8	16.8	.5	1.0	10.9	31.2	28.8	61.0	1.4	.5	13.7
Indiana .....	18	8	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Iowa .....	E2 10	4	.2	4.0	.1	.3	2.1	10.2	17.6	27.7	.4	(NA)	(NA)
Kansas .....	7	3	.2	3.0	.1	.3	1.9	12.0	5.5	17.3	(D)	(NA)	(NA)
Kentucky .....	18	8	.4	6.6	.3	.5	3.8	13.6	13.9	27.4	.5	.3	7.5
Louisiana .....	3	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	7.3
Maine .....	2	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	E	(D)
Maryland .....	11	6	.4	7.9	.3	.6	5.5	13.1	52.9	66.2	(D)	.2	3.8
Michigan .....	E1 24	18	1.0	25.3	.7	1.4	14.5	42.3	53.6	95.6	2.0	F	(D)
Minnesota .....	18	12	.9	24.0	.7	1.4	14.7	57.8	53.1	109.6	5.8	F	(D)
Mississippi .....	E3 6	2	.1	2.6	.1	.2	1.4	4.6	5.7	10.3	.1	C	(D)
Missouri .....	25	7	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	9.9
Nebraska .....	5	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.3	7.7
Nevada .....	12	7	.4	7.8	.3	.7	5.0	15.6	16.2	32.0	.4	(NA)	(NA)
New Jersey .....	E1 9	8	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.6	26.1
New York .....	19	9	.4	9.3	.3	.7	5.7	24.4	23.6	48.2	.4	E	(D)
North Carolina .....	E1 34	18	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	1.7	40.4

See footnotes at end of table.

MANUFACTURES—INDUSTRY SERIES

MILLWORK, PLYWOOD, & STRUCT. MBRS. 24B-11

**Table 2. Industry Statistics for Selected States: 1992 and 1987—Con.**

[Excludes data for auxiliaries. States with 100 employees or more are shown. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and geographic area	1992										1987			
	All establishments		All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	All employees <sup>2</sup> (1,000)	Value added by manufacture (million dollars)	
	E <sup>1</sup>	Total (no.)	With 20 employees or more (no.)	Number <sup>2</sup> (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)							Wages (million dollars)
<b>INDUSTRY 2439, STRUCTURAL WOOD MEMBERS, N.E.C.—Con.</b>														
North Dakota	—	7	1	.1	2.4	.1	.2	1.5	5.1	7.0	12.1	(D)	(NA)	(NA)
Ohio	—	30	17	1.0	21.5	.8	1.6	12.5	52.6	68.2	120.6	(D)	F	(D)
Oklahoma	E4	13	1	C	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)	(NA)
Oregon	—	40	19	1.5	44.2	1.3	2.6	32.8	107.8	244.5	344.0	3.7	1.7	66.9
Pennsylvania	E1	24	13	.8	12.8	.4	.8	7.8	28.0	33.1	58.8	(D)	4	18.1
South Carolina	—	11	6	.3	5.5	.2	.4	2.9	9.3	11.8	21.0	.2	.3	6.3
South Dakota	—	8	2	.1	3.0	.1	.2	1.7	4.7	7.4	12.1	(D)	(NA)	(NA)
Tennessee	E1	18	5	.3	6.3	.2	.5	3.3	10.2	14.7	24.7	(D)	.3	9.3
Texas	—	29	8	.8	11.9	.4	.9	6.4	22.7	55.7	78.4	(D)	F	(D)
Utah	—	12	6	E	(D)	(D)	(D)	(D)	(D)	(D)	(D)	.2	C	(D)
Virginia	—	22	11	F	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	F	(D)
Washington	E1	42	21	1.0	21.3	.7	1.4	13.3	44.6	45.8	90.3	2.0	7	22.7
Wisconsin	—	19	9	.8	13.6	.4	.9	7.7	28.4	30.9	59.4	1.1	5	17.0

Note: For qualifications of data, see footnotes on table 1a.

<sup>1</sup>Payroll and sales data for some 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 the items shown 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 for those States where estimated value of shipments data based on administrative-record data account for 10 percent or more of figure shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

<sup>2</sup>Statistics for some producing States have been withheld to avoid disclosing data for individual companies. However, for States with 100 employees or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: C—100 to 249 employees; E—250 to 499 employees; F—500 to 999 employees; G—1,000 to 2,499 employees; H—2,500 to 4,999 employees; I—5,000 to 9,999 employees; J—10,000 to 24,999 employees; K—25,000 to 49,999 employees; L—50,000 to 99,999 employees; M—100,000 employees or more.

**Table 3a. Summary Statistics for the Industry: 1992**

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

Item	Millwork (SIC 2431)	Wood kitchen cabinets (SIC 2434)	Hardwood veneer and plywood (SIC 2435)	Softwood veneer and plywood (SIC 2436)	Structural wood members, n.e.c. (SIC 2439)
Companies	3 009	4 273	283	123	829
All establishments	3 155	4 323	318	201	895
With 1 to 19 employees	2 358	3 896	105	42	487
With 20 to 99 employees	641	517	152	56	378
With 100 employees or more	158	110	61	103	32
Employment and labor costs:					
Employees	86.3	82.8	20.1	31.3	24.3
Compensation, total	2 430.1	1 580.9	490.9	1 065.2	626.2
Annual payroll	1 963.9	1 307.5	394.7	827.4	515.1
Fringe benefits	446.2	273.4	96.2	237.7	111.1
Social Security and other legally required payments	233.2	146.0	48.2	103.1	65.5
Employer voluntary payments	213.0	127.4	48.0	134.6	45.8
Production workers:					
Average for year	68.8	49.8	17.0	28.0	18.1
March	67.1	48.5	16.7	27.8	16.8
May	69.5	50.1	17.1	28.1	18.2
August	70.7	50.8	17.1	28.1	19.4
November	68.1	50.0	17.0	28.1	18.0
Hours	136.9	99.7	35.1	63.5	35.7
Wages	1 395.9	926.6	285.0	704.7	315.9
Cost of materials <sup>1</sup>	5 627.8	2 214.7	1 401.9	3 265.3	1 483.5
Materials, parts, containers, etc., consumed <sup>2</sup>	5 164.2	2 049.6	1 228.5	3 056.7	1 342.4
Resales	326.4	79.5	96.2	25.5	100.1
Fuels	21.0	14.5	10.4	44.8	8.5
Purchased electricity	78.0	42.3	30.9	118.9	17.9
Contract work	38.0	28.8	35.9	19.3	14.6
Quantity of electric energy used for heat and power:					
Purchased	1 347.7	651.8	558.3	2 689.0	313.5
Generated less sold	—	(D)	(D)	(D)	—
Total value of shipments	9 639.8	4 933.5	2 247.5	5 447.0	2 505.3
Value added	4 048.4	2 728.3	856.4	2 185.9	1 034.2
Inventories by stage of fabrication:					
Beginning of 1992	1 237.5	462.6	302.3	270.5	172.3
Finished goods	283.8	100.1	129.5	82.6	51.2
Work in process	337.8	118.0	42.1	42.5	18.3
Materials and supplies	616.0	244.4	130.7	145.3	102.7
End of 1992	1 284.7	488.8	331.1	294.0	197.5
Finished goods	310.4	98.2	133.9	83.6	60.8
Work in process	347.3	131.4	48.5	45.6	21.2
Materials and supplies	627.0	261.1	148.8	164.8	115.5

Note: For qualifications of data, see footnotes on table 1a.

<sup>1</sup>Data on purchased services for the repair of buildings and machinery and for communication services are not included in cost of materials, etc., but are shown in table 3c.

<sup>2</sup>Data on materials consumed by type are shown in table 7. Data on amount purchased or transferred from foreign sources are shown in table 3c.

**Table 3b. Gross Book Value of Depreciable Assets, Capital Expenditures, Retirements, Depreciation, and Rental Payments: 1992**

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

Item	Millwork (SIC 2431)	Wood kitchen cabinets (SIC 2434)	Hardwood veneer and plywood (SIC 2435)	Softwood veneer and plywood (SIC 2436)	Structural wood members, n.e.c. (SIC 2439)
<b>Gross book value of depreciable assets:</b>					
<b>Total:</b>					
Beginning of year .....	1 954.9	1 128.2	583.6	2 195.4	724.3
New capital expenditures <sup>1</sup> .....	190.7	88.1	47.0	98.7	42.5
Used capital expenditures .....	24.2	13.0	5.0	58.7	6.2
Retirements .....	38.8	28.1	11.0	43.7	31.8
End of year .....	2 131.1	1 204.2	624.6	2 309.2	741.2
<b>Buildings and other structures:</b>					
Beginning of year .....	588.4	342.1	131.5	263.3	161.9
New capital expenditures .....	39.4	18.6	11.4	6.6	5.6
Used capital expenditures .....	6.7	3.3	.5	(D)	.5
Retirements .....	3.8	3.0	1.4	(D)	5.9
End of year .....	630.7	359.0	142.0	269.5	162.2
<b>Machinery and equipment:</b>					
Beginning of year .....	1 366.5	786.1	452.1	1 932.1	562.4
New capital expenditures <sup>1</sup> .....	151.3	72.5	35.6	92.1	36.9
Used capital expenditures .....	17.6	9.7	4.8	(D)	5.7
Retirements .....	35.0	23.1	9.6	(D)	25.9
End of year .....	1 500.4	845.2	482.6	2 039.7	579.0
<b>Depreciation charges during 1992:</b>					
<b>Total:</b>	148.3	77.7	45.1	112.6	65.8
Buildings and other structures .....	25.1	15.4	10.5	8.4	11.7
Machinery and equipment .....	121.2	62.4	34.5	103.2	54.1
<b>Rental payments:</b>					
<b>Total:</b>	92.9	73.8	16.2	7.5	24.6
Buildings and other structures .....	54.1	40.8	9.7	4.3	14.9
Machinery and equipment .....	38.9	33.0	6.5	3.3	9.8

<sup>1</sup>Data on new machinery and equipment expenditures by type are provided in table 3c.

**Table 3c. Supplemental Industry Statistics Based on Sample Estimates: 1992**

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

Item	Millwork (SIC 2431)		Wood kitchen cabinets (SIC 2434)		Hardwood veneer and plywood (SIC 2435)		Softwood veneer and plywood (SIC 2436)		Structural wood members, n.e.c. (SIC 2439)	
	Amount (million dollars)	Relative standard error of estimate <sup>1</sup> (percent)	Amount (million dollars)	Relative standard error of estimate <sup>1</sup> (percent)	Amount (million dollars)	Relative standard error of estimate <sup>1</sup> (percent)	Amount (million dollars)	Relative standard error of estimate <sup>1</sup> (percent)	Amount (million dollars)	Relative standard error of estimate <sup>1</sup> (percent)
<b>Purchased services:</b>										
<b>Cost of purchased services for the repair of—</b>										
Buildings and other structures .....	6.6	(X)	4.1	(X)	2.4	(X)	4.6	(X)	1.9	(X)
Response coverage ratio (percent) <sup>2</sup> .....	69.1	(X)	62.1	(X)	61.7	(X)	85.5	(X)	72.2	(X)
Machinery .....	36.8	(X)	18.5	(X)	20.3	(X)	67.0	(X)	15.1	(X)
Response coverage ratio (percent) <sup>2</sup> .....	72.5	(X)	69.1	(X)	64.6	(X)	93.2	(X)	75.6	(X)
<b>Other purchased services:</b>										
Communications .....	15.0	(X)	9.5	(X)	2.4	(X)	3.0	(X)	5.9	(X)
Response coverage ratio (percent) <sup>2</sup> .....	68.0	(X)	61.7	(X)	82.3	(X)	81.3	(X)	73.2	(X)
Legal .....	14.7	(X)	4.4	(X)	1.6	(X)	2.2	(X)	1.8	(X)
Response coverage ratio (percent) <sup>2</sup> .....	68.4	(X)	67.7	(X)	79.3	(X)	93.2	(X)	72.5	(X)
Accounting and bookkeeping .....	14.2	(X)	5.9	(X)	1.7	(X)	3.8	(X)	2.2	(X)
Response coverage ratio (percent) <sup>2</sup> .....	71.0	(X)	68.6	(X)	64.6	(X)	90.9	(X)	73.8	(X)
Advertising .....	70.5	(X)	24.3	(X)	1.4	(X)	1.5	(X)	2.9	(X)
Response coverage ratio (percent) <sup>2</sup> .....	72.5	(X)	68.1	(X)	64.6	(X)	90.9	(X)	74.0	(X)
Software and other data processing .....	14.8	(X)	2.2	(X)	.7	(X)	.6	(X)	2.0	(X)
Response coverage ratio (percent) <sup>2</sup> .....	66.6	(X)	63.6	(X)	78.2	(X)	93.2	(X)	71.6	(X)
Refuse removal, including hazardous waste .....	8.9	(X)	7.4	(X)	1.8	(X)	1.6	(X)	1.7	(X)
Response coverage ratio (percent) <sup>2</sup> .....	68.8	(X)	66.3	(X)	62.5	(X)	90.9	(X)	75.5	(X)
<b>New machinery and equipment expenditures</b> .....	151.3	(X)	72.5	(X)	35.6	(X)	92.1	(X)	36.9	(X)
Automobiles, trucks, etc., for highway use .....	11.3	9	12.3	21	2.5	26	1.7	11	7.7	12
Computers and peripheral data processing equipment .....	17.8	5	6.7	11	1.5	34	1.2	3	2.4	10
All other .....	122.1	2	53.5	6	31.6	4	89.2	1	26.8	4
Adjustment ratio <sup>3</sup> .....	1.9	(X)	1.9	(X)	1.4	(X)	1.1	(X)	1.8	(X)
<b>Cost of materials, components, parts, etc., used</b> .....	5 184.2	(X)	2 049.6	(X)	1 228.5	(X)	3 058.7	(X)	1 342.4	(X)
Materials purchased or transferred from foreign sources <sup>4</sup> .....	172.5	21	(S)	(X)	102.8	10	10.5	2	(S)	(X)
Materials purchased or transferred from domestic sources .....	4 991.7	1	(S)	(X)	1 125.7	1	3 048.2	1	(S)	(X)
Adjustment ratio <sup>3</sup> .....	1.9	(X)	(S)	(X)	1.8	(X)	1.2	(X)	(S)	(X)

Note: The amounts shown for purchased services reflect only those services that establishments purchase from other companies. Amounts purchased by separate central administrative offices and services provided to establishments by central administrative offices are excluded.

