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## APPENDIX G

### CATALOGUE AND DESCRIPTION OF STATISTICAL SERIES

The series used in this study are listed in this Appendix by the chapters in which they appear. Immediately following the name of the series is a reference to the tables or charts in which it figures (unless it is referred to only in the text) together with notes describing the source, composition, and coverage of the data. When a series is cited more than once, the reader is referred to the chapter in which its descriptive note appears.

#### CHAPTER 1

- 1 Gross national product and its main components, average changes during 5 business cycles, 1918-38 (Table 1). See notes to Table 1.

#### CHAPTER 2

- 1 Value of inventories by major industrial divisions (Table 3)
  - a Kuznets' estimates, 1918-33
  - b Department of Commerce estimates, modified by the National Bureau of Economic Research, 1928-39Kuznets' estimates of the value of manufacturers' inventories described briefly in Ch. 3 and in detail in App. A. Department of Commerce estimates described more briefly in Ch. 3 and App. A. Further references to sources of Kuznets' estimates of inventories held by other divisions may be found in App. F.

#### CHAPTER 3

- 1 Coke production (Tables 5-13; Charts 1-2)
  - 2 Railroad bond yields (Tables 14, 16-19)
  - 3 Deflated clearings (Tables 16-19)
  - 4 Pig iron production (Tables 16-19)
  - 5 Railroad stock prices (Tables 16-19)
  - 6 Shares traded (Tables 16-19)
  - 7 Call money rates (Tables 16-19)
- These series, illustrating and testing NBER methods of computing cycle measures, described in *Measuring Business Cycles*, p. 25, note to Table 4, and p. 210, note 7.

## CHAPTER 4

- 1 Manufacturers' inventories, current prices, total and ten groups
    - a Kuznets (Tables 20-21; Charts 3-4)
    - b Dun and Bradstreet (Chart 3)
    - c Schmidt-Young (Chart 3)
    - d Terborgh (Chart 3)
    - e Currie (Chart 3)
    - f National Industrial Conference Board index (Chart 3)
    - g Department of Commerce (Chart 3)

These series described briefly in text; for detailed descriptions see App. A. Kuznets' figures are given in Table 107.
  - 2 Manufacturers' inventories, constant prices, total and ten groups
    - a Kuznets (Tables 22-23; Charts 5-6)

The method by which estimates in current prices are adjusted for changes in prices described in text; for detailed description see App. A, Sec. 2. The figures are given in Table 108.

    - b Terborgh (Chart 5)

See *Federal Reserve Bulletin*, July 1941, pp. 613-7, also references under series 1d above
  - 3 Inventories, current prices, 5 major industrial divisions: manufacturing, trade, transportation and other public utilities, agriculture, and mining
 

Kuznets' estimates (Tables 24-25; Chart 7)

For 1918-33, data are from *Commodity Flow and Capital Formation*, Part VII, where the methods of estimation are described fully. The series extended to later years by me with help of data provided by Kuznets. Estimates of inventory investments derived from these figures are described by Kuznets in *NBER Bulletin 74* and in *National Product since 1869*. Certain revisions of Kuznets' series are described in notes to Table 3. For detailed information on manufacturers' inventories see App. A. Figures are given in Table 110.
  - 4 Inventories, constant prices, 5 major industrial divisions (Tables 24-25; Chart 8)
- See series 3 above. Figures are given in Table 111.

## CHAPTER 5

- 1 Manufacturers' inventories, current prices, Kuznets' estimates (Tables 26-27; Chart 9)
- See Ch. 4, series 1a
- 2 Manufacturers' gross sales, current prices (Tables 26-27; Chart 9)
- See Ch. 6, series 2. Figures are given in Table 113.
- 3 National Industrial Conference Board indexes of manufacturers' inventories and of shipments (Chart 10)
- See Ch. 4, series 1f. NICB indexes of shipments, derived by essentially similar methods, described in the same source.

- 4 Manufacturers' inventories, constant prices, Kuznets' estimates (Tables 28-29; Chart 11)  
See Ch. 4, series 2a
- 5 Federal Reserve Board indexes of manufacturing output at year ends: total and 10 manufacturing groups (Tables 28-29; Chart 11)  
The basic data for these series are the indexes computed by FRB and published in *Federal Reserve Index of Industrial Production, October 1943* (Washington, D. C., Board of Governors of Federal Reserve System). The FRB indexes were combined into industry groups comparable with those to which our inventory data refer; end of year indexes are averages of December and January. These procedures are described in the text, Ch. 5, note 9. The resulting year end series are given in Table 115.

## CHAPTER 6

- 1 Manufacturers' inventories, current prices, Kuznets' estimates (Tables 36-37; Chart 12)  
See Ch. 4, series 1a
- 2 Manufacturers' gross sales, current prices (Tables 31-32, 36-37; Chart 12)  
See Ch. 5, series 2
- 3 Inventory-sales ratios, manufacturing (Tables 30-32; Chart 12)  
Computed from series 1 and 2 above. Series for calendar years computed by method described in note to Table 30. Series for year ends are averages of sales for pairs of adjoining years. Resulting sales figures were then divided into year end inventory figures. Ratios are given in Table 114.
- 4 NICB indexes of manufacturers' inventories and shipments (Chart 13)  
See Ch. 5, series 3, and Ch. 4, series 1f
- 5 NICB indexes of manufacturers' inventory-shipments ratios (Table 33; Chart 13)  
Computed from NICB inventory and shipments indexes described above.
- 6 Manufacturers' inventories, constant prices, Kuznets' estimates (Tables 36-37; Chart 14)  
See Ch. 4, series 2a
- 7 FRB indexes of manufacturing output at year ends (Tables 34-37; Chart 14)  
See Ch. 5, series 5
- 8 Indexes of manufacturers' inventory-output ratios (Table 34; Chart 14)  
Computed from manufacturers' inventories in constant prices and FRB year end indexes of manufacturers' output. Resulting indexes are given in Table 116.

## CHAPTER 7

- 1 Manufacturers' inventories, percentage distribution by stage of fabrication (Table 38; Chart 15)
  - a Relative importance of finished goods in total inventories on December 31, 1936 and 1937
  - b Relative importance of raw materials, goods in process, and finished goods on December 31, 1938 and 1939, and annual averages of monthly standings, 1939-45  
The sample reporting at monthly intervals to Department of Commerce is described in App. A.
- 2 Finished goods and all other manufacturers' stocks, average values as percentage of total stocks at year ends, 1936-39; total and 10 manufacturing groups (Table 39)  
The figures, from Census of Manufactures, 1937, and 1939, are not adjusted for underreporting. They include returns by establishments representing 94.6 percent of the total value of products in 1937 and 96.4 percent in 1939.
- 3 Ratio of goods in process to total manufacturers' inventories on December 31, 1938 and 1939 (Table 40)  
Based on returns from corporations reporting to Federal Trade Commission. The character of sample and method used to calculate the importance of goods in process described in Ch. 7 and in App. C.

## CHAPTER 9

The time series studied in Chapter 9 are all described in the statistical notes to Chapter 10. References to series numbers below indicate the appropriate notes to Chapter 10.

## RAW COTTON

- 1 Stocks at mills (Tables 43-44), series 4
- 2 Consumption (Tables 43-44), series 6

## RAW SILK

- 3 Stocks at manufacturers (Tables 43-44), series 10
- 4 Deliveries to mills (Tables 43-44), series 12

## RAW CATTLE HIDES

- 5 Stocks in tanners' hands (Tables 43-44), series 16
- 6 Wettings (Tables 43-44), series 18

## CRUDE RUBBER AND RELATED SERIES

- 7 Stocks in and afloat for United States (Tables 43-44), series 22
- 8 Automobile tire, pneumatic casings, production (Tables 43-44), series 29

## COTTONSEED

- 9 Stocks at mills, series 30

## RAW SUGAR

- 10 Stocks at ports (Tables 43-44), series 33
- 11 Meltings at ports (Tables 43-44), series 34

## CRUDE PETROLEUM

- 12 Refinable petroleum in pipelines and at tank farms and refineries (Tables 43-44), series 36
- 13 Consumption (Tables 43-44), series 37

## NEWSPRINT

- 14 Stocks at and in transit to publishers (Tables 43-44), series 39
- 15 Consumption (Tables 43-44), series 40

## IRON ORE

- 16 Stocks at furnaces, Lake Superior region, series 41

## LEAD

- 17 Stocks at warehouses (Tables 43-44), series 47
- 18 Imports (Tables 43-44), series 48

## CHAPTER 10

## RAW COTTON

- 1 Total stocks, 1912-44, (a) annual, July 31 (Chart 16); (b) average monthly standings during crop years (Chart 17)

*Unit:* running bale

*Sources and Coverage:* 1912-22, N. Y. Cotton Exchange Service; 1923-44, Bureau of Census in accordance with Acts of Congress approved 1912, 1924, and 1938. Data published in Department of Agriculture, *Agricultural Statistics, 1939*, p. 108, and *1945*, p. 76. All holders July 31st of each year.

The total figures include stocks on farms and in transit, in warehouses and at mills. As of July 31st about 75 percent of total stocks are in warehouses; stocks on farms and in transit, taken together, are at their lowest point for the year on this date. Running bales vary in weight according to locality, market price of cotton, and weather and crop conditions. Round bales counted as half bales. Linters (short staple fibers adhering to cottonseed after ginning) excluded.

- 2 Stocks in public storage and at compresses (warehouse stocks), 1912-42: (a) end of crop year (Chart 16); (b) average monthly standings (Charts 17-18)

*Unit:* running bale

*Source and Coverage:* Cotton Production and Distribution, Bureau of Census *Bulletin 135*, pp. 57-8, and subsequent bulletins. Cotton in independent warehouses and other public storage places and at compresses comprise all cotton held in such establishments regardless of ownership. Certain port stocks included. Foreign cotton on

hand included with domestic. Round bales counted as half bales; foreign cotton computed in equivalent 500 pound bales. Linters excluded.

- 3 Visible supply, 1869-1940 (a) end of crop year (Chart 16); (b) average monthly standings (Chart 17)  
*Unit:* running bale  
*Source and Coverage:* *Commercial and Financial Chronicle*; all stocks in public warehouses in principal ports and interior towns at which raw cotton is held as well as cotton on shipboard but not yet cleared. Total visible supply derived by NBER by adding stocks at United States ports and at interior towns. Because published figures are based on a changing list of ports and towns, the series was divided into overlapping segments. The list of ports and towns changes slightly within each segment but relative effect negligible.
- 4 Stocks at mills (consuming establishments), monthly 1912-42 (Chart 18)  
*Unit:* running bale  
*Source and Coverage:* See series 2 above; all consuming establishments, as required by Acts of Congress approved 1912, 1924, and 1938.
- 5 Consumption, annual (years beginning September 1, 1904-13; years beginning August 1, after 1913), 1904-44  
*Unit:* equivalent bale of 500 lbs., gross weight.  
*Source and Coverage:* Cotton Production and Distribution, Bureau of Census *Bulletin 182*, p. 52. All consuming establishments covered. Bales are considered consumed when opened at mill. Linters excluded in 1908 and following years. Separate figures not obtainable prior to that date. Original data in running bales converted by NBER to equivalent 500 pound bales, gross weight, by using average net weight of running bales reported to the census. Net weight of 478 pounds treated as equivalent of 500 pounds, gross weight.
- 6 Consumption, monthly, 1912-40 (Chart 18)  
*Unit:* running bale  
*Source and Coverage:* Bureau of Census *Bulletin 135*, pp. 57-8, and subsequent bulletins.  
 See series 5 above.
- 7 Production (crop), annual, 1866-1944 (Chart 29)  
*Unit:* equivalent bale of 500 lbs., gross weight  
*Sources and Coverage:* 1866-98, Department of Agriculture; Cotton Crop of the United States, 1790-1911, Bureau of Statistics *Circular 32*, Aug. 1912. 1866-68, 1870-78, and 1880-83, figures are for commercial crop as estimated annually by Latham, Alexander & Co. in *Cotton Movement and Fluctuations*. 1884-88 and 1890-98, Department of Agriculture estimates based upon data furnished by officials of rail

and water lines, of mills, and by special agents of the Department at southern ports and important receiving points in the interior. 1869, 1879, and 1889, figures compiled from census returns. 1899-1944, *Agricultural Statistics*, 1939, pp. 102-3, and 1945, p. 70.

*Circular 32* rather than *Agricultural Statistics* was used through 1898 since data for this period had been already converted to 500 pound bales. Comparison of running bales data in *Circular 32* before conversion with those in *Agricultural Statistics*, 1939, shows only minor revisions. Linters excluded after 1898. Separate figures for linters unavailable prior to 1899.

8 Exports, annual, 1866-1944

*Unit*: see series 7 above

*Source and Coverage*: *Agricultural Statistics*, 1941, pp. 116-7, and 1946, p. 72, derived from data furnished by Department of Commerce. Linters excluded after 1913. Separate figures for linters unavailable prior to 1914.

RAW SILK

9 Stocks at warehouses, monthly, 1920-41 (Chart 19)

*Unit*: picul bale, approximately 132¼ lbs.

*Sources*: 1920-30, Silk Association of America, *Silkworm*. 1931-41, Commodity Exchange, Inc., New York; published in its *Daily Market Report*, *Monthly Statistical Supplement: Raw Silk*, July 1933, and subsequent issues.

*Coverage*: Main warehouses in New York and Hoboken. Data include Commodity Exchange certified stocks and stocks at terminals. The Silk Association (*Mid-Year Report*, 1929, p. 13) indicates that relatively small stocks, about 2 percent of the total, are held at railroad terminals in some years.

10 Stocks at manufacturers, monthly, 1921-34 (Chart 19)

*Unit*: see series 9 above

*Sources and Coverage*: Silk Association of America; 1921-29, data published in *Survey of Current Business*, March 1925, p. 27, and 1932 Supplement; 1930-34, see series 9 above. 35-60 percent of all silk manufacturers and throwsters covered, averaging about 45 percent for most of the year 1924. Information for later years unavailable. Hosiery manufacturers not included. The *Survey of Current Business* states that, owing to varying number of mills reporting, original figures were prorated up to 100 percent by dividing stocks reported by percentage of trade they are estimated to represent. Maximum reporting capacity (60 percent in April and May 1923), coming immediately after a month of minimum reporting capacity (35 percent in March 1923), indicates by the close correspondence of these prorated totals that the prorating represents the situation quite accurately.