<sup>1</sup>For description of relative standard error of estimate, see Qualifications of the Data in appendixes.

<sup>2</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight, see appendix B) for those ASM establishments that reported to the weighted total employment for all ASM establishments classified in the industry.

<sup>3</sup>Detail has been adjusted upwards to account for nonresponse. Inverse of the ratio shown represents a measure of the response of the inquiry. (See appendixes for further explanation.)

<sup>4</sup>Data may understate the true cost of imported parts, components, and supplies since some respondents do not know the origin of these materials. Includes cases where materials were purchased from secondary suppliers or where they were transferred from company-operated warehouses or other distribution points. Direct purchases from foreign suppliers and importers by domestic manufacturing establishments are believed to be reported accurately.

**Table 4. Industry Statistics by Employment Size of Establishment: 1992**

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

Industry and employment size class	E1	All establishments (no.)	All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories (million dollars)
			Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)					
<b>INDUSTRY 2431, MILLWORK</b>												
Total .....	E1	3 155	86.3	1 983.9	68.8	136.9	1 395.9	4 048.4	5 627.6	9 639.8	190.7	1 284.7
Establishments with an average of—												
1 to 4 employees .....	E8	1 202	2.2	43.0	1.8	3.5	31.2	84.6	113.9	198.0	4.1	28.0
5 to 9 employees .....	E10	618	4.1	77.7	3.2	6.1	54.9	151.4	195.4	347.1	5.8	42.4
10 to 19 employees .....	E11	538	7.4	155.3	5.6	10.9	105.3	302.2	354.3	653.7	11.1	82.2
20 to 49 employees .....	E11	427	13.0	284.6	10.0	19.8	182.1	547.0	712.8	1 257.0	21.4	183.7
50 to 99 employees .....	E11	214	14.8	318.4	11.6	23.2	216.4	852.8	975.0	1 620.8	42.4	249.3
100 to 249 employees .....	E11	111	17.0	357.0	13.7	27.9	247.2	741.1	1 156.8	1 888.7	28.2	297.0
250 to 499 employees .....	E11	34	12.2	270.5	10.4	20.4	204.3	594.1	900.3	1 479.1	33.6	213.6
500 to 999 employees .....	E11	9	7.2	177.5	5.7	11.8	131.6	297.6	505.0	801.2	14.8	89.6
1,000 to 2,499 employees .....	—	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
2,500 employees or more .....	—	3	8.5	299.9	6.9	13.4	223.0	677.6	714.2	1 396.4	28.6	118.8
Covered by administrative records <sup>2</sup> .....	E9	1 299	3.6	54.3	3.0	5.5	38.9	100.4	149.4	249.8	5.7	32.7
<b>INDUSTRY 2434, WOOD KITCHEN CABINETS</b>												
Total .....	E1	4 323	62.8	1 307.5	49.8	99.7	926.6	2 728.3	2 214.7	4 933.5	89.1	488.8
Establishments with an average of—												
1 to 4 employees .....	E8	2 021	3.8	66.7	3.1	5.9	50.3	147.5	119.2	266.4	4.2	25.2
5 to 9 employees .....	E10	1 026	6.7	123.8	5.3	10.5	94.5	233.8	188.5	400.4	6.2	38.0
10 to 19 employees .....	E10	649	8.6	171.0	6.7	13.4	123.0	306.1	215.6	521.4	7.7	42.6
20 to 49 employees .....	E10	392	11.4	240.7	8.7	17.3	158.1	428.4	305.5	731.4	11.9	65.8
50 to 99 employees .....	E11	125	8.4	178.9	6.5	12.8	121.7	335.0	267.5	598.7	9.2	66.1
100 to 249 employees .....	E11	83	12.4	268.5	10.1	20.6	180.3	683.8	595.5	1 255.1	16.5	118.3
250 to 499 employees .....	—	20	6.7	138.1	5.4	10.8	104.6	368.3	338.0	710.3	16.9	87.5
500 to 999 employees .....	—	7	4.8	119.8	4.0	8.2	84.0	247.6	204.9	449.9	16.5	65.2
Covered by administrative records <sup>2</sup> .....	E9	1 963	4.7	88.1	3.8	7.2	48.5	144.1	117.4	261.4	4.5	24.5
<b>INDUSTRY 2435, HARDWOOD VENEER AND PLYWOOD</b>												
Total .....	—	318	20.1	394.7	17.0	35.1	265.0	856.4	1 401.9	2 247.5	47.0	331.1
Establishments with an average of—												
1 to 4 employees .....	E8	39	.1	1.5	.1	.1	1.1	3.4	8.0	9.4	.2	1.3
5 to 9 employees .....	E9	29	.2	3.0	.2	.3	2.2	5.4	9.7	15.0	.5	2.1
10 to 19 employees .....	E9	37	.5	10.3	.4	.9	6.9	23.9	34.2	57.9	1.3	7.0
20 to 49 employees .....	E9	87	3.0	58.2	2.4	5.0	38.3	127.3	232.3	362.7	5.5	42.5
50 to 99 employees .....	E10	65	4.7	86.1	3.9	8.0	60.4	181.6	291.6	453.4	14.1	75.7
100 to 249 employees .....	E10	47	6.7	129.6	5.7	11.8	93.1	289.2	382.2	647.8	15.2	88.7
250 to 499 employees .....	—	13	4.9	107.9	4.3	9.0	83.0	265.5	445.9	701.5	10.2	113.8
500 to 999 employees .....	—	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records <sup>2</sup> .....	E9	59	.3	3.8	.2	.4	2.8	7.4	13.7	21.1	.5	3.1
<b>INDUSTRY 2436, SOFTWOOD VENEER AND PLYWOOD</b>												
Total .....	—	201	31.3	627.4	28.0	63.5	704.7	2 185.9	3 263.3	5 447.0	98.7	294.0
Establishments with an average of—												
1 to 4 employees .....	E8	14	(Z)	.7	(Z)	.1	.6	1.3	2.8	4.1	.1	.2
5 to 9 employees .....	E9	11	.1	1.7	.1	.1	1.3	3.7	7.7	11.4	.3	.7
10 to 19 employees .....	E9	17	.2	5.4	.2	.4	4.0	10.0	17.2	27.2	.3	1.7
20 to 49 employees .....	E10	25	.8	17.1	.7	1.4	13.0	40.7	83.5	123.8	9.8	12.4
50 to 99 employees .....	E10	31	2.1	58.2	1.8	4.0	45.2	145.3	347.5	490.8	5.8	38.5
100 to 249 employees .....	—	50	8.5	227.0	7.8	16.9	187.0	551.4	892.9	1 447.8	35.4	75.9
250 to 499 employees .....	—	48	18.1	421.8	14.5	33.4	357.7	1 183.3	1 588.2	2 747.8	45.1	130.3
500 to 999 employees .....	—	5	3.3	97.8	3.0	7.0	85.9	270.3	327.5	594.4	2.5	34.3
Covered by administrative records <sup>2</sup> .....	E9	17	.1	1.5	.1	.2	1.2	2.0	4.7	6.7	.1	.4
<b>INDUSTRY 2439, STRUCTURAL WOOD MEMBERS, N.E.C.</b>												
Total .....	E1	895	24.3	515.1	18.1	35.7	315.9	1 034.2	1 483.5	2 505.3	42.5	197.5
Establishments with an average of—												
1 to 4 employees .....	E8	155	.3	8.3	.2	.5	4.2	16.7	20.9	37.5	.6	3.0
5 to 9 employees .....	E9	150	1.0	17.9	.8	1.5	11.8	39.2	51.0	90.3	1.8	7.2
10 to 19 employees .....	E9	182	2.5	47.3	1.9	3.7	28.1	92.0	124.1	214.8	2.6	15.6
20 to 49 employees .....	E10	256	8.2	166.4	6.0	11.9	100.9	321.5	418.9	739.9	14.0	59.1
50 to 99 employees .....	E10	120	8.1	173.1	6.1	11.7	105.1	342.7	450.0	789.7	15.0	61.1
100 to 249 employees .....	—	32	4.2	104.0	3.1	6.3	64.9	222.1	418.8	633.1	8.7	51.3
Covered by administrative records <sup>2</sup> .....	E9	172	.7	8.5	.5	.8	5.2	16.7	24.0	40.7	.9	3.0

See footnotes at end of table.

**24B-14 MILLWORK, PLYWOOD, & STRUCT. MBRS.**

**MANUFACTURES—INDUSTRY SERIES**

**Table 4. Industry Statistics by Employment Size of Establishment: 1992—Con.**

Note: For qualifications of data, see footnotes on table 1a. Data shown as (D) are included in underscored figures above.

<sup>1</sup>Payroll and sales data for some small single-establishment manufacturing 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 the items shown 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 for those employment-size classes where estimated data based on administrative-record data account for 10 percent or more of figures shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

<sup>2</sup>Report forms were not mailed to small single-establishment companies with up to 20 employees (cutoff varied by industry). Payroll and sales data for 1992 were obtained from administrative records supplied by other agencies of the Federal Government. Those data were then used in conjunction with industry averages to estimate the items shown. Data are also included in respective employment-size classes shown.

**Table 5a. Industry Statistics by Industry and Primary Product Class Specialization: 1992**

[Table presents selected statistics for establishments according to their degree of specialization in products primary to their industry. Measures of plant specialization shown are (1) industry specialization: ratio of primary product shipments to total product shipments (primary plus secondary, excluding miscellaneous receipts) for the establishment; and (2) product class specialization: ratio of largest primary product class shipments to total product shipments (primary plus secondary, excluding miscellaneous receipts) for the establishment. See appendix for method of computing ratios. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.]

Industry or product class code	Industry or primary product class	All establishments (number)	All employees		Production workers			Value added by manufacture (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)
			Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
2431	<b>Millwork:</b>										
	All establishments in industry .....	3 155	86.3	1 983.9	68.8	138.9	1 395.9	4 048.4	5 627.6	9 639.8	190.7
	Establishments with this product class primary:										
24311	Wood window units .....	140	24.3	683.1	19.5	38.8	477.5	1 405.6	1 768.8	3 159.0	64.0
24312	Wood sash, excluding window units .....	16	.8	18.1	.7	1.3	12.9	37.0	64.1	99.1	.9
24313	Wood window and door frames, and door frames shipped in door units .....	49	2.9	69.4	2.4	4.9	51.8	143.9	299.8	440.4	8.7
24314	Wood doors, interior and exterior, including those with glazed sections .....	234	12.5	278.7	9.5	19.4	186.2	607.0	967.1	1 572.4	31.8
24315	Other wood doors, including garage, screen, storm, etc. ....	117	5.9	114.8	4.9	9.7	81.2	269.0	285.6	557.0	15.2
24316	Wood moldings except prefinished moldings made from purchased moldings .....	202	9.1	187.6	7.6	15.2	136.5	388.4	788.9	1 148.1	16.2
24317	Prefinished wood moldings made from purchased moldings .....	19	.8	16.2	.8	1.3	11.4	34.8	51.4	84.7	2.1
24318	Other millwork products, including stairwork and exterior millwork .....	421	12.6	282.0	9.9	19.5	190.4	515.7	536.3	1 046.3	19.5
2434	<b>Wood kitchen cabinets:</b>										
	All establishments in industry .....	4 323	62.8	1 307.5	48.8	99.7	928.6	2 728.3	2 214.7	4 933.5	89.1
	Establishments with this product class primary:										
24341	Wood kitchen cabinets and cabinetwork, stock line .....	324	21.3	456.6	17.5	35.2	328.3	1 154.3	1 061.9	2 208.8	45.4
24342	Wood kitchen cabinets and cabinetwork, custom .....	1 304	23.7	515.1	18.5	37.8	362.4	897.2	619.4	1 512.4	23.4
24343	Vanities and other cabinetwork .....	144	3.3	69.2	2.2	4.2	43.4	123.0	92.3	219.5	4.4
2435	<b>Hardwood veneer and plywood:</b>										
	All establishments in industry .....	318	20.1	394.7	17.0	35.1	285.0	856.4	1 401.9	2 247.5	47.0
	Establishments with this product class primary:										
24351	Hardwood plywood .....	52	5.8	120.7	5.0	10.2	90.8	243.3	512.2	750.3	10.4
24352	Prefinished hardwood plywood made from purchased plywood .....	13	.8	19.5	.5	1.1	9.8	53.9	189.2	254.2	.6
24353	Hardwood plywood type products <sup>1</sup> .....	56	4.0	79.5	3.3	7.1	57.9	188.5	295.6	482.5	11.7
24354	Hardwood veneer, not reinforced or backed <sup>1</sup> .....	102	7.9	147.5	6.8	14.1	106.5	317.4	340.3	655.5	21.3
2436	<b>Softwood veneer and plywood:</b>										
	All establishments in industry .....	201	31.3	827.4	28.0	63.5	704.7	2 185.9	3 265.3	5 447.0	98.7
	Establishments with this product class primary:										
24363	Softwood plywood type products <sup>1</sup> .....	11	.9	19.4	.8	1.7	15.5	38.5	84.1	121.7	1.3
24364	Softwood veneer, not reinforced or backed <sup>1</sup> .....	48	2.9	73.4	2.4	5.2	59.3	189.1	461.0	648.2	16.3
24365	Softwood plywood, rough, including touch sanded, interior and exterior .....	77	19.8	533.8	17.9	41.0	456.7	1 519.1	1 952.0	3 472.1	56.6
24366	Softwood plywood, sanded .....	18	4.8	121.5	4.2	9.4	105.0	281.0	471.0	730.1	12.1
24367	Softwood plywood specialties .....	14	2.6	70.1	2.4	5.3	60.6	160.9	256.1	414.7	11.4
2439	<b>Structural wood members, n.e.c.:</b>										
	All establishments in industry .....	895	24.3	515.1	18.1	35.7	315.9	1 034.2	1 483.5	2 505.3	42.5

Note: For qualifications of data, see footnotes on table 1a.

<sup>1</sup>For 1992, veneers which are backed with paper, cloth, or other flexible materials are included in veneer, not reinforced or backed; two-ply veneers are included in plywood type products.

**Table 5b. Industry-Product Analysis-Value of Industry and Primary Product Shipments; Specialization and Coverage Ratios: 1992 and Earlier Census Years**

[Million dollars. An establishment is assigned to an industry based on shipment values of products representing largest amount considered primary to an industry. Frequently, establishment shipments comprise mixtures of products assigned to an industry (primary), those considered primary to other industries (secondary), and receipts for activities such as merchandising or contract work (total miscellaneous receipts). Subtotals for total value of shipments show this product pattern for an industry. Primary products specialization ratio is the primary products value of shipments divided by the sum of primary products value of shipments plus secondary products value of shipments. The extent of which an industry's primary products are shipped by establishments classified both in and out of an industry is the coverage ratio and is calculated by dividing the primary products value of shipments by the value of primary products shipments made in all industries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry	1992	1987	1982
<b>INDUSTRY 2431, MILLWORK</b>			
Total value of shipments .....	9 639.8	9 328.9	4 248.3
Primary products value of shipments .....	8 785.8	8 460.4	3 762.4
Secondary products value of shipments .....	388.0	399.7	265.3
Total miscellaneous receipts .....	486.2	486.8	220.6
Value of resales .....	391.8	389.9	188.0
Contract receipts .....	33.5	26.3	15.6
Other miscellaneous receipts .....	61.1	50.6	17.0
Sales of scrap and refuse .....	18.4	18.1	6.3
Other miscellaneous receipts .....	38.7	34.5	9.5
Other miscellaneous receipts, n.s.k. ....	8.0	(NA)	1.2
Primary products specialization ratio .....	96	95	93
Value of primary products shipments made in all industries .....	9 183.8	8 800.9	3 988.4
Value of primary products shipments made in this industry .....	8 785.8	8 460.4	3 762.4
Value of primary products shipments made in other industries .....	417.9	340.5	226.0
Coverage ratio .....	95	98	94
<b>INDUSTRY 2434, WOOD KITCHEN CABINETS</b>			
Total value of shipments .....	4 933.5	4 378.2	2 060.7
Primary products value of shipments .....	4 837.3	4 130.8	1 943.2
Secondary products value of shipments .....	179.9	151.7	78.8
Total miscellaneous receipts .....	118.4	95.7	40.7
Value of resales .....	97.3	70.4	24.8
Contract receipts .....	7.7	6.3	5.2
Other miscellaneous receipts .....	11.4	19.1	10.7
Sales of scrap and refuse .....	.1	(D)	.2
Other miscellaneous receipts .....	8.5	(D)	9.3
Other miscellaneous receipts, n.s.k. ....	4.8	(NA)	1.2
Primary products specialization ratio .....	96	96	96
Value of primary products shipments made in all industries .....	4 763.7	4 216.5	2 001.3
Value of primary products shipments made in this industry .....	4 837.3	4 130.8	1 943.2
Value of primary products shipments made in other industries .....	126.5	85.8	58.1
Coverage ratio .....	97	98	97
<b>INDUSTRY 2435, HARDWOOD VENEER AND PLYWOOD</b>			
Total value of shipments .....	2 247.5	2 060.5	1 304.4
Primary products value of shipments .....	1 902.7	1 756.6	1 162.2
Secondary products value of shipments .....	196.2	150.1	93.9
Total miscellaneous receipts .....	148.6	153.8	48.3
Value of resales .....	105.0	128.1	33.0
Contract receipts .....	33.8	11.5	13.1
Other miscellaneous receipts .....	9.8	16.3	2.2
Bark .....	(D)	(D)	(D)
Sales of mill residues other than bark, including sawdust, shavings, slabs, cores, fuel wood, etc. ....	6.8	(D)	1.1
Other miscellaneous receipts .....	2.0	(D)	1.0
Other miscellaneous receipts, n.s.k. ....	(D)	(NA)	(D)
Primary products specialization ratio .....	91	92	93
Value of primary products shipments made in all industries .....	2 027.8	1 834.5	1 237.0
Value of primary products shipments made in this industry .....	1 902.7	1 756.6	1 162.2
Value of primary products shipments made in other industries .....	124.9	77.9	74.8
Coverage ratio .....	94	96	94
<b>INDUSTRY 2436, SOFTWOOD VENEER AND PLYWOOD</b>			
Total value of shipments .....	5 447.0	4 919.6	3 221.5
Primary products value of shipments .....	4 579.8	4 188.1	2 622.3
Secondary products value of shipments .....	672.6	603.9	495.2
Total miscellaneous receipts .....	194.6	129.6	104.0
Value of resales .....	35.7	23.0	13.1
Contract receipts .....	17.9	8.5	(D)
Other miscellaneous receipts .....	141.0	98.1	(D)
Bark .....	8.1	(NA)	3.5
Sales of mill residues other than bark, including sawdust, shavings, slabs, cores, fuel wood, etc. ....	130.2	90.8	(D)
Other miscellaneous receipts .....	1.7	7.3	5.7
Other miscellaneous receipts, n.s.k. ....	.9	(NA)	3.2
Primary products specialization ratio .....	87	87	84
Value of primary products shipments made in all industries .....	4 752.8	4 383.0	2 780.0
Value of primary products shipments made in this industry .....	4 579.8	4 188.1	2 622.3
Value of primary products shipments made in other industries .....	173.0	196.9	157.8
Coverage ratio .....	96	95	94

24B-16 MILLWORK, PLYWOOD, & STRUCT. MBRS.

MANUFACTURES-INDUSTRY SERIES

**Table 5b. Industry-Product Analysis—Value of Industry and Primary Product Shipments; Specialization and Coverage Ratios: 1992 and Earlier Census Years—Con.**

(Million dollars. An establishment is assigned to an industry based on shipment values of products representing largest amount considered primary to an industry. Frequently, establishment shipments comprise mixtures of products assigned to an industry (primary), those considered primary to other industries (secondary), and receipts for activities such as merchandising or contract work (total miscellaneous receipts). Subtotals for total value of shipments show this product pattern for an industry. Primary products specialization ratio is the primary products value of shipments divided by the sum of primary products value of shipments plus secondary products value of shipments. The extent of which an industry's primary products are shipped by establishments classified both in and out of an industry is the coverage ratio and is calculated by dividing the primary products value of shipments by the value of primary products shipments made in all industries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes.)

Industry	1992	1987	1982
<b>INDUSTRY 2439, STRUCTURAL WOOD MEMBERS, N.E.C.</b>			
Total value of shipments .....	2 505.3	1 928.8	847.9
Primary products value of shipments .....	2 263.4	1 794.4	757.3
Secondary products value of shipments .....	101.2	49.8	34.8
Total miscellaneous receipts .....	140.7	84.8	55.8
Value of resales .....	124.7	79.0	48.3
Contract receipts .....	8.4	3.8	.5
Other miscellaneous receipts .....	9.5	2.0	7.0
Sales of scrap and refuse .....	1.9	.8	.3
Other miscellaneous receipts .....	7.2	1.2	5.5
Other miscellaneous receipts, n.s.k. ....	.4	(NA)	1.2
Primary products specialization ratio .....	96	97	98
Value of primary products shipments made in all industries .....	2 334.6	1 687.6	800.2
Value of primary products shipments made in this industry .....	2 263.4	1 794.4	757.3
Value of primary products shipments made in other industries .....	71.2	93.2	42.9
Coverage ratio .....	97	95	95

Note: For qualifications of data, see footnotes on table 1a.

**Table 6a. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1992 and 1987**

(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 further explanation, see Value of Shipments in appendixes. For meaning of abbreviations and symbols, see introductory text.)

Product code	Product	1992			1987		
		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>	
			Quantity <sup>2</sup>	Value (million dollars)		Quantity <sup>2</sup>	Value (million dollars)
<b>2431—</b>	<b>MILLWORK</b>						
	Total .....	(NA)	(X)	9 183.6	(NA)	(X)	8 800.9
24311	Wood window units .....	(NA)	(X)	2 377.7	(NA)	(X)	1 995.1
	Double hung:						
24311 31	Cladded .....	82	*5 200.8	699.1	41	*4 799.9	529.9
24311 32	Other .....	64	**2 533.7	223.3	54	*2 524.3	224.1
24311 34	Awning .....	22	(S)	29.0	25	(S)	27.0
	Casement:						
24311 35	Cladded .....	48	*5 217.3	760.7	38	*5 854.1	720.4
24311 36	Other .....	64	(S)	188.8	54	*1 886.5	217.8
24311 41	Horizontal sliding .....	29	*887.9	90.5	29	(S)	48.9
24311 45	All other, including single hung .....	57	*2 021.1	340.4	50	(S)	197.5
24311 00	Wood window units, n.s.k. ....	(NA)	(X)	46.1	(NA)	(X)	31.7
24312	Wood sash, excluding window units .....	(NA)	(X)	131.7	(NA)	(X)	168.7
24312 09	Knockdown (kd) and open .....	19	(X)	71.4	15	(X)	50.4
24312 15	Glazed .....	21	*1 008.3	57.2	20	*2 590.5	92.8
24312 00	Wood sash, excluding window units, n.s.k. ....	(NA)	(X)	3.1	(NA)	(X)	23.7
24313	Wood window and door frames, and door frames shipped in door units .....	(NA)	(X)	448.2	(NA)	(X)	358.4
24313 13	Window frames, wood .....	49	(S)	141.3	48	3 401.3	133.5
24313 15	Door frames, wood .....	103	(S)	295.8	81	(S)	224.5
24313 00	Wood window and door frames, and door frames shipped in door units, n.s.k. ....	(NA)	(X)	11.1	(NA)	(X)	4
24314	Wood doors, interior and exterior, including those with glazed sections .....	(NA)	(X)	1 505.4	(NA)	(X)	1 508.8
	Panel type:						
24314 11	Douglas fir .....	66	(S)	165.5	63	*2 355.4	204.4
24314 13	Western pines .....	61	(S)	233.7	60	*3 733.5	319.6
24314 19	Other species .....	112	**703.4	111.5	50	(S)	38.5
	Flush type, hollow core:						
24314 31	Softwood faces .....	14	(S)	56.3	10	(S)	49.8
24314 35	Hardwood faces, including lauan, birch, oak, etc. ....	91	(S)	251.9	90	*15 074.2	285.5
24314 33	Hardboard faces .....	42	**9 070.6	188.1	51	(S)	97.8
24314 37	Other faces .....	13	(S)	23.7	19	*6 004.5	103.7
	Flush type, solid core:						
24314 41	Hardwood faces, including lauan, birch, oak, etc.: Solid wood core .....	55	(S)	105.5	58	(S)	80.7
24314 45	Solid composition core .....	56	(S)	206.3	68	*3 541.1	183.7
24314 46	Hardboard faces .....	15	(S)	16.1	17	*1 142.0	38.0
24314 48	Softwood and other faces .....	18	**1 094.9	55.2	15	*638.7	33.7
24314 00	Wood doors, interior and exterior, including those with glazed sections, n.s.k. ....	(NA)	(X)	111.5	(NA)	(X)	93.2

See footnotes at end of table.

**Table 6a. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1992 and 1987—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 further explanation, see Value of Shipments in appendixes. For meaning of abbreviations and symbols, see introductory text)