- 11 Total visible stocks, monthly, 1923-36; 1930-41  
*Unit:* see series 9 above  
*Source and Coverage:* Commodity Exchange, Inc., N. Y.; 1923-36, data published in *Survey of Current Business*, July 1936, p. 20, and Dec. 1936, p. 57; 1930-41, Feb. 1937, p. 20, and subsequent issues. First segment represents stocks of raw silk held in New York warehouses, in Japanese ports, and the estimated amount in transit between Japan and United States at end of month. Second segment is the series of the first segment revised to include stocks weighed and awaiting shipment in the ports of Yokohama and Kobe, Japan. For all practical purposes the second segment may be treated as continuous with the first; the two segments were spliced at July 1930.
- 12 Deliveries to mills, monthly, 1920-41 (Chart 19)  
*Unit:* see series 9 above  
*Sources:* 1920-June 1929, Silk Association of America; thereafter, Commodity Exchange, Inc., N. Y. 1920-June 1929, data published in Textile Economics Bureau, Inc., *Rayon Organon*, Jan. 1940, special supplement, p. 26. July 1929-41, see series 9 above.  
*Coverage:* Deliveries to mills were obtained by adding to or subtracting from imports during a given month the difference in United States stock position at beginning and end of month. Reexports included. Imports are based on ships' manifests; time allowed for imports received at Pacific ports to reach New York overland. Warehouse stocks, reported by main warehouses in New York and Hoboken, include Commodity Exchange certified stocks and stocks at terminals. See also description of warehouse stocks, series 9 above, and of imports, series 13 below.
- 13 Imports, monthly, 1867-86; 1882-1924; 1919-38  
*Unit:* pound  
*Sources and Coverage:* Through June 1914, derived from publications of Bureau of Foreign and Domestic Commerce (or predecessor agencies); thereafter, *Monthly Summary of Foreign Commerce of the United States*. 1867-86 segment excludes waste raw silk, data for which are unavailable prior to 1882. Total imports included in the first two segments, but for 1919-38 data are for net imports, i.e., total imports minus reexports as computed by NBER. Cocoons excluded throughout except from July 1930 to August 1936 when not separable from waste raw silk. They are relatively unimportant in other years. Beginning with 1934, imports are for consumption instead of general imports, but data are treated as continuous. Imports for consumption consist of goods entered for immediate consumption and withdrawals from warehouses for consumption. Prior to 1934 published data were based on imported merchandise entered for immediate consumption and merchandise entered for storage in bonded warehouses.

## RAW CATTLE HIDES AND RELATED SERIES

- 14 Stocks in all hands, monthly, 1920-43 (Chart 23)  
*Unit:* one hide  
*Sources and Coverage:* Through April 1932, Bureau of Census, *Monthly Report on Hides, Skins and Leather*; thereafter, reports of Tanners' Council of America. Through May 1932, data were collected by Bureau of Census from all holders: packers, butchers, dealers, importers, and tanners. Beginning June 1932, changes in stocks are computed by Tanners' Council from wettings of cattle hides and movement into sight of cattle hides. Since the latter do not reflect fluctuations in holdings by dealers of 'country hides', the computed stocks series does not represent total raw hide stocks accurately. See series 17 and 18 below. Kip sides excluded.
- 15 Stocks in dealers' and importers' hands, monthly, 1922-39 (Chart 23)  
*Unit:* one hide  
*Source and Coverage:* NBER computations from raw cattle hide stocks in all hands and stocks in hands of tanners. See series 14 above and 16 below. Represented are all stocks other than those held by tanners, subject to limitations of series 14 with respect to omission of hides from uninspected slaughter in hands of dealers.
- 16 Stocks in tanners' hands, monthly, 1920-41 (Chart 23)  
*Unit:* one hide  
*Source and Coverage:* Tanners' Council. Includes practically all tanners (98 percent of industry's output although less by number of establishments).
- 17 Total movement into sight, monthly, 1921-41 (Chart 22)  
*Unit:* one hide  
*Sources:* 1921-34, Tanners' Council; 1935-41, Commodity Exchange, Inc., N. Y., *Daily Market Report, Monthly Statistical Supplement: Hides*, July 11, 1941.  
*Coverage:* Before May 1932, data derived by Tanners' Council from raw stocks in all hands and cattle hide wettings, the sum of wettings and the change in raw stocks being taken to represent movement into sight. As raw stocks were reported to the census, the derived series on movement into sight is considered reliable. Beginning May 1932, movement into sight series was estimated by adding federally inspected slaughter, net imports, and tanners' receipts of country hides, that is, hides other than those from federally inspected slaughter (by farmers, local butchers, or farm death of animals not slaughtered). Since country hides are also received and held by many intermediaries before they reach tanners, the estimate of movement into sight is deficient with respect to changes in these holdings. This class of stocks amounted to about 10 percent of total raw stocks during census period. The implicit assumption that such stocks remain constant means that whenever they increase,

both movement into sight and raw stocks will be somewhat lower than they should be. The reverse is true when dealers' stocks of raw hides from uninspected slaughter decrease.

Data are for cattle hides only, since kip sides are not distinguished from calf skins in basic series.

- 18 Wettings, monthly, 1921-44 (Charts 20, 22-23)  
*Unit:* one hide  
*Sources:* 1921, computed by NBER from data supplied by Tanners' Council; 1922-34 and 1941-44, Tanners' Council; 1935-40, see series 17 above.  
*Coverage:* Before April 1927, Tanners' Council computed the series by determining the sum of the change in stocks in process and production of all cattle hide leathers, both reported to Bureau of Census. To eliminate kip sides wettings, 10 percent was deducted from total wettings (the average relation of reported wettings of kips to total wettings as reported to the census in 1928-30). Data for 1921 computed by NBER by deducting 10 percent from Tanners' Council figures for 'all wettings'. April 1927-32, series compiled by census from reports from the whole industry. Since 1932, wettings collected by the Council from almost all tanners raised by industry total.
- 19 Net imports, monthly, 1919-41 (Chart 21)  
*Unit:* one hide  
*Source and Coverage:* Tanners' Council; data compiled from reports of Department of Commerce. Prior to 1934, net imports equal total imports minus exports and reexports; beginning 1934, net imports equal imports for consumption only (excluding hides earmarked for reexport), minus exports.
- 20 Wholesale price of hides, packers, heavy native steers, Chicago, monthly, 1890-1939 (Chart 21)  
*Unit:* cents per lb.  
*Source:* Department of Labor, Bureau of Labor Statistics: through 1931, published in Wholesale Prices, 1931, BLS *Bulletin* 572, p. 34, and previous bulletins on wholesale prices; beginning January 1932, monthly bulletins.  
*Coverage:* Data indicate the price of green, salted, packers', heavy native steer hides, f.o.b. Chicago. Quotations are from *Shoe and Leather Reporter* for first of the month, 1890-96; average monthly price, 1897-1908; first of the month, 1909-13; first Wednesday in month, 1914-17; beginning 1918, monthly average.
- 21 Cattle slaughtered under federal inspection, monthly, 1907-42 (Chart 20)  
*Unit:* one head  
*Source and Coverage:* Department of Agriculture, Bureau of Agricultural Economics; published in Production and Marketing Admin-

istration, *Livestock Market News Statistics and Related Data, 1947*, p. 34. Data cover number of animals slaughtered under federal inspection, including rejected carcasses. In 1940 such slaughter accounted for about 65 percent of all cattle slaughtered (see figures for federally inspected and total slaughter in source given above).

Retail butchers, dealers, farmers, and establishments whose products are produced and distributed within the state in which they are located are not subject to federal inspection. Government relief slaughter (June 1934-February 1935 and August-September 1936) excluded.

## CRUDE RUBBER AND RELATED SERIES

- 22 Stocks in and afloat for United States, monthly, 1923-40 (Charts 24 and 28)  
 Unit: long ton  
 Source and Coverage: Data computed by NBER by adding stocks in and afloat for the United States as published in *Survey of Current Business*, 1932 Supplement, pp. 248-9, and subsequent issues.  
 a) Stocks in the United States: 1923-26, data compiled by Rubber Manufacturers' Association, quarterly data through third quarter 1924 interpolated monthly by NBER; 1927-40, data derived from end of year stocks shown by surveys of Bureau of Foreign and Domestic Commerce, Leather and Rubber Division, for each year except 1927-29 when a year end stock figure for 1930 was used. To year end stocks are added Department of Commerce figures for total imports. From this total the Rubber Manufacturers' Association consumption figures raised to 100 percent plus reexports are deducted to obtain month end stock figures. Relatively small revisions were required to reconcile estimated monthly stocks with year end surveys.  
 b) Stocks afloat for the United States: prior to 1926 and beginning September 1930, compiled by Rubber Manufacturers' Association; January 1926-August 1930, compiled by Bureau of Foreign and Domestic Commerce. Stocks afloat for the United States government are included. For January 1926-August 1930 the figures are practically complete; prior to and since that period coverage at least 75 percent complete.
- 23 World stocks, annual, 1923-27 (Charts 27-28)  
 Unit: long ton  
 Source: George Rac, *Journal of the Royal Statistical Society*, New Series, CI, Part II, 1938, Table XV, p. 347.
- 24 Consumption, United States, annual, 1919-37 (Chart 25)  
 Unit: long ton  
 Sources and Coverage: Estimates of Department of Commerce and Rubber Manufacturers' Association; published in *Survey of Current*

- Business, 1942 Supplement, p. 160.* The Association reports consumption (annually through 1923, monthly beginning 1924) on basis of reports from both member and nonmember companies. The reported figures were raised to industry totals as indicated by data from Census of Manufactures prior to 1926 and thereafter by annual surveys of the rubber industry by Bureau of Foreign and Domestic Commerce. Included in total rubber consumption are all grades of rubber.
- 25 Consumption, world, annual, 1919-37 (Charts 25 and 27)  
*Unit:* long ton  
*Source and Coverage:* See series 23 above, *ibid.*, Table VII, p. 338. Estimated on the basis of net imports into manufacturing countries, adjusted for changes in stocks in those countries where data are available except in the cases of the United States for which available consumption data were used from 1920 on (see series 24 above) and the United Kingdom for which consumption data are available beginning 1935.
- 26 Prices, London, annual, 1920-36 (Chart 26)  
*Unit:* pence per pound  
*Source:* see series 23 above, *ibid.*, Table II, p. 320
- 27 Acreage yielding rubber, annual, 1927-36 (Chart 26)  
*Unit:* acre  
*Source:* Estimated by NBER from Rae, *op. cit.* (see series 23 above). Annual increments to planted acreage were added to acreage in 1927, allowing for an 8-year lag between planting and maturity.
- 28 Increment to acreage, annual, 1920-36 (Chart 26)  
*Unit:* acre  
*Source:* see series 23 above, *ibid.*, Table II, p. 320
- 29 Automobile tire, pneumatic casings, production, monthly, 1921-41 (Chart 24)  
*Unit:* one pneumatic casing  
*Source and Coverage:* Rubber Manufacturers' Association; data published in *Survey of Current Business*, May 1939, p. 16, and subsequent issues. Coverage of figures from 75-80 percent during 1921-28 to 97 percent 1934-July 1935, and a slightly lower percentage thereafter, according to *Survey of Current Business, 1942 Supplement*, note 1 to p. 161. Data raised by Association to represent industry totals on basis of biennial Censuses of Manufactures.
- COTTONSEED
- 30 Stocks at mills, monthly, 1916-41 (Charts 29-30)  
*Unit:* short ton  
*Source and Coverage:* Bureau of Census *Bulletin 135*, p. 95, and subsequent bulletins. All cottonseed mills in conformity with Act of Congress, August 7, 1916.

- 31 Crude cottonseed oil production, monthly, 1916-41 (Charts 29-30)  
*Unit:* pound  
*Source and Coverage:* Bureau of Census *Bulletin 135*, p. 95, and subsequent bulletins. Data in source, cumulative from August 1 to July 31 of following year, were converted by NBER into regular monthly production data.
- 32 Cotton crop (Chart 29)  
 See series 7 above

## RAW CANE SUGAR

- 33 Stocks at ports, monthly, 1890-1940; 1920-44 (Chart 31)  
*Unit:* long ton  
*Source:* Willett and Gray, Inc., *Weekly Statistical Sugar Trade Journal*, January review issues for first segment; weekly issues for second segment.  
*Coverage:* Stocks held by both importers and refiners, but bulk of stock is held by refiners. Includes all sugar after arrival in port and before melting. Sugar purchased but not yet arrived is excluded. The original data were compiled in two overlapping segments: 1890-1940 and 1920-44. The first segment includes stocks at New York, Boston, and Philadelphia, 1890-February 1922. An inconsequential quantity is reported at Baltimore also before 1903. Beginning March 1922, Baltimore is again reported reflecting the establishment of a refinery. The second segment includes cities previously mentioned plus Savannah, New Orleans, Galveston, and San Francisco, and, beginning April 1929, Norfolk.  
 The original data are for given weekdays nearest the ends of months. The days differ for cities in the first and second segments and change from time to time. Combinations were made to reflect the situation as near end of month as possible.
- 34 Meltings at ports, monthly, 1890-1930; 1920-40 (Chart 31)  
*Unit:* long ton  
*Source:* 1890-1930, see series 33 above. 1920-40, *Survey of Current Business*, Oct. 1937, p. 17, and subsequent issues.  
*Coverage:* Refineries at four ports, New York, Boston, Philadelphia, and Baltimore; then at eight ports, the foregoing plus New Orleans, Savannah, Galveston, and San Francisco. Monthly totals computed from weekly reports by prorating data for overlapping weeks. Figures for New Orleans are partly estimated.
- 35 Total supply, annual (year beginning July), 1899-1939  
*Unit:* short ton  
*Sources and Coverage:* Computed by NBER from series compiled by Bureaus of Agricultural Economics and of Foreign and Domestic Commerce; published in *Agricultural Yearbook*, 1924, p. 801, and *Agricultural Statistics*, 1940, p. 143, and subsequent issues.