Product code	Product	1992			1987		
		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>	
			Quantity <sup>2</sup>	Value (million dollars)		Quantity <sup>2</sup>	Value (million dollars)
<b>2431—</b>	<b>MILLWORK—Con.</b>						
24315	Other wood doors, including garage, screen, storm, etc.	(NA)	(X)	970.9	(NA)	(X)	995.3
24315 81	Garage doors, wood, 1,000 openings	34	(S)	119.6	33	(S)	285.9
24315 75	Screen doors and combination screen and storm doors	14	(S)	20.8	16	(S)	31.3
24315 81	Louver doors, thousands	28	(S)	39.0	35	(NA)	53.7
24315 84	Bifold doors	49	(X)	104.5	58	(X)	127.0
24315 85	Patio doors:						
24315 85	Sliding	41	(X)	237.7	43	(X)	271.5
24315 87	Swinging	31	(X)	198.6	(NA)	(X)	( <sup>3</sup> )
24315 97	Other wood doors, including storm, cabinet, toilet, grain, etc.	89	(X)	216.1	66	(X)	209.5
24315 00	Other wood doors, including garage, screen, storm, etc., n.s.k.	(NA)	(X)	34.6	(NA)	(X)	16.4
24316	Wood moldings except prefinished moldings made from purchased moldings	(NA)	(X)	1 126.7	(NA)	(X)	1 085.5
24316 21	Softwood (includes softwood covered with metal, plastics, etc.):						
24316 31	Pine	89	(X)	661.6	93	(X)	799.9
24316 51	Other softwood species	60	(X)	113.5	42	(X)	88.2
24316 00	Hardwood (including lauan) and hardwood covered with metal, plastics, etc.	174	(X)	279.4	115	(X)	141.2
24316 00	Wood moldings except prefinished moldings made from purchased moldings, n.s.k.	(NA)	(X)	72.2	(NA)	(X)	56.3
24317	Prefinished wood moldings made from purchased moldings	(NA)	(X)	151.2	(NA)	(X)	127.6
24317 25	Softwood, including softwood covered with metal, plastics, etc.	29	(X)	102.3	(NA)	(X)	90.4
24317 71	Hardwood (including lauan) and hardwood covered with metal, plastics, etc.	29	(X)	15.3	17	(X)	26.0
24317 00	Prefinished wood moldings made from purchased moldings, n.s.k.	(NA)	(X)	33.7	(NA)	(X)	11.2
24318	Other millwork products, including stairwork and exterior millwork	(NA)	(X)	978.0	(NA)	(X)	882.4
24318 21	Stairwork, including treads, risers, balusters, brackets, crooks, newels, etc.:						
24318 25	Softwood	75	(X)	114.7	51	(X)	73.5
24318 33	Hardwood	133	(X)	172.0	83	(X)	173.7
24318 35	Exterior wood blinds and shutters, with or without their hardware (excluding fibrous vegetable materials)	35	(X)	24.4	23	(X)	35.1
24318 77	Exterior millwork, including porch columns, porch rails, newels, trellises, and entrances	39	(X)	62.8	40	(X)	58.1
24318 98	Nonstandard or specialty wood moldings, carvings, and ornaments:						
24318 77	Softwood	29	(X)	50.5	22	(X)	20.8
24318 77	Hardwood	78	(X)	75.3	36	(X)	35.8
24318 00	Other millwork products, n.e.c., including interior millwork	272	(X)	433.8	248	(X)	442.1
24318 00	Other millwork products, including stairwork and exterior millwork, n.s.k.	(NA)	(X)	45.4	(NA)	(X)	43.1
24310	Millwork, n.s.k.	(NA)	(X)	1 492.7	(NA)	(X)	1 680.3
24310 00	Millwork, n.s.k. <sup>4</sup>	(NA)	(X)	1 242.5	(NA)	(X)	1 410.6
24310 02	Millwork, n.s.k. <sup>5</sup>	(NA)	(X)	250.2	(NA)	(X)	269.7
<b>2434—</b>	<b>WOOD KITCHEN CABINETS</b>						
	Total	(NA)	(X)	4 763.7	(NA)	(X)	4 216.5
24341	Wood kitchen cabinets and cabinetwork, stock line	(NA)	(X)	1 925.3	(NA)	(X)	1 617.4
24341 11	Wood, 1,000 cabinets	280	**21 373.9	1 672.8	228	**19 814.8	1 278.1
24341 13	Plastics laminated	100	(X)	176.5	103	(X)	266.2
24341 00	Wood kitchen cabinets and cabinetwork, stock line, n.s.k.	(NA)	(X)	78.2	(NA)	(X)	73.1
24342	Wood kitchen cabinets and cabinetwork, custom	(NA)	(X)	1 361.9	(NA)	(X)	1 102.2
24342 12	Wood, 1,000 cabinets	1 051	(S)	938.1	653	(S)	776.0
24342 14	Plastics laminated	448	(X)	311.0	344	(X)	254.3
24342 00	Wood kitchen cabinets and cabinetwork, custom, n.s.k.	(NA)	(X)	112.8	(NA)	(X)	72.0
24343	Vanities and other cabinetwork	(NA)	(X)	505.4	(NA)	(X)	488.6
24343 18	Stock line, 1,000 units	121	**3 048.1	289.9	121	6 365.0	250.2
24343 18	Custom	422	(X)	207.2	283	(X)	178.2
24343 00	Vanities and other cabinetwork, n.s.k.	(NA)	(X)	26.4	(NA)	(X)	40.2
24340	Wood kitchen cabinets, n.s.k.	(NA)	(X)	971.1	(NA)	(X)	1 028.3
24340 00	Wood kitchen cabinets, n.s.k. <sup>4</sup>	(NA)	(X)	708.8	(NA)	(X)	763.2
24340 02	Wood kitchen cabinets, n.s.k. <sup>5</sup>	(NA)	(X)	262.4	(NA)	(X)	265.1

See footnotes at end of table.

**24B-18 MILLWORK, PLYWOOD, & STRUCT. MBRS.**

**MANUFACTURES—INDUSTRY SERIES**

**Table 6a. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1992 and 1987—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 further explanation, see Value of Shipments in appendixes. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	1992				1987			
		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments <sup>1</sup>		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments <sup>1</sup>	
				Quantity <sup>2</sup>	Value (million dollars)			Quantity <sup>2</sup>	Value (million dollars)
<b>2435—</b>	<b>HARDWOOD VENEER AND PLYWOOD</b>								
	Total.....	(NA)	(X)	(X)	2 027.6	(NA)	(X)	(X)	1 834.5
24351	Hardwood plywood.....	(NA)	(X)	(X)	677.0	(NA)	(X)	(X)	758.6
24351 01	Veneer core.....mil sq ft sm..	47	(X)	(X)	822.7				
24351 05	Particleboard core.....mil sq ft sm..	26	(X)	(X)	*101.7				
24351 07	MDF core.....mil sq ft sm..	22	(X)	(X)	**87.5				
24351 47	Other core, including lumber, hardboard, oriented strand board or waferboard.....mil sq ft sm..	15	(X)	(X)	*13.9	69	(X)	(X)	758.6
24351 00	Hardwood plywood, n.s.k.....	(NA)	(X)	(X)	34.5				
24352	Prefinished hardwood plywood made from purchased plywood.....	(NA)	(X)	(X)	189.5	(NA)	(X)	(X)	313.2
24352 00	Prefinished hardwood plywood made from purchased plywood.....mil sq ft sm..	13	(X)	(X)	773.4	16	(X)	(S)	313.2
24353	Hardwood plywood type products.....	(NA)	(X)	(X)	477.3	(NA)	(X)	(X)	235.8
24353 11	Hardwood veneer, reinforced or backed <sup>6</sup> .....mil sq ft sm..	(NA)	(X)	(X)	-	7	(X)	(X)	835.0
24353 31	Hardwood veneered panels <sup>6</sup> .....mil sq ft sm..	32	(X)	(X)	510.9	9	(X)	(X)	**71.3
24353 98	Other hardwood plywood type products, including cellular panels and curved and molded plywood.....mil sq ft sm..	33	(X)	(S)	136.4	39	(X)	(X)	**814.9
24353 00	Hardwood plywood type products, n.s.k.....	(NA)	(X)	(X)	43.9	(NA)	(X)	(X)	148.1
24354	Hardwood veneer, not reinforced or backed <sup>6</sup> .....	(NA)	(X)	(X)	589.2	(NA)	(X)	(X)	421.4
24354 15	Birch.....mil sq ft sm..	12	**513.4	**418.1	30.0	11	486.9	456.1	30.5
24354 17	Maple.....mil sq ft sm..	27	**447.8	439.4	39.5	18	200.3	191.1	22.8
24354 19	Oak.....mil sq ft sm..	54		*1 945.1	220.8	45	1 651.1	1 502.9	149.3
24354 21	Walnut.....mil sq ft sm..	21	(S)	(S)	40.5	22	342.1	342.1	40.7
24354 27	Other domestic hardwoods.....mil sq ft sm..	69	**1 226.2	153.5	58	1 673.3	**1 606.8	116.3	
24354 31	Imported hardwoods.....mil sq ft sm..	6	(S)	(S)	6.0	7	15.6	14.6	4.7
24354 00	Hardwood veneer, not reinforced or backed, n.s.k.....	(NA)	(X)	(X)	98.9	(NA)	(X)	(X)	57.2
24350	Hardwood veneer and plywood, n.s.k.....	(NA)	(X)	(X)	94.6	(NA)	(X)	(X)	105.4
24350 00	Hardwood veneer and plywood, n.s.k. <sup>7</sup> .....	(NA)	(X)	(X)	73.5	(NA)	(X)	(X)	67.0
24350 02	Hardwood veneer and plywood, n.s.k. <sup>8</sup> .....	(NA)	(X)	(X)	21.1	(NA)	(X)	(X)	38.4
<b>2436—</b>	<b>SOFTWOOD VENEER AND PLYWOOD</b>								
	Total.....	(NA)	(X)	(X)	4 752.8	(NA)	(X)	(X)	4 383.0
24363	Softwood plywood type products.....	(NA)	(X)	(X)	132.0	(NA)	(X)	(X)	*135.3
24363 11	Softwood veneer, reinforced or backed <sup>6</sup> .....mil sq ft sm..	(NA)	(X)	(X)	-	9			*285.0
24363 31	Softwood veneered panels <sup>6</sup> .....mil sq ft sm..	9	(X)	(X)	*449.5	8	(X)	(X)	*482.7
24363 98	Other softwood plywood type products, including cellular panels, and curved and molded plywood.....mil sq ft sm..	12	(S)	(S)	26.3	11	(X)	(S)	27.7
24363 00	Softwood plywood type products, n.s.k.....	(NA)	(X)	(X)	-	(NA)	(X)	(X)	1.7
24364	Softwood veneer, not reinforced or backed <sup>6</sup> .....	(NA)	(X)	(X)	597.5	(NA)	(X)	(X)	530.8
24364 00	Softwood veneer, not reinforced or backed.....mil sq ft (1 in. basis)...	63	(S)	**2 713.5	597.5	59	6 938.7	*4 377.5	530.8
24365	Softwood plywood, rough, including touch sanded, interior and exterior.....	(NA)	(X)	(X)	2 709.6	(NA)	(X)	(X)	2 292.3
24365 01	Interior: C - D exterior glue.....mil sq ft (3/8 in. basis)...	28	(X)	(X)	8 944.6	1 863.5	(NA)	(X)	(NA)
24365 05	Underlayment exterior glue.....mil sq ft (3/8 in. basis)...	20	(X)	(X)	2 620.6	539.9	(NA)	(X)	(NA)
24365 11	Other.....mil sq ft (3/8 in. basis)...	17	(X)	(X)	1 205.2	225.1	(NA)	(X)	(NA)
24365 21	Exterior: C - C.....mil sq ft (3/8 in. basis)...	14	(X)	(X)	310.3	68.6	(NA)	(X)	(NA)
24365 23	C - C plugged.....mil sq ft (3/8 in. basis)...	11	(X)	(X)	436.3	96.3	(NA)	(X)	(NA)
24365 00	Softwood plywood, rough, including touch sanded, interior and exterior, n.s.k.....	(NA)	(X)	(X)	116.2	(NA)	(X)	(X)	(NA)
24366	Softwood plywood, sanded.....	(NA)	(X)	(X)	786.4	(NA)	(X)	(X)	756.4
24366 07	Interior.....mil sq ft (3/8 in. basis)...	7	(X)	(X)	170.0	41.0	(NA)	(X)	(NA)
24366 11	Exterior: A - C.....mil sq ft (3/8 in. basis)...	16	(X)	(X)	1 291.3	332.4	(NA)	(X)	(NA)
24366 13	B - B plyform.....mil sq ft (3/8 in. basis)...	9	(X)	(X)	329.0	72.7	(NA)	(X)	(NA)
24366 15	B - C.....mil sq ft (3/8 in. basis)...	20	(X)	(X)	1 042.9	233.5	(NA)	(X)	(NA)
24366 17	Other.....mil sq ft (3/8 in. basis)...	13	(X)	(X)	152.2	34.3	(NA)	(X)	(NA)
24366 00	Softwood plywood, sanded, n.s.k.....	(NA)	(X)	(X)	72.5	(NA)	(X)	(X)	(NA)
24367	Softwood plywood specialties.....	(NA)	(X)	(X)	468.9	(NA)	(X)	(X)	582.5
24367 03	Sidings.....mil sq ft (3/8 in. basis)...	13	(X)	(X)	907.2	245.9	(NA)	(X)	(NA)
24367 21	Overlays.....mil sq ft (3/8 in. basis)...	8	(X)	(X)	236.6	71.4	(NA)	(X)	(NA)
24367 23	Interior decoratives.....mil sq ft (3/8 in. basis)...	3	(X)	(D)	(D)	(NA)	(X)	(NA)	(NA)
24367 25	Other specialties.....mil sq ft (3/8 in. basis)...	8	(X)	(X)	423.7	83.1	(NA)	(X)	(NA)
24367 00	Softwood plywood specialties, n.s.k.....	(NA)	(X)	(X)	(D)	(D)	(NA)	(X)	(NA)
24380	Softwood veneer and plywood, n.s.k.....	(NA)	(X)	(X)	58.4	(NA)	(X)	(X)	85.6
24380 00	Softwood veneer and plywood, n.s.k. <sup>9</sup> .....	(NA)	(X)	(X)	51.7	(NA)	(X)	(X)	71.9
24380 02	Softwood veneer and plywood, n.s.k. <sup>10</sup> .....	(NA)	(X)	(X)	6.7	(NA)	(X)	(X)	13.7

See footnotes at end of table.

MANUFACTURES—INDUSTRY SERIES

MILLWORK, PLYWOOD, & STRUCT. MBRS. 24B-19

**Table 6a. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1992 and 1987—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 further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	1992			1987		
		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>		Number of companies with shipments of \$100,000 or more	Product shipments <sup>1</sup>	
			Quantity <sup>2</sup>	Value (million dollars)		Quantity <sup>2</sup>	Value (million dollars)
<b>2439—</b>	<b>STRUCTURAL WOOD MEMBERS, N.E.C.</b>						
	Total .....	(NA)	(X)	2 334.6	(NA)	(X)	1 887.6
24390	Fabricated structural wood products .....	(NA)	(X)	2 334.6	(NA)	(X)	1 887.6
	Members for heavy timber construction (wood laminates, decking, etc.):						
24390 31	Glued laminated lumber ..... mil bd ft.	61	(S)	271.0	40	*481.6	277.5
24390 33	Sawn lumber .....	34	(X)	61.9	32	(X)	86.3
24390 35	Combination of glued, laminated, and sawn lumber .....	20	(X)	24.2	16	(X)	45.9
24390 51	Roof trusses made of sawn lumber, light construction, sold separately .....	498	(X)	1 231.3	333	(X)	893.8
24390 98	Other fabricated structural wood products, including floor trusses, n.e.c. ....	179	(X)	511.4	84	(X)	195.5
24390 00	Structural wood members, n.e.c., n.s.k. <sup>4</sup> .....	(NA)	(X)	193.8	(NA)	(X)	319.4
24390 02	Structural wood members, n.e.c., n.s.k. <sup>5</sup> .....	(NA)	(X)	40.8	(NA)	(X)	69.2

<sup>1</sup>Data reported by all producers, not just those with shipments of \$100,000 or more.