Series consists of: (a) Cane sugar produced in continental United States

b) Raw sugar brought in duty free from insular possessions: Hawaii, Puerto Rico, and the Philippine Islands; Virgin Islands included beginning 1917

c) Imports: data are for general imports minus reexports through 1932; thereafter imports for consumption; Virgin Islands excluded beginning 1917

#### CRUDE PETROLEUM

36 Stocks, 1918-41, monthly (Chart 32)

*Unit:* barrel of 42 U.S. gallons

*Sources:* Department of the Interior (or predecessor agencies), Bureau of Mines: 1918-30, Petroleum Refinery Statistics, *Bulletins* 339 and 367; 1931-34, *Statistical Appendices to Minerals Yearbook, 1932-33, 1934, and 1935*; 1935-38, Petroleum Statistics, 1935-1938, *Economic Paper* 20; 1939-41, *Minerals Yearbook, 1940*, and subsequent issues.

*Coverage:* All crude oil held in United States whether of domestic or foreign origin; basic sediment and water mixed with the oil excluded. Stocks include holdings at refineries, in pipelines, and at tank farms as well as on petroleum producing properties. Except for the fourth category, the data represent exclusively manufacturers' stocks of raw materials held for fabrication. Stocks on producing properties are, however, relatively unimportant. Since petroleum commonly passes into ownership of refining companies when it leaves producing property, pipeline and tank farm stocks are properly included.

A considerable quantity of heavy crude oil in California is included, and from 1924 to 1929 also residual and distillate fuel oil in California. Since then residual but not distillate fuel oil has been included. These are defects in the series since heavy crude in California is not commonly refined while the fuel oils are already refined products. At a late stage in this study, data eliminating these categories were secured. The total series including and excluding California heavy crude and fuel oils are so nearly alike in behavior that revision was not considered worth while. A division of the data at three dates indicates the relative importance of stocks in different categories.

37 Consumption (runs to stills), monthly, 1917-42 (Chart 32)

*Unit:* barrel of 42 U.S. gallons

*Sources:* Bureau of Mines: 1917-30, Petroleum Refinery Statistics, *Bulletins* 280, 289, 297, 318, 339, and 367; beginning 1931, see series 36 above.

*Coverage:* Both domestic and foreign crude oil but not reruns of

CRUDE PETROLEUM STOCKS IN VARIOUS CATEGORIES, DECEMBER 31  
(thousands of barrels)

	1922	1927	1935
<b>East of California</b>			
At refineries	30,671	39,317	50,704 <sup>c</sup>
In pipelines & at tank farms	199,038	312,637	218,077
Producers' stocks	8,428	7,536	7,130
Foreign crude held by importers	5,062	84	c
Total	243,199	359,574	275,911
<b>California</b>			
Light	a	20,086	38,944
Heavy crude & fuel oils	a	93,719 <sup>b</sup>	61,227 <sup>d</sup>
Total	52,509	113,805	100,171
<b>Total Stocks in U. S.</b>	<b>295,708</b>	<b>473,379</b>	<b>376,082</b>

From time to time it was necessary to revise or reclassify crude oil stocks. When the amounts were substantial, two December 31 figures were shown, one comparable with data for the given year and one for the following year. In such cases the NBER distributed the differences between old and revised figures equally over the 12 months of the given year.

<sup>a</sup>California stocks not differentiated before 1923; fuel oils not included until 1924

<sup>b</sup>Includes both distillate and residual fuel oils

<sup>c</sup>Foreign crude oil held by importers included with refinery stocks since 1929

<sup>d</sup>Includes residual fuel oils but excludes distillate fuel oils since 1929

unfinished oils and unfinished gasoline, or consumption of heavy crude and fuel oil.

38 Production, total, monthly, 1913-40

Unit: barrel of 42 U.S. gallons

Sources: 1913-15, Elizabeth Boody, *Cyclical Fluctuations in the Volume of Mining, 1913-23*, *Review of Economic Statistics*, April 1924, p. 88; 1916-17, Geological Survey, *Mineral Resources of the United States*, II, 1917 and 1918; 1918-40, see series 36 above. 1913-15, figures estimated from data compiled by Department of Interior, Geological Survey. Monthly figures for the Appalachian, Lima-Indiana, Illinois, Mid-continent, and Gulf fields, when added, constituted 59.6 percent of annual United States production in 1913, 61.0 percent in 1914, and 67.6 percent in 1915. On the basis of these figures monthly output in the five fields was prorated up to 100 percent of the total United States output of these three years.

Coverage: Through 1918, figures represent marketed production, i.e., the quantity transported from producing properties, excluding petroleum consumed on the leases, usually about 1 percent of the petroleum brought to the surface. Beginning 1919, figures obtained by combining monthly and annual reports to Geological Survey and



later to Bureau of Mines. Monthly reports of pipeline and other companies, which give quantity of petroleum transported from producing properties, constitute preliminary data. To these figures were added the quantity of petroleum consumed as fuel on the leases and the net change in stocks held on producing properties on the first and last days of the year. Prior to 1919, producers' stocks were not taken into account.

## NEWSPRINT

- 39 Stocks at and in transit to publishers, monthly, 1919-44 (Chart 33)  
Unit: short ton

*Sources and Coverage:* 1919-May 1923, Federal Trade Commission; published in *Newsprint Paper Review*, Jan. 1922, and subsequent issues. June 1923-44, American Newspaper Publishers' Association; published in *Survey of Current Business*, Sept. 1938, p. 20, and subsequent issues.

Figures for stocks at publishers were added to stocks in transit to publishers by NBER throughout the period and adjusted as follows:

Farm magazine newsprint data, excluded beginning June 1923, were also deducted from FTC figures, 1919-May 1923; for January-May 1919, lacking separate data on farm magazine newsprint, such figures were estimated on the basis of their relation to the total during June-December 1919. The resulting series for 1919-May 1923 was

then multiplied by the ratio  $\frac{134,576}{176,347 - 2,406} = .77369$  to reduce

the FTC figures to the level of stocks reported to the American Newspaper Publishers' Association. The numerator of the fraction is the number of short tons of newsprint held on May 31, 1923 by the 422 publishers reporting to that organization; the denominator represents stocks held on the same date by publishers reporting to the FTC exclusive of farm magazine newsprint.

For June 1923-44, owing to changes in the number of publishers reporting to American Newspaper Publishers' Association, the reported figures were adjusted by NBER to the total of 422 publishers throughout by the use of year to year link relatives for identical publishers. Data for overlapping years were obtained directly from the Association. The reporting publishers accounted for 77 percent of all newsprint consumed beginning in 1937; 80 percent, 1927-36; and 60 percent in earlier years.

- 40 Consumption by publishers, monthly, 1919-39 (Chart 33)  
See series 39 above

## IRON ORE

- 41 Stocks at furnaces, Lake Superior region, monthly, 1918-41 (Tables 45-48; Charts 34-36)  
Unit: long ton

*Sources:* Lake Superior Iron Ore Association; published in Bureau of Census, *Record Book of Business Statistics*, Part II, p. 13, and *Survey of Current Business*, 1932 Supplement, pp. 198-9, and subsequent issues.

*Coverage:* Lake Superior ore, i.e., ore mined in Minnesota, Wisconsin, and Michigan. The inclusion of rail and Canadian furnaces beginning June 1922 affects comparability only slightly. The number of furnaces varies from 341 to 189. The large reduction is due to dismantling of furnaces and elimination of furnaces which no longer use Lake ore.

- 42 Stocks on Lake Erie docks, monthly, 1918-41 (Tables 45-47; Chart 34)  
*Unit:* long ton  
*Source:* see series 41 above  
*Coverage:* Lake Superior ore only
- 43 Stocks on Lake Erie docks at opening and closing of navigation, 1887-1945  
*Unit:* long ton  
*Sources:* Through 1928, compiled by *Marine Review* and *Iron Trade Review*; thereafter, by Lake Superior Iron Ore Association. Published in successive annual issues of *Mineral Resources* through 1931, and *Minerals Yearbook*, 1932-33, and subsequent issues.  
*Coverage:* Data are for stocks at opening and closing of navigation, approximately May 1 and December 1.
- 44 Stocks at furnaces and Lake Erie docks, monthly, 1918-41 (Tables 46-47; Chart 34)  
*Unit:* long ton  
*Sources:* Obtained by NBER by adding series 41 and 42 above
- 45 Stocks at mines, annual (December 31), 1920-37 (Table 45)  
*Unit:* long ton  
*Source:* see series 43 above  
*Coverage:* Lake Superior ore mined in Minnesota, Wisconsin, and Michigan.
- 46 Consumption by furnaces, Lake Superior ore, monthly, 1918-40 (Tables 45 and 48; Charts 35-36)  
*Unit:* long ton  
*Sources:* 1918-22, Lake Superior Iron Ore Association, *Lake Superior Iron Ores*, 1938, p. 330. 1923-40, *Survey of Current Business*, 1932 Supplement, and subsequent issues.  
*Coverage:* see series 41 above

## LEAD

- 47 Stocks at warehouses, monthly, 1894-1922, 1924-30 (Chart 37)  
*Unit:* short ton  
*Sources:* see series 13 above  
*Coverage:* Bonded custom warehouses covered. Because data after

1919 are inaccurate, they were not analyzed. The inventory of lead in bonded warehouses, submitted by customs collectors in accordance with a new tariff, revealed that for many years collectors had omitted certain withdrawal data but recorded entries into warehouses. Data from 1919 to July 1930, therefore, do not show the correct movement of inventories. These discrepancies could not be adjusted because complete records are lacking.

48 Imports, monthly, 1894-1933 (Chart 37)

*Unit:* pound

*Sources:* see series 13 above

*Coverage:* March 1894-June 1897, pigs, bars, old, and other in ore. July 1897-June 1900, lead in ore, etc. July 1900-June 1909, lead ore and base bullion. July 1909-September 1922, lead ore, bullion, and base bullion. October 1922-December 1933, lead ore, matte, bullion, and base bullion.

A major change in coverage occurred in 1897; other changes affect terminology primarily. In 1897 the series pigs, bars, old, and other in ore was split into two series, lead in ore, etc., and pigs, bars, and old. The latter represented only 1 percent of total imports of lead July 1897-June 1899; consequently the lead in ore series is treated as continuous from 1894. The data represent general imports, that is, merchandise entered for immediate consumption and merchandise entered for storage in bonded warehouses.

## CHAPTER 11

### STEEL SHEETS

1 Stocks made to stock, monthly, 1919-36 (Tables 49-50; Chart 38)

*Unit:* short ton

*Sources and Coverage:* National Association of Flat Rolled Steel Manufacturers; published in *Record Book of Business Statistics*, Part II, p. 24, and in *Survey of Current Business*, 1932 Supplement, pp. 216-7, and subsequent issues. The Association represents almost all independent manufacturers of black, blue, galvanized, and full finished steel sheets. The reported figures are estimated to represent 60 percent of hot mill capacity of United States in 1919-21, 75 percent in 1925-26, and 59 percent in 1935. No adjustment made for complete coverage.

2 Stocks made to order, monthly, 1919-36 (Chart 38)

*Unit:* short ton

*Sources and Coverage:* Derived by NBER from total stocks of steel sheets and stocks of steel sheets made to stock; see series 1 above

3 Shipments, monthly, 1919-36 (Table 49; Charts 38-39)

See series 1 above

4 Production, monthly, 1919-36; quarterly, 1932-43 (Chart 39)

*Unit:* short ton

*Sources and Coverage:* For monthly segment, 1919-36, see series 1 above; annual production for 1933 and quarterly data beginning 1934 compiled by American Iron and Steel Institute, and published in *Survey of Current Business*, Nov. 1940, p. 14, and subsequent issues. Figures for the second segment compiled from reports of firms representing more than 95 percent of the industry's capacity and production. Sheets include hot rolled, hot rolled annealed, galvanized, cold rolled, and all other. The industry includes only processors who are also primary producers of steel. Sales to members of the industry for further conversion are excluded.

The Association's monthly series differs from the Institute's quarterly series chiefly in that it excludes U. S. Steel Corporation and covers fewer independent producers.

The NBER raised quarterly totals obtained from the monthly series for 1932 and 1933 to level of second segment by using the ratio of the 1933 annual total for steel sheet production for sale to the 1933 annual total for steel sheet production (2.2325).

## PAPER, ALL GRADES

## 5 Stocks at mills, monthly, 1918-33 (Tables 49-50)

*Unit:* short ton

*Sources and Coverage:* Through May 1923, FTC; thereafter, American Paper and Pulp Association. 1918-22, data published in *FTC Statistical Summary of the Paper Industry*, Jan. 1922, and subsequent issues; 1923-32, *Survey of Current Business*, 1932 Supplement, pp. 238-9, and subsequent issues; 1933 data furnished by *Survey of Current Business*; compilation of series discontinued 1934. Through 1923, FTC data represent practically complete coverage. Thereafter, the figures were prorated to represent complete coverage on the basis of data from Census of Manufactures. The series includes figures on newsprint as compiled by Newsprint Service Bureau, on boxboard as compiled by Bureau of Census, as well as book paper, writing, wrapping, and all other grades of paper. Stocks represent paper at mills only, excluding stocks at terminal and delivery points.

## 6 Production, monthly, 1918-41 (Table 49)

*Unit:* short ton

*Sources and Coverage:* 1918-20, see series 5 above; 1921-33, unpublished data from files of *Survey of Current Business*; 1934-41, *Survey of Current Business*, Nov. 1940, pp. 12-3, and subsequent issues. FTC series, compiled by that agency through May 1923, represents complete coverage of industry. Data obtained from *Survey of Current Business* are based on that series prior to June 1923, and thereafter, on compilations by American Paper and Pulp Association; they have been adjusted to industry totals by distributing Bureau of Census

production figures on a monthly basis in accordance with the movement of the sample data.

Revised segment after 1933 was compiled by Department of Commerce by adding to total paper production excluding newsprint and paperboard, compiled by American Paper and Pulp Association, newsprint production data furnished by Newsprint Service Bureau and paperboard production compiled by Bureau of Census. The revision removed duplication arising from inclusion of kraft board in the data compiled by both the Association and Bureau of Census. Also eliminated were all four- and five-week monthly totals in the case of data obtained from weekly reports, by prorating data for weeks falling in two months. The NBER further adjusted 1934-41 data by raising their level to agree with the totals for census years and with the Census of Forest Products for intercensal years.

#### NEWSPRINT

- 7 Stocks at mills, United States and Canada, monthly, 1918-37; 1936-46 (Tables 49-50)

*Unit:* short ton

*Sources:* United States figures through May 1923 compiled by FTC; Newsprint Service Bureau for all other. United States data 1918-19, see series 5 above; all other including unpublished revisions furnished by Newsprint Service Bureau.

*Coverage:* The second segment, 1936-46, includes stocks owned by mills but stored in warehouses. These figures are not separable from stocks at mills. For certain years NBER obtained total stocks by adding United States and Canadian figures. United States and Canadian statistics cover practically the entire industry (see also *Survey of Current Business*, 1947 Supplement, note 3 to p. 160).

- 8 Shipments from mills, United States and Canada, monthly, 1919-45 (Table 49)

*Unit:* short ton

*Sources:* See series 7 above. United States data 1919-21, published in *FTC Statistical Summary of the Paper Industry*, Jan. 1922, and subsequent issues; United States and Canadian, 1938-45, in *Survey of Current Business*, 1940 Supplement, pp. 145-6, and subsequent issues; all other United States and Canadian including unpublished revisions furnished by Newsprint Service Bureau, except revised United States figures for 1922-24 and 1926, furnished by American Paper and Pulp Association. United States and Canadian figures combined into totals by NBER throughout the period.

*Coverage:* Entire industry is covered by the series.

#### SOUTHERN PINE LUMBER

- 9 Stocks, monthly, 1916-29; 1929-40 (Tables 49-50)

*Unit:* board feet

*Source:* Southern Pine Association; data for 1916-April 1929 (first segment) and 1929-33 (second segment), direct from the Southern Pine Association; May-December 1929 (first segment) and 1934-40 (second segment) published in the *Survey of Current Business*, 1931 Supplement, p. 63, 1938 Supplement, p. 128, and subsequent issues. Through 1927, stock figures reported direct; thereafter, computed from the movement of production, shipments, and previous stocks. *Coverage:* For 1916-29, figures adjusted by the Association to a constant sample of 192 mills by applying the ratio of actual to 'normal' stocks of the mills reporting in any given month to 'normal' stocks of 192 mills originally reporting. 'Normal' represents the average of stocks during 16 months ending April 1916. A new series beginning in 1929 is based on estimated industry totals (see series 10 and 11 below for description of components). NBER reduced these totals to level of the 1916-29 data on basis of the average monthly relationship of the two segments in 1929, the ratio being 0.3563; 1916-28 of earlier segment combined with second segment beginning 1929 into a continuous series.

- 10 Shipments, monthly, 1916-40 (Tables 49 and 54; Chart 39)

*Unit:* board feet

*Source:* see series 9 above

*Coverage:* First segment data represent 192 mills as described in series 9 above except that average shipments in the first four months of 1916 are considered 'normal'. Reported figures for the second segment are adjusted by the Southern Pine Association to correspond to estimated production totals (see series 11 below). The NBER reduced these totals to the level of the 1916-29 data on the basis of the average monthly relationship of the two segments in 1929, the ratio being 0.3944; 1916-28 of earlier segment was combined with second segment beginning 1929 into a continuous series.

- 11 Production, monthly, 1916-40 (Table 54; Chart 39)

*Unit:* board feet

*Source:* see series 9 above

*Coverage:* First segment data represent 192 mills as described in series 9 above except that average production in first four months of 1916 is considered 'normal'. Data for the second segment are estimated industry totals based on reports from mills representing 25-40 percent of total production from 1929 to mid-1933, 60-90 percent from mid-1933 to March 1935, 30-40 percent from April 1935 to the end of 1937, and roughly 30 percent since then (see *Survey of Current Business*, 1942 Supplement, note 1 to p. 134). The source adjusted the reported figures to total annual production reported by the Bureau of Census. The NBER reduced these figures to the level of the 1916-29 data on the basis of the average monthly relationship

of the two segments in 1929, the ratio being 0.3941; 1916-28 of earlier segment was combined with second segment beginning 1929 into a continuous series.

OAK FLOORING AND RELATED SERIES

- 12 Stocks, monthly, 1912-43 (Tables 49-50)  
*Unit:* board feet  
*Source and Coverage:* National Oak Flooring Manufacturers' Association, Inc.; published in *Survey of Current Business*, May 1924, pp. 36-7, 1932 Supplement, pp. 188-9, and subsequent supplements. Prior to 1929 coverage is uncertain but is believed to be 90 percent of total oak flooring industry. 1929-33, reporting firms represent 90-95 percent of total production; the rest was estimated. 1934, coverage is complete, and for subsequent years 75-80 percent of the industry was covered by actual reports, the balance being estimated.
- 13 Shipments, monthly, 1912-43 (Tables 49 and 54; Chart 39)  
*Unit:* board feet  
*Source and Coverage:* See series 12 above; revisions made by the National Oak Flooring Manufacturers' Association beginning 1934 could not be incorporated in the figures for earlier years.
- 14 Production, monthly, 1912-42 (Table 54; Chart 39)  
 See series 12 and 13 above
- 15 Total hardwood stocks, monthly, 1924-40 (Table 50)  
*Unit:* board feet  
*Sources and Coverage:* 1924-33, Hardwood Manufacturers' Institute; 1934-40, National Lumber Manufacturers' Association. Published in *Survey of Current Business*, 1932 Supplement, pp. 190-1, and subsequent supplements. 1924-33, data from reporting mills in Southern and Appalachian District adjusted to cover the entire country. This district accounted for about 84 percent of total hardwoods produced in 1929. 1934-40, data based on reports from regional associations were corrected to the trend shown by annual production figures in the Censuses of Forest Products and of Manufactures (except for 1932 and 1933 when census coverage was not considered complete, see *Survey of Current Business*, 1942 Supplement, note 2 to p. 132). According to that source, coverage within the regions varies from 30 to 90 percent, but actual figures from producers for the country as a whole covered 80-90 percent of the total cut during 1934, 70-80 percent in 1935, 50-65 percent in 1936-37, and 50-60 percent in 1938-40. The NBER raised the data for 1924-33 to the level of total hardwood stocks on the basis of the average relation between the two series in 1934, 112.2. While monthly figures for the second segment begin only in 1934, quarterly figures are available for 1929-33, and comparison of the two series shows that they behaved in strikingly similar fashion during the overlapping period.

## PORTLAND CEMENT

- 16 Stocks, monthly, 1911-41 (Tables 49-50)  
*Unit:* barrel of 376 lbs., net weight, or 380 lbs., gross weight  
*Sources and Coverage:* 1911-19, Portland Cement Association; 1920-41, Geological Survey and Bureau of Mines. 1911-20, data compiled by E. F. Burchard of the Geological Survey; published in the *Problem of Business Forecasting*, Warren M. Persons and others, editors (Boston: Houghton Mifflin Co., 1924), pp. 160-1. 1921-41, published in *Survey of Current Business*, Sept. 1923, p. 47, 1932 Supplement, pp. 256-7, and subsequent issues. Data through 1920 represent companies with 85-95 percent of total output. Data after 1920 based mainly on reports of producers of Portland cement but in part on estimates. Monthly figures reflect practically complete coverage, according to final annual reports of the producers. Beginning January 1940, data for one plant in Puerto Rico included. Stocks are those of finished cement rather than of clinker.
- 17 Shipments, monthly, 1911-41 (Tables 49 and 54; Chart 39)  
 See series 16 above; data through 1920 adjusted to equal the total for the year as ascertained by the annual statistical canvass by the Geological Survey.
- 18 Production, monthly, 1911-42 (Table 54; Chart 39)  
 See series 16 and 17 above

## BATHTUBS

- 19 Stocks, monthly, 1919-31 (Tables 49-50)  
*Unit:* one piece  
*Sources and Coverage:* Bureau of Census: prior to 1928, compiled from reports to the Enameled Sanitary Ware Manufacturers' Association; thereafter, from reports to Bureau of Census. Believed to represent almost the entire industry. Data published in *Record Book of Business Statistics*, Part II, pp. 36 ff., and *Survey of Current Business*, 1932 Supplement, pp. 206 ff. Discontinued after 1931.
- 20 Shipments, monthly, 1917-31 (Table 49)  
 See series 19 above

## LAVATORIES

- 21 Stocks, monthly, 1919-31 (Tables 49-50)  
 See series 19 above
- 22 Shipments, monthly, 1917-31 (Table 49)  
 See series 19 above

## KITCHEN SINKS

- 23 Stocks, monthly, 1919-31 (Tables 49-50)  
 See series 19 above
- 24 Shipments, monthly, 1917-31 (Table 49)  
 See series 19 above



## MISCELLANEOUS ENAMELED SANITARY WARE

- 25 Stocks, monthly, 1919-31 (Tables 49-50)  
See series 19 above
- 26 Shipments, monthly, 1917-31 (Table 49)  
See series 19 above

## GASOLINE

- 27 Stocks at refineries, monthly, 1917-40; 1932-40 (Tables 49-50)  
*Unit and Sources:* see Ch. 10, series 36 and 37  
*Coverage:* 1917-May 1923, stocks at all refineries. June 1923-31, stocks at all refineries east of California plus refiners' and marketers' stocks on the Pacific Coast, excluding negligible quantities of natural gasoline. Overlapping data for June 1923-December 1924 permitted a splicing of this segment with earlier data. The earlier segment was 92.1 percent of the later in the period common to both. 1932-40, stocks at refineries and bulk terminals and, from 1933, stocks in pipelines and in transit. The NBER made minor revisions in 1932-34 to take account of year end adjustments in the source.
- 28 Refinery production, monthly, 1917-40 (Table 49)  
*Unit and Sources:* see Ch. 10, series 36 and 37  
*Coverage:* Complete output of refineries in operation. The output of natural gasoline, though partly blended to make it stable, is included with straight run gasoline. Although gasoline is produced by three methods, 'straight run', 'cracked', and 'natural gasoline blended', the final product is generally a blend of any two or all three types.

## LUBRICANTS

- 29 Stocks at refineries, monthly, 1917-27; 1921-43 (Tables 49-50)  
*Unit and Sources:* see Ch. 10, series 36 and 37  
*Coverage:* Beginning June 1923, figures for California include marketers' and some previously unreported refinery stocks. In December 1923 these amounted to 360,000 out of a total of 710,000 barrels of California stock. Applying this ratio, California marketers' stocks were estimated for each month, June 1923-27, and subtracted from the total for United States; the result yielded information for the first segment through 1927. The second segment was then extrapolated to 1921, using the ratio of overlapping data for June 1923-May 1924.
- 30 Production, monthly, 1917-40 (Table 49)  
*Unit and Sources:* see Ch. 10, series 36 and 37  
*Coverage:* Entire output of refineries in operation

## PIG IRON

- 31 Stocks at merchant furnaces, monthly, 1919-26 (Tables 49-50)  
*Unit:* long ton

*Source and Coverage:* American Pig Iron Association; published in the *Record Book of Business Statistics*, Part II. Monthly reports from 94 to 131 stocks which represent the following percentages of total merchant pig iron production, as compiled by *Iron Age*:

1919	77	1921	68	1923	51	1925	55
1920	71	1922	57	1924	58	1926	53

The reporting plants are said to account for about 90 percent of production in strictly merchant furnaces, that is, those making iron for sale instead of for further use in their own plants. American Pig Iron Association discontinued its statistical services after 1926, when many merchant furnaces closed and many steel plants engaged in the sale of merchant pig iron.

- 32 Shipments from merchant furnaces, monthly, 1919-26 (Tables 49 and 54; Chart 39)  
See series 31 above
- 33 Production at merchant furnaces, monthly, 1919-26 (Table 54; Chart 39)  
See series 31 above

## REFINED COPPER

- 34 Stocks, United States, monthly, 1909-14; North and South America, monthly, 1919-38 (Tables 49-50)  
*Unit:* short ton  
*Sources:* 1909-June 1914, American Copper Producers' Association; July 1914-December 1914, American Metal Market; 1919-23, Copper Export Association; 1924-38, American Bureau of Metal Statistics. Data prior to 1926 published in *Record Book of Business Statistics*, Part II, pp. 47 and 49; 1926, American Metal Market, *Metal Statistics*, 1936, pp. 248 ff.; beginning 1927, American Bureau of Metal Statistics, *Yearbook*, 1927, p. 10, and subsequent issues.  
*Coverage:* 1909-14, only domestic stocks of refined copper covered; discontinued during World War I. 1919-38, stocks in North and South America.
- 35 Shipments, North and South America, monthly, 1919-38 (Tables 49 and 54; Chart 39)  
*Unit:* short ton  
*Sources and Coverage:* Through 1923, data compiled by Copper Export Association; thereafter, by American Bureau of Metal Statistics. Data for 1919-25 obtained from American Bureau of Metal Statistics; thereafter, see series 34 above. Exports as well as domestic shipments covered. 1919-23 data converted by NBER from pounds to short tons.
- 36 Production, North and South America, monthly, 1919-38 (Table 54; Chart 39)

*Unit and Source:* see series 34 above

*Coverage:* Total output of primary refined copper. American Bureau of Metal Statistics claims practically 100 percent coverage of copper refineries in North and South America; only one small concern fails to report regularly. Its occasional reports are used as basis for estimating the total.

Areas covered include the United States and Chile through 1925; Canada was added, 1926-38. United States not available separately. Ingot copper produced by concerns that treat only secondary material was omitted, but copper derived from secondary material that passes through the primary refineries along with copper derived from ore was included. Copper produced directly of sufficient purity for market is considered to be refined copper, and included.