<sup>2</sup>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: \*10 to 19 percent estimated; \*\*20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

<sup>3</sup>For 1987, the value of code 24315 87 was included with the value of code 24315 97.

<sup>4</sup>Typically for establishments with 5 employees or more.

<sup>5</sup>Typically for establishments with less than 5 employees.

<sup>6</sup>For 1992, veneers which are backed with paper, cloth, or other flexible materials are included in veneer, not reinforced or backed; two-ply veneers are included in veneered panels.

<sup>7</sup>Typically for establishments with 15 employees or more.

<sup>8</sup>Typically for establishments with less than 15 employees.

<sup>9</sup>Typically for establishments with 10 employees or more.

<sup>10</sup>Typically for establishments with less than 10 employees.

**Table 6b. Product Classes—Value of Shipments by All Producers for Specified States: 1992 and 1987**

[Million dollars. Product classes shown are those where the data are 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 1992. For meaning of abbreviations and symbols, see introductory text]

Product class and geographic area	1992 value of product shipments	1987 value of product shipments	Product class and geographic area	1992 value of product shipments	1987 value of product shipments
<b>24311, WOOD WINDOW UNITS</b>			<b>24313, WOOD WINDOW AND DOOR FRAMES, AND DOOR FRAMES SHIPPED IN DOOR UNITS—Con.</b>		
United States .....	2 377.7	1 995.1	Minnesota .....	11.0	2.7
Arizona .....	4.0	(NA)	Oregon .....	180.8	125.8
California .....	11.1	13.6	Pennsylvania .....	8.2	(NA)
Colorado .....	19.4	20.0	Texas .....	17.2	48.0
Massachusetts .....	14.7	16.0	Utah .....	5.8	(NA)
Michigan .....	46.5	19.7	Virginia .....	4.0	(NA)
New York .....	18.0	34.3	Washington .....	18.0	31.8
North Carolina .....	12.2	7.1	Wisconsin .....	6.3	11.2
Ohio .....	100.4	71.8			
Oregon .....	85.8	(NA)	<b>24314, WOOD DOORS, INTERIOR AND EXTERIOR, INCLUDING THOSE WITH GLAZED SECTIONS</b>		
Texas .....	7.3	13.5	United States .....	1 505.4	1 509.6
Virginia .....	80.1	35.2	Alabama .....	67.9	55.4
Washington .....	18.0	7.8	Arizona .....	29.1	29.3
Wisconsin .....	540.6	301.5	California .....	83.8	134.9
			Colorado .....	7.7	5.2
<b>24312, WOOD SASH, EXCLUDING WINDOW UNITS</b>			Florida .....	42.3	44.4
United States .....	131.7	168.7	Georgia .....	24.5	8.7
California .....	2.4	(NA)	Illinois .....	23.1	30.0
Illinois .....	2.6	16.5	Indiana .....	97.4	75.6
New York .....	3.1	(NA)	Iowa .....	33.8	42.5
Wisconsin .....	12.5	(NA)	Kentucky .....	5.1	(NA)
			Louisiana .....	3.8	(NA)
<b>24313, WOOD WINDOW AND DOOR FRAMES, AND DOOR FRAMES SHIPPED IN DOOR UNITS</b>			Massachusetts .....	11.9	17.2
United States .....	448.2	358.4	Michigan .....	86.3	66.6
Alabama .....	3.5	(NA)	Minnesota .....	7.3	5.8
Arizona .....	5.4	(NA)	Missouri .....	6.5	7.8
California .....	79.7	54.1	New Jersey .....	10.5	(NA)
Florida .....	2.6	(NA)	New York .....	31.8	27.4
Kentucky .....	12.2	(NA)	North Carolina .....	40.1	13.8
Massachusetts .....	4.9	4.6	Ohio .....	28.3	67.9

See footnotes at end of table.

**24B-20 MILLWORK, PLYWOOD, & STRUCT. MBRS.**

**MANUFACTURES—INDUSTRY SERIES**

**Table 6b. Product Classes—Value of Shipments by All Producers for Specified States: 1992 and 1987—Con.**

(Million dollars. Product classes shown are those where the data are 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 1992. For meaning of abbreviations and symbols, see introductory text)

Product class and geographic area	1992 value of product shipments	1987 value of product shipments	Product class and geographic area	1992 value of product shipments	1987 value of product shipments
<b>24314, WOOD DOORS, INTERIOR AND EXTERIOR, INCLUDING THOSE WITH GLAZED SECTIONS—Con.</b>			<b>24318, OTHER MILLWORK PRODUCTS, INCLUDING STAIRWORK AND EXTERIOR MILLWORK</b>		
Oregon	93.5	155.4	United States	979.0	982.4
Pennsylvania	59.3	56.8	Alabama	52.8	29.4
South Carolina	14.1	(NA)	Arizona	13.5	10.5
Texas	120.9	124.2	California	108.1	95.5
Utah	2.7	(NA)	Colorado	10.4	19.2
Virginia	28.5	29.1	Connecticut	15.8	17.0
Washington	160.5	119.1	Florida	13.2	15.7
West Virginia	3.1	(NA)	Georgia	29.2	12.8
Wisconsin	257.4	194.1	Illinois	32.6	16.3
			Indiana	21.8	13.6
			Iowa	3.4	11.3
<b>24315, OTHER WOOD DOORS, INCLUDING GARAGE, SCREEN, STORM, ETC.</b>			Kansas	5.5	5.7
United States	970.9	995.3	Kentucky	12.0	15.1
Alabama	25.5	(NA)	Louisiana	2.3	2.5
Arizona	7.2	4.0	Maine	3.8	9.7
Arkansas	2.1	(NA)	Maryland	33.1	52.1
California	71.3	87.3	Massachusetts	17.1	14.9
Colorado	5.4	(NA)	Michigan	32.7	32.7
Florida	13.8	18.9	Mississippi	3.2	2.3
Georgia	13.9	11.0	Missouri	11.2	18.7
Illinois	20.9	18.2	Nevada	4.4	(NA)
Indiana	54.7	34.1	New Hampshire	2.8	7.3
Kentucky	5.3	(NA)	New Jersey	14.1	40.1
Massachusetts	3.7	5.3	New York	33.8	38.8
Michigan	24.0	11.2	North Carolina	31.8	14.5
New York	12.7	22.0	Ohio	68.2	70.8
North Carolina	7.5	10.8	Oklahoma	27.0	(NA)
Ohio	42.0	121.9	Oregon	50.2	22.5
Oregon	37.1	24.8	Pennsylvania	68.9	37.8
Pennsylvania	38.1	75.3	South Carolina	2.7	6.8
South Carolina	5.5	(NA)	Tennessee	23.9	14.2
Texas	89.6	83.4	Texas	48.3	40.8
Virginia	37.5	(NA)	Utah	4.8	2.9
Washington	24.8	15.7	Virginia	49.0	48.5
Wisconsin	78.7	54.0	Washington	17.4	27.7
			Wisconsin	38.5	48.4
<b>24316, WOOD MOLDINGS EXCEPT PREFINISHED MOLDINGS MADE FROM PURCHASED MOLDINGS</b>			<b>24341, WOOD KITCHEN CABINETS AND CABINETWORK, STOCK LINE</b>		
United States	1 126.7	1 085.5	United States	1 925.3	1 617.4
Alabama	2.5	(NA)	Arizona	58.0	24.5
Arizona	14.3	12.8	Arkansas	23.7	4.0
Arkansas	21.3	(NA)	California	80.6	177.4
California	341.7	393.6	Colorado	17.3	13.9
Colorado	7.0	(NA)	Connecticut	9.8	11.9
Florida	17.2	7.2	Florida	37.8	58.2
Georgia	4.4	5.3	Georgia	60.0	44.2
Illinois	18.8	7.5	Illinois	85.2	60.7
Indiana	39.2	16.2	Indiana	197.9	217.7
Kansas	3.2	(NA)	Iowa	42.4	(NA)
Kentucky	3.4	(NA)	Kansas	49.9	48.0
Michigan	14.5	6.2	Kentucky	2.7	(NA)
Minnesota	13.4	9.6	Louisiana	4.4	(NA)
Missouri	4.0	5.7	Maryland	3.9	2.5
Nebraska	2.3	(NA)	Minnesota	161.3	118.2
New Mexico	47.3	25.8	Mississippi	11.8	(NA)
New York	6.1	10.0	Missouri	2.1	(NA)
North Carolina	44.0	28.7	New Jersey	6.8	39.4
Ohio	35.8	12.1	New York	19.6	31.4
Oregon	127.2	184.3	North Carolina	77.3	63.4
Pennsylvania	17.4	9.0	Oklahoma	4.8	2.1
South Carolina	9.3	4.8	Oregon	55.3	37.5
Tennessee	6.1	18.2	Pennsylvania	102.0	128.2
Texas	77.8	116.4	Tennessee	49.2	27.9
Utah	2.4	(NA)	Texas	101.5	73.1
Vermont	2.3	(NA)	Utah	29.0	30.2
Virginia	4.7	6.9	Washington	38.5	32.9
Washington	41.6	18.8	Wisconsin	23.5	2.2
West Virginia	7.1	(NA)			
Wisconsin	49.2	14.2	<b>24342, WOOD KITCHEN CABINETS AND CABINETWORK, CUSTOM</b>		
			United States	1 361.9	1 102.2
<b>24317, PREFINISHED WOOD MOLDINGS MADE FROM PURCHASED MOLDINGS</b>			Alabama	15.2	7.1
United States	151.2	127.6	Arizona	15.4	18.1
California	16.5	22.2	Arkansas	3.3	3.3
Florida	6.1	(NA)	California	164.4	134.8
Illinois	2.8	3.6	Colorado	6.9	3.3
New Hampshire	2.7	(NA)	Connecticut	25.8	18.8
Washington	4.8	(NA)	Florida	59.0	78.0
			Georgia	27.1	20.6
			Hawaii	4.7	(NA)
			Idaho	5.3	3.5

See footnotes at end of table.

**Table 6b. Product Classes—Value of Shipments by All Producers for Specified States: 1992 and 1987—Con.**

[Million dollars. Product classes shown are those where the data are 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 1992. For meaning of abbreviations and symbols, see introductory text]

Product class and geographic area	1992 value of product shipments	1987 value of product shipments	Product class and geographic area	1992 value of product shipments	1987 value of product shipments
<b>24342, WOOD KITCHEN CABINETS AND CABINETWORK, CUSTOM—Con.</b>			<b>24351, HARDWOOD PLYWOOD</b>		
Illinois.....	29.6	23.5	United States .....	677.0	758.6
Indiana.....	79.7	44.0	Arkansas.....	52.4	(NA)
Iowa.....	64.4	27.0	California.....	76.8	83.0
Kansas.....	19.3	11.5	New York.....	3.0	(NA)
Kentucky.....	17.0	7.9	North Carolina.....	114.3	108.9
Louisiana.....	5.1	4.0	Oregon.....	173.3	181.7
Maryland.....	10.8	9.8	Virginia.....	84.8	54.0
Massachusetts.....	18.8	23.3	Wisconsin.....	35.4	23.5
Michigan.....	14.7	8.2	<b>24352, PREFINISHED HARDWOOD PLYWOOD MADE FROM PURCHASED PLYWOOD</b>		
Minnesota.....	98.6	79.3	United States .....	189.5	313.2
Mississippi.....	2.1	4.0	North Carolina.....	3.6	(NA)
Missouri.....	38.1	22.7	<b>24353, HARDWOOD PLYWOOD TYPE PRODUCTS</b>		
Nebraska.....	6.2	6.6	United States .....	477.3	235.8
Nevada.....	7.7	(NA)	California.....	37.5	9.4
New Hampshire.....	5.1	(NA)	Indiana.....	60.4	13.9
New Jersey.....	19.5	27.3	North Carolina.....	81.5	32.2
New Mexico.....	5.8	2.5	Oregon.....	121.3	(NA)
New York.....	41.7	38.3	South Carolina.....	13.3	11.0
North Carolina.....	21.1	13.5	Wisconsin.....	23.5	62.3
North Dakota.....	3.1	2.4	<b>24354, HARDWOOD VENEER, NOT REINFORCED OR BACKED</b>		
Ohio.....	51.8	82.9	United States .....	589.2	421.4
Oklahoma.....	12.4	2.2	Alabama.....	20.1	19.2
Oregon.....	54.7	8.7	Arkansas.....	9.1	6.0
Pennsylvania.....	172.3	204.1	Georgia.....	30.3	18.5
South Carolina.....	7.9	3.8	Indiana.....	104.0	99.1
Tennessee.....	20.5	25.6	Kentucky.....	22.2	11.5
Texas.....	59.1	39.2	Michigan.....	53.8	29.7
Utah.....	22.4	5.9	North Carolina.....	80.1	58.7
Virginia.....	29.8	22.8	Pennsylvania.....	25.2	(NA)
Washington.....	29.7	13.6	South Carolina.....	7.2	9.8
West Virginia.....	2.3	(NA)	Virginia.....	34.7	15.8
Wisconsin.....	44.8	30.7	Wisconsin.....	78.5	42.9
<b>24343, VANITIES AND OTHER CABINETWORK</b>			<b>24353, SOFTWOOD PLYWOOD TYPE PRODUCTS</b>		
United States .....	505.4	468.6	United States .....	132.0	135.3
Alabama.....	7.1	3.6	<b>24354, SOFTWOOD VENEER, NOT REINFORCED OR BACKED</b>		
Arizona.....	5.2	4.9	United States .....	597.5	530.8
Arkansas.....	5.2	(NA)	California.....	37.4	(NA)
California.....	42.8	55.4	Georgia.....	7.4	(NA)
Colorado.....	6.9	4.1	Oregon.....	427.9	377.1
Connecticut.....	4.5	3.3	Washington.....	24.8	36.1
Florida.....	16.1	14.5	<b>24355, SOFTWOOD PLYWOOD, ROUGH, INCLUDING TOUCH SANDED, INTERIOR AND EXTERIOR</b>		
Georgia.....	4.9	8.0	United States .....	2 709.6	2 292.3
Illinois.....	30.0	17.6	Alabama.....	214.1	140.9
Indiana.....	66.0	67.9	Arkansas.....	288.5	175.0
Iowa.....	12.5	19.3	Louisiana.....	378.1	253.4
Kansas.....	3.8	3.4	Oregon.....	574.2	669.8
Kentucky.....	2.1	4.2	Texas.....	259.4	215.3
Louisiana.....	2.4	(NA)	Washington.....	138.1	112.8
Maryland.....	3.8	2.5	<b>24356, SOFTWOOD PLYWOOD, SANDED</b>		
Massachusetts.....	11.4	2.2	United States .....	786.4	756.4
Michigan.....	16.0	15.6	Arkansas.....	48.1	32.5
Minnesota.....	23.0	9.4	Louisiana.....	91.0	17.7
Missouri.....	14.7	8.5	Oregon.....	284.8	438.0
Nebraska.....	2.1	(NA)	Texas.....	72.2	(NA)
Nevada.....	5.4	5.2	Washington.....	88.7	105.2
New Jersey.....	12.5	9.2	<b>24357, SOFTWOOD PLYWOOD SPECIALTIES</b>		
New York.....	5.9	12.3	United States .....	468.9	582.5
North Carolina.....	14.0	12.2	Oregon.....	148.0	247.3
Ohio.....	37.9	15.5	Washington.....	63.2	102.8
Oregon.....	10.1	5.4			
Pennsylvania.....	35.7	67.9			
South Dakota.....	2.0	(NA)			
Tennessee.....	7.0	5.9			
Texas.....	17.5	18.8			
Utah.....	12.9	2.3			
Virginia.....	13.2	22.2			
Washington.....	11.0	6.9			
Wisconsin.....	7.1	10.2			