#### REFINED LEAD

- 37 Stocks at smelters and refineries, monthly, 1924-30; 1930-39 (Tables 49-50)

*Unit:* short ton

*Source and Coverage:* Furnished by American Bureau of Metal Statistics; data for second segment published in *American Metal Market, Metal Statistics*, annual issues. 1924-30, all refineries except 3 in United States and Mexico; 1930-39, United States refineries only. First segment was lowered to level of second by .728, the average ratio between the two series in January-March 1930. Stocks include refined pig lead and antimonial lead, which are finished products, and also lead in ore and in process of smelting and refining. During 1930-40, about two-thirds of total stocks were finished products.

- 38 Ore receipts, domestic, monthly, 1921-40 (Table 49)

*Unit:* short ton

*Source and Coverage:* American Bureau of Metal Statistics: 1921-22, published in *Record Book of Business Statistics*, Part II, p. 56; 1923-40, in *Survey of Current Business*, 1932 Supplement, pp. 226-7, and subsequent issues. 1921-22, estimates by Bureau of Census based on figures made available by American Bureau of Metal Statistics. These figures are believed to represent conditions approximately. They were raised to include data for two nonreporting smelters producing pig lead for their own consumption. Since receipts at these two smelters constituted about 18 percent of total receipts in 1923, a corresponding percentage was added to reported figures for 1921-22 to obtain estimated totals. The statistics representing lead content of domestic ore received by United States smelters were based on estimated recoverable lead. According to the reporting source the monthly totals probably understate actual production of pig lead because some lead receipts may have been omitted.

- 39 Production from domestic ore, monthly, 1929-41 (Table 54; Chart 39)

*Unit:* short ton

*Source:* American Bureau of Metal Statistics; published in *Survey of Current Business*, 1932 Supplement, p. 227, and subsequent issues.

*Coverage:* Total refined lead produced from domestic ore, as reported by primary refiners, plus some production from secondary material passing through primary smelters.

- 40 Shipments, monthly, 1928-41 (Table 54; Chart 39)

*Unit and Source:* see series 39 above

*Coverage:* Total reported shipments of domestically refined lead, including antimonial, for consumption in United States, excluding lead for domestic consumption supplied from stocks of imported refined lead, which have grown significantly since the middle of 1940.

#### SLAB ZINC

- 41 Stocks at refineries, monthly, 1920-40 (Tables 49-50)

*Unit:* short ton

*Source:* American Zinc Institute; published in *Record Book of Business Statistics*, Part II, p. 52, and in *Survey of Current Business*, 1932 Supplement, pp. 228-9, and subsequent issues.

*Coverage:* Complete refinery stocks of primary zinc from domestic and foreign ore through September 1929; thereafter, of primary and secondary zinc at primary smelters from domestic ore. The differences are negligible, and figures were used in one continuous series.

- 42 Shipments, monthly, 1920-41 (Tables 49 and 54; Chart 39)

*Unit:* short ton

*Sources and Coverage:* American Zinc Institute: 1920-22, data published in *American Metal Market*, *Metal Statistics*, 1920, p. 409; thereafter, in *Survey of Current Business*, 1932 Supplement, pp. 228-9, and subsequent issues. Revised data for 1927, 1928, and 1930 furnished by *Survey of Current Business*. Total shipments of slab zinc include domestic deliveries and shipments for export.

- 43 Production, monthly, 1917-18; 1920-39 (Tables 49 and 54; Chart 39)

*Unit:* short ton

*Sources:* 1917-18, Department of Interior, Geological Survey; beginning with 1920, American Zinc Institute. Published in *Record Book of Business Statistics*, Part II, p. 52, and in *Survey of Current Business*, 1932 Supplement, pp. 228-9, and subsequent issues. No monthly data available for 1919.

*Coverage:* see series 41 above

#### AUTOMOBILE TIRES

- 44 Pneumatic casings, stocks, monthly, 1921-41 (Tables 49-50)

*Unit:* one pneumatic casing

*Source and Coverage:* Rubber Manufacturers' Association; published in *Survey of Current Business*, May 1939, and subsequent issues.

Coverage of figures from 75-80 percent during 1921-28 to 97 percent 1934-July 1935, and a slightly lower percentage thereafter (see *Survey of Current Business*, 1942 Supplement, note 1 to p. 161). Data raised by Association to represent industry totals on basis of biennial Censuses of Manufactures.

Items forwarded to warehouses, branches, or on consignment basis included, together with stocks in hands of manufacturers, that is, items owned by manufacturers held in the domestic market are considered manufacturers' stocks.

- 45 Pneumatic casings, shipments, monthly, 1921-40 (Table 49; Chart 39)  
*Unit:* one pneumatic casing  
*Source and Coverage:* See series 44 above; data represent only shipments forwarded to purchasers.
- 46 Pneumatic casings, production, monthly, 1921-41 (Chart 39)  
 See Ch. 10, series 29

#### INNER TUBES

- 47 Stocks, monthly, 1921-41 (Tables 49-50)  
*Unit:* one inner tube  
*Source and Coverage:* see series 44 above
- 48 Shipments, monthly, 1921-40 (Table 49; Chart 39)  
*Unit:* one inner tube  
*Source and Coverage:* see series 44 above; data represent only shipments forwarded to purchasers.
- 49 Production, monthly, 1921-41 (Chart 39)  
 See Ch. 10, series 29

#### CHAPTER 12

##### CRUDE COTTONSEED OIL

- 1 Stocks, monthly, 1917-40 (Tables 55-56; Charts 40 and 43)  
*Unit:* pound  
*Source:* Bureau of Census *Bulletin 135*, p. 100, and subsequent bulletins.  
*Coverage:* Complete coverage for stocks at mills, refineries, consuming establishments, and in transit to refiners and consumers. The Bureau of Census could not estimate the typical percentage distribution between stocks at refineries and at consuming establishments since the majority of refineries are also consumers. For the few refineries not consumers, data on month end stocks were not compiled separately.
- 2 Production, monthly, 1916-41 (Tables 55-56; Charts 40-41, and 43)  
 See Ch. 10, series 31

##### REFINED COTTONSEED OIL

- 3 Stocks, monthly, 1917-42 (Tables 55-56; Charts 40 and 43)  
*Unit and Source:* see series 1 above

*Coverage:* Stocks at refineries and consuming establishments, in warehouses, or in transit to refiners and consumers covered. Excluded are quantities held by small occasional users, accounting for a minor part of total stocks.

- 4 Production, monthly, 1916-41 (Table 56; Charts 40-41, and 43)

*Unit:* pound

*Source and Coverage:* Cotton Production and Distribution, Bureau of Census *Bulletin* 140, p. 91; 156, p. 60, and *Survey of Current Business*, 1932 Supplement, pp. 156-7, and subsequent issues. Coverage complete for cottonseed oil refineries. Original data, cumulative from August 1 until July 31 of the following year, were converted by NBER into monthly data through 1922.

- 5 Cotton crop, annual, 1866-1940 (Chart 41)

See Ch. 10, series 7

#### PORK, LARD, AND BEEF

- 6 Cold storage holdings of pork, monthly, 1916-40 (Tables 55-56; Chart 44)

*Unit:* pound

*Source:* Department of Agriculture; published in War Food Administration, *Livestock, Meats, and Wool Market Statistics and Related Data*, 1943, pp. 51 f.

*Coverage:* 98 percent complete; stocks of meat purchased for government account under the emergency hog control program in certain months of 1933, 1934, and 1935 excluded. Pork includes frozen, dry salt, pickled, and cured pork, and pork in process of cure, in public warehouses and in packing plants.

- 7 Cold storage holdings of lard, monthly, 1916-40 (Tables 55-56; Chart 44)

*Unit and Source:* see series 6 above

*Coverage:* Lard includes all prime steam, kettle rendered, neutral, other pure lards, and rendered pork fat, in public warehouses and in packing plants; lard substitutes or lard compounds excluded.

- 8 Cold storage holdings of beef and veal, monthly, 1916-43 (Tables 55-56; Chart 44)

*Unit and Source:* see series 6 above

*Coverage:* Beef includes beef and veal frozen, cured, and in process of cure in public warehouses and packing plants. Stocks of meat from drought-stricken livestock purchased for government account in certain months of 1934 and 1935 excluded.

- 9 Pork, frozen or placed in cure in meat packing establishments, monthly, 1919-36 (Tables 56-58; Charts 44-46)

*Unit:* pound

*Source:* Bureau of Agricultural Economics; data for 1919-33 published in Cold Storage Holdings, Department of Agriculture *Statist-*

*tical Bulletin 48*, pp. 22-4; 1934-36, *Crops and Markets*. Includes frozen, dry salt placed in cure, and pickled placed in cure at packing plants; data totaled by NBER.

- 10 Beef, frozen or placed in cure in meat packing establishments, monthly, 1919-36 (Tables 56-58; Charts 44-46)

*Unit and Source*: See series 9 above, *Statistical Bulletin 48*, pp. 19-20. *Coverage*: Series for frozen beef and beef placed in cure at packing plants totaled by NBER.

- 11 Lard production from federally inspected slaughter, monthly, 1919-24; 1921-40 (Tables 56-58; Charts 44-46)

*Unit*: pound

*Sources and Coverage*: Department of Agriculture: 1919-24, published in *Survey of Current Business*, March 1924, p. 54, and Feb. 1925, p. 99; 1921-40, Agricultural Marketing Service, *Livestock, Meats, and Wool Market Statistics and Related Data, 1939*, p. 95, and *Survey of Current Business*, Oct. 1940, p. 44. 1919-24, data represent production of identical firms which in 1921 produced about 79 percent of total lard production as estimated by the Bureau of Agricultural Economics and which, on the average, accounted for about 68 percent of total production during that period. 1921-40, data represent the estimated production of lard obtained by applying the average yield per hog at plants that regularly report their production to Agricultural Marketing Service to the number of animals passed for food. Figures are on the average 66 percent of total estimated production, rising to 72 percent of the total in 1923, 1928, and 1929, and falling to 52 percent in 1935 (see *Agricultural Statistics, 1942*, Table 530, p. 409).

- 12 Hogs slaughtered, monthly, commercial, 1879-1906; under federal inspection, 1907-43 (Table 57; Chart 45)

*Unit*: one hog

*Source and Coverage*: Department of Agriculture; data published by War Food Administration in *Livestock, Meats, and Wool Market Statistics and Related Data, 1943*, p. 32. Prior to 1907, commercial annual slaughter estimated by Bureau of Agricultural Economics on the basis of total eastern and western slaughter. These data were interpolated monthly on the basis of monthly western slaughter and records of receipts at eastern seaboard markets. Federally inspected slaughter averages approximately 62 percent of total slaughter, which includes noninspected wholesale, retail, and farm slaughter. Purchases under the government emergency hog production control program between August 22 and October 7, 1933 were added to the number slaughtered in September 1933 by NBER. This figure is available in *Agricultural Statistics, 1942*, p. 404.

- 13 Cattle slaughtered under federal inspection, monthly, 1907-43 (Table 57; Charts 45 and 47)  
See Ch. 10, series 21

## INEDIBLE TALLOW

- 14 Stocks at factories and warehouses, quarterly, 1919-44 (Tables 55-56; Chart 50)  
*Unit:* pound  
*Source:* Bureau of Census, *Animal and Vegetable Fats and Oils: Calendar Years 1919 to 1923*, p. 16, and subsequent issues.  
*Coverage:* Practically complete; stocks are quantities held by producers, by factory consumers, and in public storage at the end of each quarter.
- 15 Production, quarterly, 1919-44 (Tables 56 and 59; Charts 47, 49-50)  
*Unit and Source:* see series 14 above, *ibid.*, p. 8  
*Coverage:* Factory production only
- 16 Production by meat packers, annual, 1914-27 (Table 59)  
*Unit:* pound  
*Source:* L. B. Zapoleon, *Fats and Oils Studies*, 3 (Stanford University, Food Research Institute, Dec. 1929), p. 107.
- 17 Production by other producers, annual, 1914-27 (Table 59)  
See series 16 above
- 18 Wholesale price, monthly, 1918-41 (Chart 48)  
*Unit:* cents per pound  
*Source:* BLS bulletins on wholesale prices; see Ch. 10, series 20.  
*Coverage:* 1918-October 1923, the average of the range of prices on Fridays of a month; thereafter, average range of prices on Tuesdays of a month. Quotations refer to 'packer's prime', f. o. b. Chicago.
- 19 Ratio of inedible tallow to meat production, annual, 1918-40 (Chart 48)  
*Unit:* percent  
*Source and Coverage:* Computed by NBER from series on inedible tallow and meat production. For tallow, see series 14 and 15 above. Meat production was obtained by NBER by combining the series on beef, veal, and lamb and mutton production estimated by Bureau of Agricultural Economics from its estimates of total slaughter of cattle, calves, sheep and lambs (see *Agricultural Statistics, 1942*, p. 444). Animals slaughtered under the emergency government relief purchase program in 1934 and 1935 excluded.

## LINSEED OIL

- 20 Stocks at factories and warehouses, quarterly, 1919-42 (Tables 55-56; Charts 54-56)  
*Unit and Source:* see series 14 above  
*Coverage:* Practically complete; stocks are quantities held at factories



and in public storage, factory holdings accounting for the majority of stocks. The data may in some instances include imports not withdrawn from bonded warehouses during the quarter.

- 21 Shipments, quarterly, 1919-42 (Charts 52-53, and 55)

*Unit:* pound

*Source and Coverage:* Computed by NBER so that shipments equal production (see series 22 below) minus change in stocks (see series 20 above).

- 22 Production, quarterly, 1918-42 (Table 56; Charts 51-54)

*Unit:* pound

*Sources:* 1918, United States Food Administration: published in Production and Conservation of Fats and Oils in the United States, Department of Agriculture *Bulletin 769*, supplement, p. 4; 1919-42, see series 14 above.

*Coverage:* Beginning 1919, practically complete; data represent only factory production.