Note: For qualifications of data, see footnotes on table 6a.

**Table 6c. Historical Statistics for Product Classes—Value Shipped by All Producers: 1992 and Earlier Years**

(Million dollars. For meaning of abbreviations and symbols, see introductory text)

Product code	Product class	1992	1991 <sup>1</sup>	1990 <sup>1</sup>	1989 <sup>1</sup>	1988 <sup>1</sup>	1987	1982	1977
<b>2431-</b>	<b>Millwork</b>	<b>9 183.6</b>	<b>8 463.9</b>	<b>9 052.1</b>	<b>9 223.4</b>	<b>8 973.2</b>	<b>8 800.9</b>	<b>3 986.4</b>	<b>3 693.3</b>
24311	Wood window units	2 377.7	2 099.9	2 163.1	2 135.6	2 037.7	1 995.1	692.1	609.3
24312	Wood sash, excluding window units	131.7	153.2	195.7	209.1	189.2	166.7	60.8	95.4
24313	Wood window and door frames, and door frames shipped in door units	448.2	299.0	327.5	322.5	329.7	358.4	180.2	264.6
24314	Wood doors, interior and exterior, including those with glazed sections	1 505.4	1 517.9	1 672.0	1 663.0	1 521.0	1 509.6	775.5	707.5
24315	Other wood doors, including garage, screen, storm, etc.	970.9	1 036.2	1 079.6	1 098.5	1 037.5	995.3	480.4	479.1
24316	Wood moldings except prefinished moldings made from purchased moldings	1 126.7	937.8	949.7	966.4	1 078.2	1 085.5	507.9	589.1
24317	Prefinished wood moldings made from purchased moldings	151.2	112.3	117.5	124.9	128.7	127.6	99.1	75.0
24318	Other millwork products, including stairwork and exterior millwork	979.0	905.2	1 014.8	1 035.5	1 001.9	882.4	405.4	288.3
24310	Millwork, n.s.k.	1 492.7	1 402.3	1 532.3	1 667.9	1 669.3	1 680.3	777.2	605.1
<b>2434-</b>	<b>Wood kitchen cabinets</b>	<b>4 763.7</b>	<b>4 021.7</b>	<b>4 482.2</b>	<b>4 249.4</b>	<b>4 351.5</b>	<b>4 216.5</b>	<b>2 001.3</b>	<b>1 563.2</b>
24341	Wood kitchen cabinets and cabinetwork, stock line	1 925.3	1 568.4	1 740.8	1 834.5	1 825.1	1 617.4	708.0	689.2
24342	Wood kitchen cabinets and cabinetwork, custom	1 361.9	1 230.9	1 387.9	1 273.4	1 247.3	1 102.2	496.4	433.2
24343	Vanities and other cabinetwork	505.4	517.3	521.6	492.8	481.3	468.6	244.3	148.4
24340	Wood kitchen cabinets, n.s.k.	971.1	705.0	832.1	848.7	997.8	1 028.3	552.6	294.5
<b>2435-</b>	<b>Hardwood veneer and plywood</b>	<b>2 027.6</b>	<b>1 742.8</b>	<b>1 879.2</b>	<b>1 937.1</b>	<b>1 826.8</b>	<b>1 834.5</b>	<b>1 237.0</b>	<b>1 160.0</b>
24351	Hardwood plywood	677.0	771.3	777.9	788.9	790.9	758.6	530.6	455.8
24352	Prefinished hardwood plywood made from purchased plywood	189.5	98.3	163.5	206.0	228.8	313.2	225.8	383.8
24353	Hardwood plywood type products <sup>2</sup>	477.3	244.4	292.5	293.6	243.5	235.8	158.7	60.8
24354	Hardwood veneer, not reinforced or backed <sup>2</sup>	589.2	410.8	422.4	432.3	459.9	421.4	277.7	213.7
24350	Hardwood veneer and plywood, n.s.k.	94.6	218.3	222.8	216.3	103.7	105.4	43.2	46.0
<b>2436-</b>	<b>Softwood veneer and plywood</b>	<b>4 752.8</b>	<b>3 972.2</b>	<b>4 411.8</b>	<b>4 605.0</b>	<b>4 323.6</b>	<b>4 383.0</b>	<b>2 780.0</b>	<b>3 582.3</b>
24363	Softwood plywood type products <sup>2</sup>	132.0	101.8	117.9	156.2	169.5	135.3	73.5	102.6
24364	Softwood veneer, not reinforced or backed <sup>2</sup>	597.5	495.7	581.4	600.8	554.7	530.8	315.8	404.5
24365	Softwood plywood, rough, including touch sanded, interior and exterior	2 709.6	2 147.1	2 302.3	2 433.1	2 208.0	2 292.3	1 404.5	3 054.6
24366	Softwood plywood, sanded	786.4	695.8	773.9	822.0	748.3	572.8	572.8	
24367	Softwood plywood specialties	488.9	475.2	547.2	542.6	554.7	582.5	381.6	
24360	Softwood veneer and plywood, n.s.k.	58.4	56.6	89.1	50.3	88.3	85.6	31.8	20.6
<b>2439-</b>	<b>Structural wood members, n.s.c.</b>	<b>2 334.6</b>	<b>1 717.8</b>	<b>1 982.4</b>	<b>2 099.9</b>	<b>2 006.1</b>	<b>1 887.6</b>	<b>800.2</b>	<b>781.7</b>
24390	Fabricated structural wood products	2 334.6	1 717.8	1 982.4	2 099.9	2 006.1	1 887.6	800.2	781.7

<sup>1</sup>Figures are estimates derived from a representative sample of manufacturing establishments. Standard errors associated with estimates are published in annual survey of manufactures publications for this period.

<sup>2</sup>For 1992, veneers which are backed with paper, cloth, or other flexible materials are included in veneer, not reinforced or backed; two-ply veneers are included in plywood type products.

**Table 7. Materials Consumed by Kind: 1992 and 1987**

(Includes cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendixes. For meaning of abbreviations and symbols, see introductory text)

Material code	Material	1992 delivered cost (million dollars)	1987 delivered cost (million dollars)
	<b>INDUSTRY 2431, MILLWORK</b>		
	Materials, ingredients, containers, and supplies	5 164.2	5 058.2
	Rough lumber:		
242110	Hardwood	249.8	238.0
242121	Softwood	679.1	853.9
	Dressed lumber:		
242117	Hardwood	125.2	75.1
242128	Softwood	503.4	674.6
242170	Softwood cut stock, including window and cabinet parts	533.7	(?)
242620	Hardwood dimension and parts, excluding furniture frames	48.4	(?)
243540	Hardwood veneer	101.3	118.5
	Plywood:		
243510	Hardwood	77.8	59.6
243801	Softwood	20.8	28.1
249310	Particleboard (wood)	52.9	39.8
249340	Hardboard (wood fiberboard)	61.7	43.5
249330	Medium density fiberboard (MDF)	26.1	20.7
321105	Glass (float, sheet, and plate)	257.0	(?)
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes	47.1	94.0
342940	Builders' hardware, including door locks, locksets, lock trim, miscellaneous sash, screen hardware, etc.	241.0	269.8
265001	Paperboard containers, boxes, and corrugated paperboard	49.8	40.8
970099	All other materials and components, parts, containers, and supplies	742.8	2 115.8
971000	Materials, ingredients, containers, and supplies, n.s.k. <sup>3</sup>	1 348.7	1 348.2

See footnotes at end of table.

**Table 7. Materials Consumed by Kind: 1992 and 1987—Con.**

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

Material code	Material	1992 delivered cost (million dollars)	1987 delivered cost (million dollars)
<b>INDUSTRY 2434, WOOD KITCHEN CABINETS</b>			
Materials, ingredients, containers, and supplies .....		2 049.6	1 768.1
Rough lumber:			
242110	Hardwood .....	98.4	60.5
242121	Softwood .....	9.0	3.2
Dressed lumber:			
242117	Hardwood .....	107.4	148.2
242128	Softwood .....	14.2	17.2
242170	Softwood cut stock, including window and cabinet parts .....	8.8	(?)
242820	Hardwood dimension and parts, excluding furniture frames .....	272.1	(?)
243540	Hardwood veneer .....	20.1	22.8
Plywood:			
243510	Hardwood .....	90.2	89.7
243601	Softwood .....	16.7	12.2
249310	Particleboard (wood) .....	160.2	107.0
249340	Hardboard (wood fiberboard) .....	11.6	19.8
249330	Medium density fiberboard (MDF) .....	29.5	20.0
321105	Glass (float, sheet, and plate) .....	4.0	(?)
308007	Plastics products consumed in the form of sheets, rods, tubes, and other shapes .....	36.8	39.4
342940	Builders' hardware, including door locks, locksets, lock trim, miscellaneous sash, screen hardware, etc .....	151.4	121.0
265001	Paperboard containers, boxes, and corrugated paperboard .....	45.5	44.8
970099	All other materials and components, parts, containers, and supplies .....	333.6	309.5
971000	Materials, ingredients, containers, and supplies, n.s.k. <sup>3</sup> .....	640.2	752.8

Material code	Material	1992		1987	
		Quantity <sup>1</sup>	Delivered cost (million dollars)	Quantity <sup>1</sup>	Delivered cost (million dollars)
<b>INDUSTRY 2435, HARDWOOD VENEER AND PLYWOOD</b>					
Materials, ingredients, containers, and supplies .....		(X)	1 228.5	(X)	1 161.1
081111	Stumpage cost (cost of timber, excluding land, cut and consumed at same establishment) .....	(X)	43.1	(X)	29.5
Logs, bolts, and unsliced fitches:					
241111	Hardwood .....	**430.0	183.2	(S)	137.6
241112	Softwood .....	155.5	54.8	84.8	10.0
242101	Lumber, rough and dressed .....	*12.8	9.3	(NA)	37.4
Veneer:					
243540	Hardwood .....	2 583.3	351.2	*3 194.4	313.3
243640	Softwood .....	867.9	61.5	(S)	22.8
Plywood:					
243510	Hardwood .....	(S)	134.3	*1 183.2	152.5
243601	Softwood .....	(D)	(D)	(D)	(D)
249310	Particleboard (wood) .....	(D)	(D)	(D)	(D)
249330	Medium density fiberboard (MDF) .....	**183.9	43.8	*967.3	68.3
249340	Hardboard (wood fiberboard) .....	*109.5	34.9	87.5	21.9
289101	Glues and adhesives .....	(D)	(D)	(D)	(D)
970099	All other materials and components, parts, containers, and supplies .....	(X)	29.1	(X)	23.9
971000	Materials, ingredients, containers, and supplies, n.s.k. <sup>3</sup> .....	(X)	115.5	(X)	175.2
		(X)	152.5	(X)	153.1
<b>INDUSTRY 2436, SOFTWOOD VENEER AND PLYWOOD</b>					
Materials, ingredients, containers, and supplies .....		(X)	3 056.7	(X)	2 712.0
081111	Stumpage cost (cost of timber, excluding land, cut and consumed at same establishment) .....	(X)	471.7	(X)	141.8
Logs, bolts, and unsliced fitches:					
241111	Hardwood .....	100.2	26.6	294.0	68.5
241112	Softwood .....	4 535.3	1 498.2	(S)	1 358.6
242101	Lumber, rough and dressed .....	9.5	2.9	30.0	11.5
Veneer:					
243540	Hardwood .....	*224.1	28.5	78.1	12.0
243640	Softwood .....	(S)	402.3	3 110.7	405.2
Plywood:					
243510	Hardwood .....	(D)	(D)	(D)	(D)
243601	Softwood .....	(D)	(D)	(D)	(D)
249310	Particleboard (wood) .....	**53.9	11.4	248.7	40.3
249330	Medium density fiberboard (MDF) .....	(D)	(D)	(D)	(D)
249340	Hardboard (wood fiberboard) .....	(D)	(D)	(D)	(D)
289101	Glues and adhesives .....	(X)	198.4	(X)	188.2

See footnotes at end of table.