- 23 Production from domestic materials, annual, 1923-30 (Chart 51)

*Unit:* pound

*Source:* Tariff Commission, Report to Congress on Certain Vegetable Oils, Whale Oil, and Copra, *Report 41*, 2d series, 1932, pp. 73-4.

Estimated as follows: from domestic flaxseed output for the calendar year the estimated amount of seed retained for planting in the following year was deducted. The resulting figure was converted into equivalent pounds of oil at the rate of 33.5 percent oil yield. Linseed oil shown for any given calendar year, however, is not all produced in that year; part of the seed is carried over and crushed the following year.

- 24 Production from foreign materials, annual, 1923-30 (Chart 51)

See series 23 above

- 25 Flaxseed production, annual, 1918-39 (Chart 51)

*Unit:* bushel of approximately 56 lbs. net

*Source:* *Agricultural Statistics*, 1942, p. 173; data are for years starting July, the opening of the crop year for flaxseed.

#### FINISHED CATTLE HIDE LEATHER

- 26 Stocks in tanners' hands, monthly, 1921-41 (Charts 58-59)

*Unit:* one hide

*Source and Coverage:* 1921-41, Tanners' Council. The Council received reports from nearly all tanners except in 1921 when data were raised by NBER to census levels.

- 27 Stocks in all hands, monthly, 1920-41 (Tables 55-56)

*Unit:* one hide

*Sources and Coverage:* 1920-April 1932, Bureau of Census; thereafter, Tanners' Council. 1920-31 and 1941, compiled from data furnished by the Council; 1932-40, published in Commodity Exchange,

Inc., N. Y., *Daily Market Report, Monthly Statistical Supplement: Hides*, Jan. 1935, and subsequent issues. Before May 1932, Bureau of Census compiled this series from reports by tanners and manufacturers of leather products. Tanners' Council converted the data into equivalent hides when census data varied as to unit, i.e., piece, pounds, backs, sides, and bends. Beginning May 1932, the series has been compiled by the Council from reports by tanners of stocks of finished leather on hand plus estimates of stocks held by manufacturers of leather products. According to *Survey of Current Business*, 1942 Supplement (note 4 to p. 130), figures reported to the Council by practically the entire industry and adjusted by the Council to an industry basis to make them comparable with the census figures of packers, tanners, dealers, importers, and manufacturers; finished stocks include all finished leather held by tanners, shoe manufacturers, glove manufacturers, belting manufacturers, etc. Data include leather made from kip sides.

- 28 All cattle hide and kip leather production, monthly, 1921-41 (Table 56; Charts 57-59)  
*Unit:* one hide  
*Sources and Coverage:* 1920-April 1932, Bureau of Census; thereafter, Tanners' Council. 1921-34, data direct to NBER from the Council; thereafter, data published in *Survey of Current Business*, 1938 Supplement, p. 124, and subsequent supplements. Census data represent the entire industry; Tanners' Council data are based on reports from almost the entire industry and adjusted to an industry basis.
- 29 Total shoe production, monthly, November 1921-43 (Charts 57-59)  
*Unit:* one pair  
*Source and Coverage:* Bureau of Census, *Production of Boots, Shoes, and Slippers Other than Rubber in the United States* (monthly). 1922-29, reports of manufacturers represent approximately 95 percent of total United States production; 1930-33, 98 percent; 1934-36, 99 percent; 1937-42, 98 percent. Excluded are rubber soled footwear with canvas and other textile uppers; included are slippers for house wear, barefoot sandals, play shoes, moccasins, and all other not specified above.

#### EVAPORATED MILK

- 30 Case goods, stocks at manufacturers, monthly, 1920-43 (Tables 55-56; Chart 60)  
*Unit:* pound  
*Sources:* Department of Agriculture, Bureaus of Markets and of Agricultural Economics. Through November 1920, data published in the *Market Reporter*, June 4, 1921, p. 358, and subsequent issues; December 1920-April 1922, *Weather, Crops and Markets*, Feb. 4.

1922, p. 95, and subsequent issues; thereafter, in *Survey of Current Business*, Aug. 1925, p. 86, 1932 Supplement, pp. 148-9, and subsequent supplements.

*Coverage:* Figures are based on monthly market reports and apply to all stocks held by manufacturers whether their own or belonging to others; whether on their own premises, in storage, or in transit (unsold) for warehouse consignments; and whether sold or contracted for and not delivered. Data cover unsweetened, unskimmed milk, and represent practically the entire industry.

- 31 Case goods, production, monthly, 1918-42 (Table 56; Charts 60-61)

*Unit:* pound

*Source and Coverage:* Bureau of Agricultural Economics: 1918, published in *Dairy Statistics*, Department of Agriculture *Statistical Bulletin* 25, p. 159; 1919-37, Edmund E. Vial, *Production and Consumption of Manufactured Dairy Products*, *Technical Bulletin* 722; 1938-42, *Survey of Current Business*, 1942 Supplement, p. 116, and subsequent issues. Monthly figures for 1918 are incomplete and were raised by NBER by the ratio of the complete to the incomplete annual total, 1.0945. Otherwise the series covers almost complete production of unsweetened, unskimmed evaporated milk in cans sold in cases.

- 32 Milk production on farms, annual, 1924-40 (Chart 61)

*Unit:* pound

*Source and Coverage:* Bureau of Agricultural Economics; published in *Agricultural Statistics*, 1942, p. 462. Data represent estimated total production of milk on farms based on daily average milk production per cow exclusive of milk sucked by calves, and the estimated number of cows on farms in about 22,000 herds kept by crop correspondents.

#### SHORTENINGS

- 33 Lard compounds and other lard substitutes, stocks at factories and warehouses, quarterly, 1922-42 (Tables 55-56; Chart 62)

*Unit and Source:* see series 14 above

*Coverage:* Practically complete stocks at factories and warehouses, stocks in hands of households, local tradesmen, retailers, wholesalers, or jobbers. Included are the quantities held in public warehouses and some imports not yet withdrawn from bonded warehouses. Importers and exporters sometimes hold considerable quantities of these commodities.

- 34 Lard compounds and other lard substitutes, production, quarterly, 1922-42 (Table 56; Chart 62)

*Unit and Source:* see series 14 above

*Coverage:* Practically complete factory production; considerable quantities of lard, tallow, and grease produced in households, on

farms, and by small local butchers and meat markets excluded. Shortenings are produced mainly from vegetable oils with cottonseed oil predominating.

## CHAPTER 14

- 1 Manufacturers' inventory investment, constant prices, total and 10 groups, Kuznets' estimates, annual, 1919-39 (Tables 61-63; Charts 63-65)  
Derived from series 2, Ch. 4. The figures are given in Table 109.
- 2 Manufacturers' inventory investment, current prices, total, Kuznets' estimates, annual, 1919-38 (Chart 64)  
Figures in constant prices (series 1) converted to current prices by use of price indexes from *Commodity Flow and Capital Formation* as revised and extended by NBER. See App. A for description of revised price indexes.
- 3 Inventory investment in 5 major industrial divisions, constant prices, annual, 1919-39 (Table 63; Chart 65)  
Derived from series 4, Ch. 4. Figures are given in Table 112.
- 4 Total inventory investment and total nonfarm inventory investment, current and constant prices, annual, 1919-38 (Chart 66)  
From Kuznets' *National Product since 1869*, Table I 11.

## CHAPTER 15

The series studied in this chapter are for aggregate output and manufacturing production. The latter fall into 3 groups: (A) general indexes; (B) indexes of production in 14 groups of manufacturing industries; (C) 57 series representing production by individual industries or of individual commodities.

## AGGREGATE OUTPUT

- 1a Barger, outlay, quarterly, 1921-38 (Table 64; Chart 67)
- 1b Barger, national income, quarterly, 1921-38 (Table 64; Chart 67)  
Unit (1a and 1b): dollar  
Source (1a and 1b): Estimates by Harold Barger in *Outlay and Income in the United States, 1921-1938*, Table 11, pp. 114-9, and Table 18, pp. 178-83.
- 2 Bank clearings outside N. Y. C., monthly, 1919-38 (Table 64; Chart 67)  
Unit: dollar  
Source: Compiled by NBER from *Commercial and Financial Chronicle*
- 3 Industrial production index, FRB, monthly, 1919-38 (Table 64; Chart 67)  
Base: 1935-39:100  
Source: *Federal Reserve Index of Industrial Production, October 1943*, p. 45

## MANUFACTURING PRODUCTION

- A General Indexes** (Tables 65, 69, and 71; Charts 68-71)
- 1 Manufactures, total, FRB, monthly, 1919-40  
*Base:* 1935-39:100  
*Source:* *Federal Reserve Bulletin*, Aug. 1940, pp. 764-5; April 1941, p. 344 (for revised data see *Federal Reserve Index of Industrial Production*, October 1943)
  - 2 Manufactures, total, Y. S. Leong, monthly, 1919-39  
*Base:* 1923-25:100  
*Source:* Through 1933, data furnished by Y. S. Leong, National Recovery Administration, Division of Research and Planning (also published in *Journal of the American Statistical Association*, Vol. 30, June 1935, pp. 370-1); thereafter, by George W. Hervey, Agricultural Adjustment Administration, Consumers' Counsel Division.
  - 3 Basic materials, Harvard Economic Service, monthly, 1919-31  
*Base:* Normal:100  
*Source:* Through 1928, *Review of Economic Statistics*, Aug. 1929, pp. 137-9; 1929-31, Harvard Economic Service, *Weekly Letters*, Jan. 1931, p. 16, and subsequent issues.
  - 4 Durable goods, Federal Reserve Bank of N. Y., monthly, 1919-43  
*Base:* estimated long term trend:100  
*Source:* Through 1941, data furnished by FRB of N. Y.; 1942-43, published in its *Monthly Review of Credit and Business Conditions*
  - 5 Durable goods, Leong, monthly, 1919-39; same as 2 above
  - 6 Durable manufactures, FRB, monthly, 1919-40; same as 1 above
  - 7 Producer durable goods, FRB of N. Y., monthly, 1919-43; same as 4 above
  - 8 Consumer durable goods, FRB of N. Y., monthly, 1919-43; same as 4 above
  - 9 Nondurable goods, FRB of N. Y., monthly, 1919-43; same as 4 above
  - 10 Transient goods, Leong, monthly, 1919-39; same as 2 above
  - 11 Nondurable manufactures, FRB, monthly, 1919-40; same as 1 above
  - 12 Producer nondurable goods, FRB of N. Y., monthly, 1919-43; same as 4 above
  - 13 Consumer nondurable goods, FRB of N. Y., monthly, 1919-43; same as 4 above
  - 14 Producer goods, FRB of N. Y., monthly, 1919-43; same as 4 above
  - 15 Producer goods, Leong, monthly, 1919-39; same as 2 above
  - 16 Consumer goods, FRB of N. Y., monthly, 1919-43; same as 4 above
  - 17 Consumer goods, Leong, monthly, 1919-39; same as 2 above
  - 18 Consumer goods, excluding automobiles, Leong, monthly, 1919-39; same as 2 above
- B Fourteen Industry Groups** (Tables 66, 70, and 72)
- 1 Production of manufactured food products index, monthly, 1919-44

*Base:* 1935-39:100

*Sources:* 1919-22, NBER; thereafter, Board of Governors of the FRB. 1919-22, data are based on 15 seasonally adjusted FRB indexes of manufactured food products and lowered to the level of the total FRB index of manufactured food products by using the January 1923 ratio of the FRB to the NBER index, 0.671. 1923-45, *Federal Reserve Index of Industrial Production, October 1943*, and *Federal Reserve Bulletin*, March 1944, and subsequent issues.

- 2 Production of textiles index, monthly, 1919-43

*Base:* 1935-39:100

*Source:* *Federal Reserve Index of Industrial Production, October 1943*, and *Federal Reserve Bulletin*, March 1944: tables on indexes by groups and industries.

- 3 Production of leather and leather products index, monthly, 1919-43  
See series 2 above

- 4 Paper and pulp production index, monthly, 1919-43  
See series 2 above

- 5 Printing index, monthly, 1919-33

*Source:* NBER; average computed from reference cycle rates of change of two series: newsprint consumption by publishers and book paper production. For newsprint consumption see Ch. 10, series 39. Book paper production for 1918-20 and 1922-24 furnished by *Survey of Current Business*; 1921 and 1925-33, published in *Survey of Current Business*, Dec. 1933, p. 19.

- 6 Crude rubber consumption, monthly, 1924-41

*Unit:* long ton

*Source:* 1924-33, furnished by *Survey of Current Business*; 1934-41, *Survey of Current Business*, 1938 Supplement, p. 148, and subsequent supplements. See also Ch. 10, series 24.

- 7 Crude petroleum consumption, monthly, 1917-42

See Ch. 10, series 37

- 8 Production of metal products index, monthly, 1919-24; 1923-43

*Bases:* 1923-25:100 (1st segment); 1935-39:100 (2d segment)

*Sources:* Indexes for first segment furnished by FRB; for second segment, see series 2 above. Data computed by NBER by averaging two FRB indexes: production of iron and steel and of nonferrous metal products, weighted by value added.