**24B-24 MILLWORK, PLYWOOD, & STRUCT. MBRs.**

**MANUFACTURES—INDUSTRY SERIES**

**Table 7. Materials Consumed by Kind: 1992 and 1987—Con.**

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

Material code	Material	1992		1987	
		Quantity <sup>1</sup>	Delivered cost (million dollars)	Quantity <sup>1</sup>	Delivered cost (million dollars)
<b>INDUSTRY 2436, SOFTWOOD VENEER AND PLYWOOD—Con.</b>					
970099	All other materials and components, parts, containers, and supplies.....	(X)	316.4	(X)	326.4
971000	Materials, ingredients, containers, and supplies, n.s.k. <sup>3</sup> .....	(X)	95.6	(X)	158.6
<b>INDUSTRY 2439, STRUCTURAL WOOD MEMBERS, N.E.C.</b>					
	Materials, ingredients, containers, and supplies .....	(X)	1 342.4	(X)	1 070.0
Rough lumber:					
242110	Hardwood..... mil bd ft.	(S)	59.1	(S)	73.4
242121	Softwood..... mil bd ft.	**498.5	169.3	*459.2	116.9
Dressed lumber:					
242117	Hardwood..... mil bd ft.	(S)	39.2	(S)	24.4
242128	Softwood..... mil bd ft.	**1 272.5	400.2	*1 057.6	309.2
243801	Softwood plywood..... mil sq ft (3/8 in. basis).....	*164.1	40.8	*115.4	22.1
327511	Gypsum building board.....	(X)	.2	(X)	(?)
342940	Builders' hardware, including door locks, locksets, lock trim, miscellaneous sash, screen hardware, etc. ....	(X)	15.6	(X)	10.2
329601	Mineral wool insulation (fibrous glass, rock wool, etc.) .....	(X)	(D)	(X)	(?)
190056	Windows and window units, including wood, metal, and vinyl..... thousands.....	*96.2	6.3	(NA)	(?)
Doors and door units:					
243103	Wood.....	(X)	2.3	(X)	(?)
344211	Metal..... thousands.....	*26.8	2.2	(NA)	(?)
243401	Kitchen cabinets, wood.....	(X)	.4	(X)	(?)
249300	Reconstituted wood products, including particleboard, oriented strandboard, medium density fiberboard, and hardboard.....	(X)	43.8	(X)	(?)
344451	Metal siding, including aluminum, steel.....	(X)	1.1	(X)	(?)
344113	Fabricated structural iron, steel, and aluminum including truss plates.....	(X)	42.1	(X)	33.2
364002	Current-carrying wiring devices, including switches, connectors, lampholders.....	(X)	(D)	(X)	(?)
363001	Household appliances, including refrigerators, cooking equipment, and other household appliances, exc. air conditioners.....	(X)	(O)	(X)	(?)
227001	Floor coverings, textile.....	(X)	3.7	(X)	(?)
970099	All other materials and components, parts, containers, and supplies.....	(X)	201.5	(X)	283.1
971000	Materials, ingredients, containers, and supplies, n.s.k. <sup>3</sup> .....	(X)	313.6	(X)	397.5

<sup>1</sup>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: \*10 to 19 percent estimated; \*\*20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

<sup>2</sup>For 1987, these materials were included with material code 970099.

<sup>3</sup>Total cost of materials of establishments that did not report detailed materials data, including establishments that were not mailed a form.

## Appendix A. Explanation of Terms

This appendix is in two sections. Section 1 includes items requested of all establishments mailed census of manufactures forms including annual survey of manufactures (ASM) forms. Note that this section also includes several items (number of establishments and companies, value added, classes of products, and specialization and coverage ratios) not included on the report forms but derived from information collected on the forms. Section 2 covers supplementary items requested only from establishments included in the ASM sample. Results of the supplementary ASM inquiries are included in table 3c of this report.

### SECTION 1. ITEMS COLLECTED OR DERIVED BASED ON ALL CENSUS OF MANUFACTURES (INCLUDING ASM) REPORT FORMS

**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.

In this report, data are shown for establishments in operation at any time during the year. A comparison with the number of establishments in operation at the end of the year will be provided in the Introduction of the *General Summary* subject report.

**Employment and related items.** The report forms requested separate information on production workers for a specific payroll period within each quarter of the year and on other employees as of the payroll period which included the 12th of March.

**All employees.** This item includes all full-time and part-time employees on the payrolls of operating manufacturing establishments during any part of the pay period which included the 12th of the months specified on the report form. Included are all persons on paid sick leave,

paid holidays, and paid vacations during these pay periods. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average for the payroll periods including the 12th of March, May, August, and November.

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

**All other employees.** This item covers nonproduction employees of the manufacturing establishment including those engaged in factory supervision above the line-supervisor level. It includes sales (including driver salespersons), sales delivery (highway truckdrivers and their helpers), advertising, credit, collection, installation and servicing of own products, clerical and routine office function, 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 to the plant and utilized as a separate work force.

In addition to reports sent to operating manufacturing establishments, information on employment during the payroll period which included March 12 and annual payrolls also was requested of auxiliary units (e.g., administrative offices, warehouses, and research and development

laboratories) of multiestablishment companies. However, these figures are not included in the totals for individual industries shown in this report. They are included in the *General Summary* and geographic area reports as a separate category.

**Payroll.** This item includes the gross earnings of all employees on the payrolls of operating manufacturing establishments paid in the calendar year 1992. 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' supplemental labor costs, both those required by Federal and State laws and those incurred voluntarily or as part of collective bargaining agreements. (Supplemental labor costs are explained later in this appendix.)

As in the case of employment figures, the payrolls of separate auxiliary units of multiestablishment companies are not included in the totals for individual industries or industry groups.

**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.

**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.

The important components of this cost item are (1) 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) electric energy purchased, (3) fuels consumed for heat, power, or the generation of electricity, (4) work done by

others on materials or parts furnished by manufacturing establishments (contract work), and (5) products bought and resold in the same condition. (See discussion of duplication of data below.)

**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. Information on the establishments consuming less than a specified amount (usually \$25,000) of a specific material were not requested to report consumption of that material separately. Also, the cost of materials for the small establishments for which either administrative records or short forms were used was imputed as "not specified by kind." (See Census of Manufactures for the importance of administrative records in the industry.)

**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 resold without further processing. Included are all items made by or for the establishments from materials 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. (See discussion of duplication of data below.)

**Individual products.** As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the 1992 census program, information was collected on the output of almost 11,000 individual product items. The term "product," as used in the census of manufactures, represents the finest level of detail for which output information was requested. Consequently, it is not necessarily synonymous with the term "product" as used in the marketing sense. In some cases, it may be much more detailed and, in other cases, it is more aggregative. For example, "pharmaceutical preparations" was distributed into over 100 terms; whereas, "motor gasoline" was reported as a single item.

Approximately 6,300 of the product items were listed separately on the 1992 census report forms. Data for

about 4,500 products were obtained in the monthly, quarterly, or annual surveys comprising the Current Industrial Reports series of the Census Bureau. Totals for the year 1992 for these items, as derived from the commodity surveys, are shown in the "products shipped" table.

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 1987 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 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.

**Classes of products.** To summarize the product information, the separate products were aggregated into classes of products that, in turn, were grouped into all primary products of each industry. The code structure used is a seven-digit number for the individual product, a five-digit number for the class of product, and a four-digit number for the total primary products in an industry. (See Census of Manufactures, Industry Classification of Establishments, for application of the coding structure to the assignment of SIC codes for establishments.)

In the 1992 census, the 11,000 products were grouped into approximately 1,500 separate classes on the basis of general similarity of manufacturing processes, types of materials used, etc. However, the grouping of products was affected by the economic significance of the class and, in some cases, dissimilar products were grouped because the products were not sufficiently significant to warrant separate classes.

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

in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to 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.

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

For those industries where value of production is collected instead of value of shipments (see footnote in table 1a), 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.

**New and used capital expenditures.** For establishments in operation and any known plants under construction, manufacturers were asked to report their new 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.

The totals for new expenditures include expenditures 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 used plant and equipment (although reported in the census), expenditures for land, and cost of maintenance and repairs charged as current operating expenses.

Manufacturers also were requested to report the value of all used buildings and equipment purchased during the year at the purchase price. 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. Furthermore, if the establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported under used capital expenditures.

Total expenditures for used plant and equipment is a universe figure; it is collected on all census forms. However, the breakdown of this figure between expenditures for used buildings and other structures and expenditures for used machinery and equipment is collected only on the ASM form. The data for total new capital expenditures, new building expenditures, and new machinery expenditures, as well as the data for total used expenditures, are shown in table 3b.

**End-of-year inventories.** Respondents were asked to report their 1991 and 1992 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). 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.

## SECTION 2. ITEMS COLLECTED ONLY ON ASM REPORT FORMS

The following items were collected only from establishments included in the ASM sample:

**Supplemental labor costs.** Supplemental labor costs 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

Because of this change in reporting instructions, the 1982 through 1992 data for inventories and value added by manufacture included in the tables of this report are not comparable to the prior-year data shown in table 1a of this report and in historical census of manufactures and annual survey of manufactures publications.

In using inventory data by stage of fabrication for "all industries" and at the two-digit industry 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 another 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 individual industries, industry groups, and "all manufacturing", which are aggregates of figures reported by establishments in specified industries.

**Specialization and coverage ratios.** These items are not collected on the report forms but are derived from the data shown in table 5b. 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 5a and data on product shipments shown in tables 6a through 6c.

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.

were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

While the excluded items do benefit employees and all or part of their cost generally is similar to the items covered in the ASM labor costs statistics, accounting records generally do not provide reliable figures on net employee benefits of these types.

**Retirements of depreciable assets.** Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during 1992. 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.

**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.

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

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

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

**Depreciable assets.** Total value of gross depreciable assets is collected on all census forms. However, the detail for depreciable assets is collected only on the ASM forms. The data encompass all fixed depreciable assets on the books of establishments at the beginning and end of the year. 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 new and used capital expenditures, less retirements, equalled assets at the end of the year.

**New and used capital expenditures.** The data for total new capital expenditures, new building expenditures, new machinery expenditures, and total used capital expenditures are collected on all census forms. However, the breakdown between expenditures for used buildings and other structures and expenditures for used machinery and equipment is collected only on the ASM form. (See further explanation on capital expenditures in section 1.)

**Quantity of electric energy consumed for heat and power.** Data on the cost of purchased electric energy are collected on all census forms. However, data on the quantity of purchased electric energy are collected only on the ASM forms. 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.

**Breakdown of new capital expenditures for machinery and equipment.** ASM establishments were requested to separate their capital expenditures for new machinery and equipment into (1) automobiles, trucks, etc., for highway use, (2) computers and peripheral data processing equipment, and (3) all other.

The category "automobiles, trucks, etc., for highway use" is intended to measure expenditures for vehicles designed for highway use that were acquired through a purchase or lease-purchase agreement. Vehicles normally operating off public highways (vehicles specifically designed to transport materials, property, or equipment on mining, construction, logging, and petroleum development projects) are excluded from this item.

**Foreign content of cost of materials.** Establishments included in the ASM sample panel were requested to provide information on foreign-made materials purchased or transferred from foreign sources. This includes materials acquired from a central warehouse or other domestic establishment of the same company but made in an operation outside of the 50 States, District of Columbia, Puerto Rico, or U.S. territories.

**Cost of purchased services.** 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 reflect the costs paid directly by the establishment, and exclude 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, such as painting, roof repairs, replacing parts, and overhauling equipment. Such 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 were capitalized are considered capital expenditures for used buildings and machinery and are, 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.

Three basic approaches were utilized to produce these statistics.

1. For items 1 through 6, data were estimated (imputed) for all non-ASM establishments using the available data in the establishment record and industry-based parameters. The statistics were then generated by simply tabulating all census records including the imputed value for non-ASM establishments and the unweighted value for ASM establishments. Separate imputation rates were developed and are shown in the table. For quantity of purchased electricity for heat and power (item 7), a similar procedure was used; however, the imputation parameters were geographically-based instead of industry-based. For quantities of generated less sold electricity, no imputation was performed for non-ASM establishments. The estimates for these items are simply tabulations of unweighted ASM values.

Since the published statistics for these items were developed from the complete census universe and not just the ASM establishments, there are no sampling variances associated with these statistics. However, there is an unknown level of bias for each of the items due to the imputation of the non-ASM establishments. This bias is felt to be small due to the strong correlation between the items being imputed and the collected items that were used to generate the imputed values.

2. For items 8 and 9, the estimates were developed using a ratio estimation methodology. For item 8, an estimate of the breakout of new capital expenditures for machinery and equipment into the three categories was made from ASM establishments reporting these categories. The estimated proportions were then applied to the corresponding census value for new capital expenditures for machinery and equipment to produce the estimates.

The estimates for item 9, foreign content of cost of materials, were developed in a similar manner based on costs of parts, supplies, and components (item 5a) as the control total for the three categories.

For items 8 and 9, an adjustment ratio of the following form was computed:

$$R_j = \frac{NM_c}{TME_{asm}}$$

where:

$NM_c$  = the census value of new capital expenditures for machinery and equipment

$TME_{asm}$  = the weighted ASM value of new capital expenditures for machinery and equipment from reporters of the detailed breakout data

3. For item 10, cost of purchased services, the estimates were made by simply tabulating weighted data for all the ASM records that reported the item. A response coverage ratio (a measure of the extent to which respondents reported for each item) is shown in table 3c for the types of services. It is derived for each item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight, see appendix B) for those ASM establishments that reported the specific inquiry to the weighted total employment for all ASM establishments classified in the industry.