- 9 Lumber production index, monthly, 1919-43

See series 2 above

- 10 Production of furniture index, monthly, 1923-43

See series 2 above

- 11 Production of stone, clay and glass products index, monthly, 1919-43

See series 2 above

- 12 Production of transportation equipment index, monthly, 1919-38

*Source:* NBER; the weighted average, computed from reference

- cycle rates of change, of 7 series; see Sec. C, series 48-54, below.
- 13 Production of machinery index, monthly, 1923-43  
See series 2 above
- 14 Production of chemical products index, monthly, 1923-39; 1939-43  
See series 2 above
- C *Fifty-seven Industries and Commodities* (Tables 67-68, 70, 73-75; Chart 82)

## FOODS, BEVERAGES AND TOBACCO

- 1 Animals slaughtered under federal inspection index, monthly, 1907-38  
*Base:* 1919-21:100  
*Source and Coverage:* See Ch. 10, series 21, *ibid.*, pp. 33-6. Computed by NBER, this index is based on 4 series of slaughter under federal inspection, weighted by their relative importance as indicated by the average value of the animals of each type slaughtered, according to successive Censuses of Manufactures, 1909 through 1929. Weights: cattle, 52 percent; calves, 6 percent; hogs, 33 percent; sheep and lambs, 9 percent.
- 2 Volume of milk used in factory production of principal dairy products, monthly, 1919-43  
*Unit:* pound  
*Source and Coverage:* Bureau of Agricultural Economics: 1919, computed by NBER; 1920-43, furnished by *Survey of Current Business*. Figures for 1919 derived from the production series published in Department of Agriculture *Technical Bulletin* 722, pp. 63-71; Bureau of Agricultural Economics conversion factors used to convert the various dairy products into equivalent quantities of milk. The series represents consumption of milk in creamery butter, cheese produced from whole milk, condensed and evaporated milk (bulk and case goods), and unskimmed and dried whole milk.
- 3 Wheat flour production, monthly, 1914-26; 1923-42  
*Unit:* barrel of approximately 196 lbs. net  
*Sources and Coverage:* 1914-26, A. L. Russell; 1923-42, Food Research Institute, Stanford University, California. 1914-26, published in *Survey of Current Business*, Oct. 1922, p. 47; Nov. 1924, p. 121; 1932 Supplement, p. 158. 1923-31, Food Research Institute, *Wheat Studies*, IX, 3, p. 130; X, 4, p. 179; X, 7, p. 285. 1932-42, *ibid.*, XIV, 1, p. 33; XVI, 1, p. 35; XVII, 1, p. 34; XVII, 8, p. 416; XVIII, 5, p. 224; XVIII, 8, p. 364.  
1914-June 1920, compiled from records of U. S. Food Administration Grain Corp. and of U. S. Grain Corp.: 1914-16, adjusted to census total of 1914; 1917-20, adjusted to cover 100 percent of rated capacity of the industry. July 1920-26, compiled by *Russell's Commercial News*, prorated to represent total industry "from represen-

tative current data". 1923-42, total production estimated by Food Research Institute to represent output of commercial mills included in biennial censuses plus an allowance for 100,000 barrels per month for custom mills and very small commercial mills.

- 4 Sugar meltings, monthly, 1890-1930; September 1920-41  
See Ch. 10, series 34
- 5 Shortenings (lard compounds and other lard substitutes) production, quarterly, 1922-42  
See Ch. 12, series 14 and 34
- 6 Tobacco consumption, small cigarettes, monthly, 1915-42  
*Unit:* number of cigarettes  
*Source and Coverage:* Treasury Department, Bureau of Internal Revenue: 1915-19, published in Standard Statistics Co., Inc., Standard Trade and Securities, *Standard Statistical Bulletin, Base Book*, Jan. 1932, p. 321; 1920-42, *Survey of Current Business*, May 1922, p. 103; Aug. 1924, p. 161; 1932 Supplement, pp. 170-1, and subsequent supplements. Data represent withdrawals from bonded warehouses upon payment of tax for domestic consumption. Small cigarettes are those weighing 3 pounds per 1,000 or less. The figures cover the entire output of that class of cigarettes; up to 1933, small cigarettes were about 90 percent of total cigarette production; from 1934, they represent 99 percent of total cigarette production.

## TEXTILES

- 7 Cotton consumption, monthly, September 1912-40  
See Ch. 10, series 5 and 6
- 8 Total wool consumption, scoured basis, monthly, 1918-40  
*Unit:* pound  
*Source and Coverage:* Bureau of Census: 1918-19, data obtained by NBER by adding series on apparel class wool and carpet class wool from Bureau of Census, *Raw Wool Consumption Report*, March and Sept. 1935 Supplements; 1920-40, *Rayon Organon*, Special Supplement, Jan. 21, 1941, p. 27. Beginning July 1934 census data, reported on a weekly basis, were converted to a calendar month basis by the Textile Economics Bureau, Inc. These figures are considered almost complete through September 1920 and complete thereafter, when allowance was made for consumption by the few manufacturers from whom no schedules were received.
- 9 Raw silk deliveries to mills, monthly, 1920-July 1941  
See Ch. 10, series 12
- 10 Rayon deliveries index, monthly, 1923-43  
*Base:* 1935-39:100  
*Source and Coverage:* *Federal Reserve Index of Industrial Production*, October 1943, pp. 31 and 63, and *Federal Reserve Bulletin*, March 1944, p. 272. The index, based on data compiled by the



Textile Economics Bureau, Inc., represents seasonally adjusted 3-month moving averages placed at the last month. Its components are weighted averages of rayon filament yarn and staple fiber deliveries (gross) plus imports for consumption (the latter through September 1941). Deliveries are those made by American producers to domestic mills exclusive of adjustments for returns and include all processes: viscose and acetate (the latter partially estimated), cuprammonium, and nitrocellulose (the last discontinued in 1934).

- 11 Factory employment index, fabrics, BLS, monthly, 1919-September 1942

*Base:* 1923-25:100

*Source and Coverage:* BLS: 1919-22 and 1933-39, obtained from FRB; 1923-32 and 1940-42, published in *Federal Reserve Bulletin*, Oct. 1938, pp. 855-6, April 1941, p. 348, and subsequent issues. This index is a composite of indexes of employment in the manufacture of the following textile products: carpets and rugs, cotton goods, cotton small wares, dyeing and finishing textiles, fur and felt hats, silk and rayon goods, woolen and worsted goods, and knit goods. These series have been weighted by the annual average number of wage earners in the respective industries as shown by Census of Manufactures, 1929, and were adjusted to conform with levels of employment indicated by successive censuses through 1939.

- 12 Factory employment index, wearing apparel, monthly, 1919-September 1942

*Base:* 1923-25:100

*Source and Coverage:* BLS: prior to 1923, see series 11 above; 1923-42, published in *Federal Reserve Bulletin*, Oct. 1938, pp. 858-60, Oct. 1939, p. 885, Nov. 1940, p. 1216, and subsequent issues. Method of compilation same as series 11. This index covers men's clothing, women's clothing, corsets and allied garments, men's furnishings, millinery, shirts, and collars.

#### HIDES, LEATHER, AND SHOES

- 13 Cattle hide and kip leather, production, monthly, 1920-41  
See Ch. 12, series 28
- 14 Total shoe production, monthly, November 1921-43  
See Ch. 12, series 29

#### PULP, PAPER, AND PRINTING

- 15 Fine paper production, monthly, 1918-33; 1932-43  
*Unit:* short ton

*Sources and Coverage:* Through May 1923, FTC; June 1923-43, American Paper and Pulp Association. 1918-20 and 1922-24, data furnished by *Survey of Current Business*; 1921 and 1923-33, published in *Survey of Current Business*, Dec. 1933, p. 19, and 1936

Supplement, p. 128. 1934-43, furnished by American Paper and Pulp Association. The first segment, ending 1933, includes only writing paper; the second segment includes also cover and bristol papers. The figures were raised to levels indicated by Census of Manufactures for the corresponding types of paper.

- 16 Wrapping paper production index, monthly, 1923-40  
*Base:* 1935-39:100  
*Sources and Coverage:* Through May 1923, FTC; June 1923-40, American Paper and Pulp Association. Data published in *Federal Reserve Bulletin*, Aug. 1940, p. 867, and Dec. 1940, pp. 1309-11. June 1923-33, figures based on a sample of identical mills; thereafter, on a changing sample of mills. Index compiled by FRB as a continuous series adjusted to conform with annual totals of wrapping paper production published by Bureau of Census.
- 17 Newsprint shipments from mills, United States and Canada, monthly, 1919-45  
 See Ch. 11, series 8
- 18 Book paper production, monthly, 1918-33  
*Unit:* short ton  
*Sources and Coverage:* Through May 1923, FTC; June 1923-33, American Paper and Pulp Association. 1918-20 and 1922-24, furnished by *Survey of Current Business*; 1921 and 1925-33, published in *Survey of Current Business*, Dec. 1933, p. 19, and March 1934, p. 50. Data adjusted to census totals to cover entire industry. Figures not carried beyond the end of 1933 because of changes in classification affecting the comparability of the series.
- 19 Factory employment index, paper boxes, BLS, monthly, 1919-September 1942  
*Base:* 1923-25:100  
*Source and Coverage:* BLS: data for 1919-30 published in Revised Indexes of Factory Employment and Pay Rolls, 1919 to 1933, BLS *Bulletin* 610, pp. 106, 78-9; 1931-34 and 1935-39, BLS releases 6609, Sept. 1938, and 9173, May 1940; 1940-August 1942, *Monthly Labor Review*, June 1940, p. 1508, and subsequent issues; September 1942, *Federal Reserve Bulletin*, Nov. 1942, p. 1141.
- 20 Newsprint consumption by publishers, monthly, 1919-39  
 See Ch. 10, series 39 and 40

## RUBBER PRODUCTS

- 21 Automobile tire, inner tubes, production, monthly, 1921-41  
 See Ch. 10, series 29
- 22 Automobile tire, pneumatic casings, production, monthly, 1921-41  
 See Ch. 10, series 29

## CHEMICALS

- 23 Ethyl alcohol production, monthly, 1920-41

*Unit:* one proof gallon

*Source and Coverage:* Treasury Department, Bureau of Internal Revenue; published in *Survey of Current Business*, April 1925, p. 27; 1932 Supplement, pp. 124-5, and subsequent supplements. Data represent complete coverage of the industry, including operations in Hawaii and Puerto Rico.

- 24 Fertilizer consumption, quarterly, 1922-June 1941

*Unit:* short ton

*Source and Coverage:* National Fertilizer Association; published in *Survey of Current Business*, Jan. 1934, p. 19, 1936 Supplement, p. 78, and subsequent supplements. Compiled from tax tag sales reports of the Commissioners of Agriculture in 11 southern states. These tags, which must be attached to fertilizer bags sold, represent an equivalent number of short tons of fertilizer. Such tag sales as recorded by state officials may be larger or smaller than actual fertilizer sales. Monthly figures are available in the source.

- 25 Inedible tallow production, quarterly, 1919-42

See Ch. 12, series 14 and 15

- 26 Explosives, shipments, monthly, 1920-43

*Unit:* pound

*Source and Coverage:* 1920-June 1933, Bureau of Mines; July 1933-August 1943, Institute of Makers of Explosives. Published in *Survey of Current Business*, Jan. 1934, p. 19, 1936 Supplement, p. 76, and subsequent supplements. Data cover sales for domestic consumption of black blasting powder, permissibles, and other high explosives, excluding ammunition, fireworks, and nitroglycerin. Believed to represent total manufacture of black blasting powder and permissible explosives, and about 96 percent of industry making high explosives other than permissibles. Monthly data prior to 1926 are not entirely comparable data for 1926 and later years because of varying coverage. However, the entire series was treated as continuous.

- 27 Linseed oil production, quarterly, 1918-42

See Ch. 12, series 22

- 28 Refined cottonseed oil production, monthly, 1916-41

See Ch. 12, series 4

#### PETROLEUM PRODUCTS

- 29 Gasoline refinery production, monthly, 1917-40

*Unit and Source:* see Ch. 10, series 36 and 37

*Coverage:* see Ch. 11, series 28

- 30 Lubricants, production, monthly, 1917-41

*Unit and Source:* see Ch. 10, series 36 and 37

*Coverage:* Total refinery production

## METALS

- 31 Pig iron production, monthly, 1877-1942  
*Unit:* long ton  
*Sources and Coverage:* 1877-1921, F. R. Macaulay, *Movements of Interest Rates, Bond Yields and Stock Prices in the United States Since 1856* (NBER, 1938), Table 27. 1922-42, *Iron Age*, 1st or 2d issue in month. The series represents daily averages obtained by dividing by the number of calendar days in the month. Charcoal pig iron and pig iron made in electric furnaces not included.
- 32 Steel ingot production, monthly, 1899-1939  
*Unit:* long ton  
*Source and Coverage:* 1899-June 1917, *Iron Age*; July 1917-39, American Iron and Steel Institute; data published in *Iron Age*, 1st or 2d issue in month. The series represents average production per working day (calendar days in month minus Sundays, Independence Day, and Christmas) and includes production of open hearth, bessemer, crucible, and electric ingots.
- 33 Refined copper production, North and South America, monthly, 1919-38  
*Unit and Sources:* see Ch. 11, series 34  
*Coverage:* see Ch. 11, series 36
- 34 Steel sheet production, monthly, 1919-36; quarterly, 1932-43  
 See Ch. 11, series 4
- 35 Lead ore shipments, Joplin district, monthly, 1895-1928; 1923-41  
*Unit:* short ton  
*Sources and Coverage:* 1895-1903, *Engineering and Mining Journal*; 1904-October 1928, New York Metal Exchange, *Official Daily, Market Report*; 1923-41, compiled by *Joplin Globe*, and published in *Survey of Current Business*, 1932 Supplement, pp. 226-7, and subsequent supplements. Data represent weekly average carloadings of concentrates (about 80 percent lead content) for shipment from mines to smelters in the Joplin district.
- 36 Slab zinc production, monthly, 1917-18; 1920-39  
*Unit and Source:* see Ch. 11, series 43  
*Coverage:* see Ch. 11, series 41
- 37 Tin and terne plate production, monthly, 1922-34; quarterly, 1932-41  
*Unit:* long ton  
*Sources and Coverage:* 1922-34, American Bureau of Metal Statistics; 1934-41, American Iron and Steel Institute, 1922-34, published in *Survey of Current Business*, Dec. 1932, p. 20, and subsequent issues; 1934-41, Nov. 1940, p. 14, and subsequent issues. First segment covers approximately entire output of tin and terne plate in United States. Second segment covers only tin plate and represents production for sale outside the industry as reported by more than 95 percent of its members; production for sale to members of the industry

for further conversion is excluded. The ratio of tin plate production to tin and terne plate production in 1933 was 0.934.

- 38 Enameled sanitary ware shipments, monthly, 1917-31  
See Ch. 11, series 19. Figures used are an average of four series: bathtubs, lavatories, kitchen sinks, and miscellaneous enameled sanitary ware (see Ch. 11, series 20, 22, 24, and 26).