## Appendix B.

# Annual Survey of Manufactures Sampling and Estimating Methodologies

### DESCRIPTION OF SURVEY SAMPLE

The annual survey of manufactures (ASM) contains two components. The mail portion of the survey is a probability sample of about 64,000 manufacturing establishments selected from a total of about 216,000 establishments. These 216,000 establishments represent all manufacturing establishments of multiunit companies and all single-establishment companies mailed schedules in the 1987 Census of Manufactures. This mail portion is supplemented annually by a Social Security Administration list of new manufacturing establishments opened after 1987 and a list of new multiunit manufacturing establishments identified from the Census Bureau's Company Organization Survey.

For the current panel, all establishments of companies with 1987 shipments in manufacturing in excess of \$500 million were included in the survey panel with certainty. There are approximately 500 such companies collectively accounting for approximately 18,000 establishments. For the remaining portion of the mail survey, the establishment was defined as the sampling unit. For this portion, all establishments with 250 employees or more and establishments with a very large value of shipments also were included in the survey panel with certainty. A total of 12,100 establishments were selected from this portion of the universe with certainty. Therefore, of the 64,000 manufacturing establishments included in the ASM panel, approximately 31,000 are selected with certainty. These certainty establishments collectively account for approximately 80 percent of the total value of shipments in the 1987 census.

Smaller establishments in the remaining portion of the mail survey were sampled with probabilities ranging from 0.999 to 0.005 in accordance with mathematical theory for optimum allocation of a sample. The probabilities of selection assigned to the smaller establishments were proportional to measures of size determined for each establishment. The measures of size depend directly upon each establishment's 1987 product class values and the historic variability of the year-to-year shipments of each product class. Product classes displaying more volatile year-to-year change in shipments at the establishment level were sampled at a heavier rate.

This method of assigning measures of size was used in order to maximize the precision (that is, minimize the variance of estimates of the year-to-year change) in the value of product class shipments. Implicitly, it also gave weight differences in employment, value added, and other

general statistics, since these are highly correlated with value of shipments. Individual sample selection probabilities were obtained by multiplying each establishment's final measure of size by an overall sampling fraction coefficient calculated to yield a total expected sample size.

The sample selection procedure gave each establishment in the sampling frame an independent chance of selection. This method of independent selection permits the rotation of small establishments out of a given sample panel without introducing a bias into the survey estimates.

The nonmail portion of the survey includes all single-establishment companies that were tabulated as administrative records in the 1987 Census of Manufactures. Although this portion contained approximately 134,000 establishments, it accounted for less than 2 percent of the estimate for total value of shipments at the total manufacturing level. This portion was not sampled; rather, the data for every establishment in this group were estimated based on selected information obtained annually from the administrative records of the Internal Revenue Service and the Social Security Administration. This administrative-records information, which includes payroll, total employment, industry classification, and physical location of the establishment, was obtained under conditions which safeguard the confidentiality of both tax and census records. Estimates of data other than payroll and employment for these small establishments were developed from industry averages.

The corresponding estimates for the mail and nonmail establishments were added together, along with the base-year differences, as defined in the Description of Estimating Procedure section, to produce the figures shown in this publication.

### DESCRIPTION OF ESTIMATING PROCEDURES

Most of the ASM estimates for the years 1988-1991 were computed using a difference estimation procedure. For each item, a base-year difference was developed. This base-year difference is equal to the difference between the 1987 census published number for an item total and the linear ASM estimate of the total for 1987. The ASM linear estimate was obtained by multiplying each sample establishment's data by its sample weight (the reciprocal of its probability of selection) and summing the weighted values.

These base-year differences were then added to the corresponding current-year linear estimates, which include the sum of the estimates for the mail and nonmail

establishments, to produce the estimates for the years 1983-1991. Estimates developed by this procedure usually are far more reliable than comparable linear estimates developed from the current sample data alone.

However, the 1992 sample estimates for the purchased service items, shown in table 3c, are strictly ASM linear estimates developed only from ASM establishments that reported the specific item.

The remaining estimates in table 3c, showing the breakdown of expenditures for new machinery and equipment and costs of parts (separated into purchases from foreign sources and purchases from domestic sources), were computed as ratio estimates. To do this, linear estimates of the new machinery detail items were developed from the ASM establishments and were ratio adjusted to the corresponding census total for new machinery. In a similar fashion, the ASM linear estimates of the detailed purchased materials items were ratio adjusted to the corresponding census total for cost of parts.

### QUALIFICATIONS OF THE DATA

The estimates developed from the sample are apt to differ somewhat from the results of a survey covering all companies in the sampled lists but otherwise conducted under essentially the same conditions as the actual sample survey. The estimates of the magnitude of the sampling errors (the differences between the estimates obtained and the results theoretically obtained from a comparable, complete-coverage survey) are provided by the standard errors of the estimates.

The particular sample selected for the ASM is one of a large number of 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 theoretical, comparable, complete-coverage values.

Estimates of the standard errors have been computed from the sample data for selected statistics in this report. They are presented in the form of relative standard errors (the standard errors divided by the estimated values to which they refer).

In conjunction with its associated estimate, the relative standard error may be used to define confidence intervals (ranges that would include the comparable, complete-coverage value for specified percentages of all the possible samples).

The complete-coverage value would be included in the range:

1. From one standard error below to one standard error above the derived estimate for about two-thirds of all possible samples.
2. From two standard errors below to two standard errors above the derived estimate for about 19 of 20 of all possible samples.
3. 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 as 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 in the course of 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 only moderately higher. However, for particular estimates, the total error may considerably exceed the standard errors shown.

The concept of complete coverage under the conditions prevailing for the ASM is not identical to the complete coverage of the census of manufactures, as the censuses have been conducted. Nearly all types of operational errors that affect the ASM also occur in the censuses. The ASM and the censuses, are conducted under quite different conditions, and operational errors can be better controlled in the ASM than in the censuses. As a result, for many of the census figures, the errors are of the same order of size as the total errors of the corresponding annual survey estimates. The differences between the census and ASM operating conditions also disturb, to some degree, the comparability of the ASM and census data.

Any figures shown in the tables in this publication having an associated standard error exceeding 15 percent may be of limited reliability. However, the figure may be combined with higher-level totals, creating a broader aggregate, which then may be of acceptable reliability.

# Appendix C. Product Code Reference Tables

## Part 1. Comparability of Product Classes and Product Codes That Changed: 1992 to 1987

1992	1987	1992	1987	1992	1987	1992	1987
24112 20	24112 28	24351 01	24351 00	24490 43	24490 41	24932 05	24932 00
24112 21	24112 28	24351 05	24351 00	24490 43	24490 51	24932 07	24932 00
24112 26	24112 23	24351 07	24351 00	24490 73	24490 71	24932 09	24932 00
24112 26	24112 28	24351 47	24351 00	24490 73	24490 81	24932 21	24932 00
24114 06	24114 08	24365 01	24365 00	24913 02	24913 01	24933 18	24933 15
24114 06	24114 10	24365 05	24365 00	24913 02	24913 03	24933 18	24933 18
24114 31	24114 15	24365 11	24365 00	24913 21	24913 15		
24114 31	24114 29	24365 21	24365 00	24913 21	24913 19	24934 12	24934 00
24114 31	24114 33	24365 23	24365 00			24934 14	24934 00
24114 31	24114 35			24919 11	24919 01	24934 16	24934 00
		24366 07	24366 00	24919 11	24919 03	24934 17	24934 00
24290 87	24290 61	24366 11	24366 00	24919 11	24919 09	24934 18	24934 00
24290 87	24290 83	24366 13	24366 00			24934 19	24934 00
		24366 15	24366 00	24931 20	24931 12		
24315 87	24315 98	24366 17	24366 00	24931 20	24931 14	24936 12	24936 14
24315 97	24315 98			24931 20	24931 18	24936 12	24936 15
		24367 03	24367 00	24931 20	24931 18		
		24367 21	24367 00	24931 21	24931 07	24994 98	24994 61
24317 25	24317 21	24367 23	24367 00	24931 21	24931 09	24994 98	24994 79
24317 25	24317 31	24367 25	24367 00	24931 21	24931 19	24994 98	24994 99

## Part 2. Comparability of Product Classes and Product Codes That Changed: 1987 to 1992

1987	1992	1987	1992	1987	1992	1987	1992
24112 23	24112 26	24351 00	24351 01	24490 41	24490 43	24932 00	24932 05
24112 28	24112 20	24351 00	24351 05	24490 51	24490 43	24932 00	24932 07
24112 28	24112 21	24351 00	24351 07	24490 71	24490 73	24932 00	24932 09
24112 28	24112 28	24351 00	24351 47	24490 81	24490 73	24932 00	24932 21
24114 08	24114 06	24365 00	24365 01	24913 01	24913 02	24933 15	24933 16
24114 10	24114 06	24365 00	24365 05	24913 03	24913 02	24933 18	24933 18
24114 15	24114 31	24365 00	24365 11	24913 15	24913 21		
24114 29	24114 31	24365 00	24365 21	24913 19	24913 21	24934 00	24934 12
24114 33	24114 31	24365 00	24365 23			24934 00	24934 14
24114 35	24114 31			24919 01	24919 11	24934 00	24934 16
		24366 00	24366 07	24919 03	24919 11	24934 00	24934 17
24290 61	24290 87	24366 00	24366 11	24919 09	24919 11	24934 00	24934 18
24290 83	24290 87	24366 00	24366 13			24934 00	24934 19
		24366 15	24366 15	24931 07	24931 21		
24315 98	24315 87	24366 00	24366 17	24931 09	24931 21	24936 14	24936 12
24315 98	24315 97			24931 12	24931 20	24936 15	24936 12
		24367 00	24367 03	24931 14	24931 20		
		24367 00	24367 21	24931 16	24931 20	24994 61	24994 98
24317 21	24317 25	24367 00	24367 23	24931 18	24931 20	24994 79	24994 98
24317 31	24317 25	24367 00	24367 25	24931 19	24931 21	24994 98	24994 98

## Part 3. Current Industrial Reports by Product Code

[Not applicable for this report]

# Publication Program

## 1992 CENSUS OF MANUFACTURES

Publications of the 1992 Census of Manufactures, containing preliminary and final data on manufacturing establishments in the United States, are described below. Publications order forms for the specific reports may be obtained from any Department of Commerce district office or from Data User Services Division, Customer Services, Bureau of the Census, Washington, DC 20233-8300.

### Preliminary Reports

#### Industry series—83 reports (MC92-I-20A(P) to -39D(P))

Preliminary industry data are issued in 83 separate reports covering 459 industries. Preliminary summary data for the United States and States are released in one report.

### Final Reports

#### Industry series—83 reports (MC92-1-20A to -39D)

Each of the 83 reports provides information for a group of related industries ("dairy products" includes industries for butter, cheese, milk, etc.). Final figures for the United States are shown for each of the 459 manufacturing industries on quantity and value of products shipped and materials consumed, cost of fuels and electric energy, capital expenditures, assets, rents, inventories, employment, payroll, payroll supplements, hours worked, value added by manufacture, number of establishments, and number of companies. Comparative statistics for earlier years are provided where available.

For each industry, data on value of shipments, value added by manufacture, capital expenditures, employment, and payroll are shown by employment-size class of establishment, State, and degree of primary product specialization.

#### Geographic area series—51 reports (MC92-A-1 to -51)

A separate report is being published for each State and the District of Columbia. Each report presents data for industry groups and industries on value of shipments, cost of materials, value added by manufacture, employment, payroll, hours worked, new capital expenditures, and number of manufacturing establishments for the State, MA's, counties, and selected places. Comparative statistics for earlier census years are shown for the State and large MA's. Manufacturing totals are presented for each county and for places with significant manufacturing activity. Detailed statistics (including inventories, assets, rents, and energy costs) are presented only in statewide totals.

#### Subject series—3 reports (MC92-S-1 to -3)

Each of the three reports contains detailed statistics for an individual subject, such as concentration ratios in manufacturing, manufacturers' shipments to the Federal Government, and a general national-level summary.

### Reference series—1 report (MC92-R-1)

The *Numerical List of Manufactured and Mineral Products* includes a description of the principal products and services published in the 1992 Censuses of Manufactures and Mineral Industries.

### Location of Manufacturing Plants—1 report (MC92-LM)

This report includes data for number of establishments by four-digit SIC industry and by employment-size class for counties, incorporated places of 2,500 inhabitants or more, and Zip Codes for each State. This report is available only on compact disc-read only memory (CD-ROM).

### Analytical Reports—2 reports (AR92-1 and -2)

#### Exports From Manufacturing Establishments (AR92-1)

This report presents data on exports by two- and three-digit SIC industry groups for the United States and States. Information is presented on value of direct report shipments and estimates of the employment required to manufacture these products. Included are estimates of employment in manufacturing and nonmanufacturing establishments that supply parts, materials, and services for production of manufactured exports.

#### Selected Characteristics of Manufacturing Establishments That Export (AR92-2)

This report presents data on the number of manufacturing companies and establishments that export by major group, State, employment size, and ratios of exports to shipments.

### Electronic Media

All data included in the printed reports are available on CD-ROM. The CD-ROM's provide the same information found in the reports as well as additional information not published in the final reports, such as location of manufacturing plants. Electronic media products are available for users who wish to summarize, rearrange, or process large amounts of data. These products, with corresponding technical documentation, are sold by Data User Services Division, Customer Services, Bureau of the Census, Washington, DC 20233-8300.

## OTHER ECONOMIC CENSUSES REPORTS

Data on retail trade, wholesale trade, financial, insurance, real estate, service industries, construction industries, mineral industries, transportation, communications, utilities, enterprise statistics, minority-owned businesses, and women-owned businesses also are available from the 1992 Economic Census. A separate series of reports covers the census of outlying areas—Puerto Rico, Virgin Islands of the United States, Guam, and the Commonwealth of the Northern Mariana Islands. Separate announcements describing these reports are available free of charge from Data User Services Division, Customer Services, Bureau of the Census, Washington, DC 20233-8300.