## LUMBER AND PRODUCTS

- 39 Douglas fir production, monthly, 1917-35  
*Unit:* board feet  
*Source and Coverage:* West Coast Lumbermen's Association: published in *Survey of Current Business*, Dec. 1922, p. 49; Aug. 1924, p. 119; 1932 Supplement, pp. 192-3, and subsequent issues. Data adjusted to the level of actual production of 124 reporting mills for May 1920.
- 40 Southern pine production, monthly, 1916-40  
*Unit and Source:* see Ch. 11, series 9  
*Coverage:* see Ch. 11, series 11
- 41 Oak flooring production, monthly, 1912-42  
See Ch. 11, series 12 and 13
- 42 Production of furniture index, monthly, 1923-43  
*Base:* 1935-39: 100  
*Sources and Coverage:* *Federal Reserve Index of Industrial Production, October 1943*, pp. 29 and 58; *Federal Reserve Bulletin*, March 1944, p. 272. Based on manhour data for furniture industry: adjusted for estimated changes in output per manhour.

## STONE, CLAY, GLASS, AND OTHER CONSTRUCTION MATERIALS

- 43 Portland cement production, monthly, 1911-42  
See Ch. 11, series 16 and 17
- 44 Polished plate glass production, monthly, 1923-43  
*Unit:* square foot  
*Source and Coverage:* Plate Glass Manufacturers of America: 1925-27, revised figures from Plate Glass Manufacturers of America; 1923-24 and 1928-43, published in *Survey of Current Business*, 1932 Supplement, pp. 258-9, and subsequent supplements. Data comprise practically the entire industry.
- 45 Face brick production, monthly, 1919-25; 1923-36  
*Unit:* number of bricks  
*Source and Coverage:* American Face Brick Association: 1919-25, published in *Survey of Current Business*, April 1923, p. 53, and subsequent issues; 1923-28, 1932 Supplement, pp. 256-7; 1929-36, June 1933, p. 20, and subsequent issues. 1919-25, data are for monthly production of 32 identical firms. 1923-36, data are for average monthly output of 54 identical firms except for 1923-27 when a

varying number of firms, 20 to 30, reported. For these years average output was adjusted to the 54 plant level. Beginning 1929, adjustments were required to allow for discrepancies between machine production of bricks (i.e., the output of bricks prior to burning) and the number drawn from the kilns.

- 46 Prepared roofing shipments, monthly, 1919-September 1928; 1928-34; 1932-43

*Unit:* one roof square (equivalent to amount of roofing needed to cover 100 sq. ft.)

*Sources and Coverage:* 1919-28, Asphalt Shingle and Roofing Association (prior to 1926, Prepared Roofing Manufacturers' Association); 1928-43, Bureau of Census. 1919-28, published in *Survey of Current Business*, Sept. 1923, p. 55, and subsequent issues; 1928-43, Bureau of Census, *Asphalt Prepared Roofing Shipments*; 1932 of last segment, from *Survey of Current Business*, 1936 Supplement, p. 84.

1919-28, data compiled "from reports of 60 to 90 percent of total machine capacity" and adjusted to 100 percent of the industry. 1928-34, compiled from reports of 40 plants "comprising practically the entire industry". 1932-43 segment covers reports ranging from 23 companies in April 1932 to 33 in 1943. The coverage has varied somewhat from over 90 percent in 1929-31 to a low of approximately 85 percent in 1935, and up to about 96 percent in 1941. The differences between this series and the one published for 40 plants are relatively slight.

- 47 Asphalt production, monthly, 1917-44

*Unit:* short ton

*Sources:* see Ch. 10, series 36 and 37

*Coverage:* Data are for asphalt derived as a byproduct from domestic and foreign petroleum, the larger proportion derived from the latter. Native asphalt is thus excluded.

#### TRANSPORTATION EQUIPMENT

- 48 Automobile production, passenger car, monthly, 1913-March 1942

*Unit:* number of cars

*Sources and Coverage:* 1913-June 1921, National Automobile Chamber of Commerce; beginning July 1921, Bureau of Census. 1913-June 1921, data published in *Survey of Current Business*, June 1927, p. 22; beginning July 21, Bureau of Census, *Automobiles*. 1913-June 1921, estimated industry totals based on returns from companies accounting for 90 percent of the output; beginning July 1921, reports received from practically the entire industry. Data are for domestic factory sales including units assembled in foreign countries from parts made in United States. Taxicabs are included, but are a negligible part of the total.

- 49 Automobile production, truck, monthly, 1913-March 1942  
*Unit:* number of trucks  
*Sources:* see series 48 above  
*Coverage:* Trucks include commercial cars, road tractors, ambulances, funeral cars, fire apparatus, street sweepers, buses, and other special purpose vehicles.
- 50 Automobile accessories and parts shipments index, monthly, 1925-41  
*Base:* January 1925=100  
*Source and Coverage:* Motor and Equipment Manufacturers' Association: 1925-32, published in *Survey of Current Business*, Feb. 1934, p. 20; 1933-41, 1936 Supplement, p. 147, and subsequent issues. Data represent a combined index based upon the value of sales of accessories and parts (original equipment) to vehicle manufacturers and wholesalers, replacement parts to wholesalers and retailers, and service equipment to wholesalers.
- 51 Vessels under construction, quarterly, 1910-14; 1918-39  
*Unit:* gross ton  
*Source and Coverage:* Lloyd's Register of Shipping; published in *Lloyd's Register Shipbuilding Returns*. Only vessels of 100 tons gross and upwards, construction of which has actually commenced, are included; vessels for other than mercantile purposes excluded. Series represents sum of figures for the four regions, Atlantic Coast, Gulf Ports, Pacific Coast, and the Great Lakes.
- 52 Freight car shipments, monthly, 1919-43  
*Unit:* number of cars  
*Source and Coverage:* American Railway Car Institute; published in *Survey of Current Business*, March 1940, p. 16; 1942 Supplement, p. 172, and subsequent issues.  
 "Reported by members of the American Railway Car Institute and cover all car builders in the United States. The figures do not include shipments (installations) of cars built in railroad shops nor for the Pullman Company." (*Survey of Current Business*, 1942 Supplement, note 1 to p. 172).
- 53 Railroad passenger car shipments, monthly, 1919-43  
 See series 52 above
- 54 Railroad locomotive shipments, monthly, 1918-41  
*Unit:* number of locomotives  
*Sources and Coverage:* 1918-19, U. S. Railroad Administration; 1920-41, Bureau of Census. 1918-19, published in *Federal Reserve Bulletin*, Feb. 1919, p. 162, and Feb. 1920, p. 183; 1920-41, Bureau of Census, *Railroad Locomotives*, Dec. 1931 and subsequent December releases through 1937, monthly thereafter. Data are for steam locomotives through 1919; steam and electric thereafter. Exports and locomotives produced in the railroads' own shops excluded.

## MACHINERY

- 55 Machine tool shipments index, monthly, 1925-34  
*Base:* 1922-24:100  
*Source and Coverage:* National Machine Tool Builders' Association; published in *Survey of Current Business*, 1932 Supplement, pp. 220-1, and subsequent issues. Data cover the dollar value of shipments, based on returns of 50-60 firms representing one-third of the industry.
- 56 Industrial pumps (steam, power, and centrifugal), shipments, monthly, 1919-33  
*Unit:* value in dollars  
*Source and Coverage:* Hydraulic Society; published in *Survey of Current Business*, Feb. 1927, p. 24, 1932 Supplement, p. 222, and subsequent issues. Data are believed to represent about two-thirds of the industry.
- 57 Woodworking machinery, shipments, monthly, 1919-40  
*Unit:* value in dollars  
*Source and Coverage:* Association of Manufacturers of Woodworking Machinery; published in *Record Book of Business Statistics*, II, p. 41; *Survey of Current Business*, 1932 Supplement, pp. 222-3, and subsequent issues. Data are compiled from reports covering about 50 percent of the total industry. About 27 products are included.

## CHAPTER 17

*Series numbers refer to the notes to Chapter 10 in this Appendix*

## RAW COTTON

- 1 Stocks at mills (Table 76; Chart 72), series 4  
 2 Consumption (Table 76; Chart 72), series 6

## RAW SILK

- 3 Stocks at manufacturers (Table 76; Chart 73), series 10  
 4 Deliveries to mills (Table 76; Chart 73), series 12

## RAW CATTLE HIDES

- 5 Stocks in tanners' hands (Table 76; Chart 74), series 16  
 6 Wettings (Table 76; Chart 74), series 18

## LEAD

- 7 Stocks at warehouses (Chart 75), series 47  
 8 Imports (Chart 75), series 48

## CRUDE RUBBER AND RELATED SERIES

- 9 Stocks in and afloat for United States (Chart 75), series 22  
 10 Automobile tire, pneumatic casings, production (Chart 75), series 29



## NEWSPRINT

- 11 Stocks at and in transit to publishers (Chart 75), series 39
- 12 Consumption (Chart 75), series 40

## CRUDE PETROLEUM

- 13 Stocks (Chart 75), series 36
- 14 Consumption (Chart 75), series 37

## RAW SUGAR

- 15 Stocks at ports (Chart 75), series 33
- 16 Meltings (Chart 75), series 34

## CHAPTER 18

*Series numbers refer to the notes to Chapter 11 in this Appendix*

## PAPER, ALL GRADES

- 1 Stocks at mills (Tables 77-81; Charts 77-81), series 5
- 2 Production (Tables 77-79; Charts 77-80), series 6

## NEWSPRINT

- 3 Stocks at mills, United States and Canada (Tables 77-81; Charts 77-81), series 7
- 4 Shipments from mills, United States and Canada (Tables 77-79; Charts 77-80), series 8

## SOUTHERN PINE LUMBER

- 5 Stocks (Tables 71-81; Charts 77-81), series 9
- 6 Shipments (Tables 77-79; Charts 77-80), series 10

## OAK FLOORING

- 7 Stocks (Tables 77-81; Charts 77-81), series 12
- 8 Shipments (Tables 77-79; Charts 77-80), series 13

## PORTLAND CEMENT

- 9 Stocks (Tables 77-81; Charts 77-81), series 16
- 10 Shipments (Tables 77-79; Charts 77-80), series 17

## BATHTUBS

- 11 Stocks (Tables 77-81; Charts 77-81), series 19
- 12 Shipments (Tables 77-79; Charts 77-80), series 20

## LAVATORIES

- 13 Stocks (Tables 77-81; Charts 77-81), series 21
- 14 Shipments (Tables 77-79; Charts 77-80), series 22

## KITCHEN SINKS

- 15 Stocks (Tables 77-81; Charts 77-81), series 23
- 16 Shipments (Tables 77-79; Charts 77-80), series 24

## MISCELLANEOUS ENAMELED SANITARY WARE

- 17 Stocks (Tables 77-81; Charts 71-81), series 25
- 18 Shipments (Tables 77-79; Charts 77-80), series 26

## GASOLINE

- 19 Stocks at refineries (Tables 77-81; Charts 77-81), series 27
- 20 Refinery production (Tables 77-79; Charts 77-80), series 28

## LUBRICANTS

- 21 Stocks at refineries (Tables 77-81; Charts 77-81), series 29
- 22 Production (Tables 77-79; Charts 77-80), series 30

## PIG IRON

- 23 Stocks at merchant furnaces (Tables 77-81; Charts 77-81), series 31
- 24 Shipments from merchant furnaces (Tables 77-79; Charts 77-80), series 32

## STEEL SHEETS

- 25 Stocks made to stock (Tables 77-81; Charts 76-81), series 1
- 26 Stocks made to order (Chart 76), series 2
- 27 Shipments (Tables 77-79; Charts 76-80), series 3

## REFINED COPPER

- 28 Stocks, United States; North and South America (Tables 77-79; Charts 77-81), series 34
- 29 Shipments, North and South America (Tables 77-79; Charts 77-80), series 35

## LEAD

- 30 Stocks at smelters and refineries (Tables 77-81; Charts 77-81), series 37
- 31 Ore receipts, domestic (Tables 77-79; Charts 77-80), series 38

## SLAB ZINC

- 32 Stocks at refineries (Tables 77-81; Charts 77-81), series 41
- 33 Shipments (Tables 77-79; Charts 77-80), series 42

## AUTOMOBILE TIRES

- 34 Pneumatic casings, stocks (Tables 77-81; Charts 77-81), series 44
- 35 Pneumatic casings, shipments (Tables 77-79; Charts 77-80), series 45

## INNER TUBES

- 36 Stocks (Tables 77-81; Charts 77-81), series 47
  - 37 Shipments (Tables 77-79; Charts 77-80), series 48
  - 38 Fifty-seven production series (Tables 82; Chart 82)
- See Ch. 16, Sec. C

## CHAPTER 19

*Series numbers refer to the notes to Chapter 12 in this Appendix, except when otherwise indicated*

## PORK, LARD, AND BEEF

- 1 Cold storage holdings of pork (Charts 83 and 86), series 6
- 2 Cold storage holdings of lard (Charts 84 and 87), series 7
- 3 Cold storage holdings of beef and veal (Charts 85 and 88), series 8
- 4 Pork, frozen or placed in cure in meat packing establishments (Charts 83 and 86), series 9
- 5 Beef, frozen or placed in cure in meat packing establishments (Charts 85 and 88), series 10
- 6 Lard production from federally inspected slaughter (Charts 84 and 87), series 11
- 7 Hogs slaughtered, commercial; under federal inspection, series 12
- 8 Cattle slaughtered under federal inspection, Ch. 10, series 21

## CRUDE AND REFINED COTTONSEED OIL

- 9 Crude cottonseed oil stocks (Charts 89 and 91), series 1
- 10 Refined cottonseed oil stocks (Charts 90, 92-93), series 3
- 11 Crude cottonseed oil production (Charts 89 and 91), Ch. 10, series 31
- 12 Refined cottonseed oil production (Charts 90 and 93), series 4
- 13 Shortenings (lard compounds and other lard substitutes), production, series 34

## EVAPORATED MILK

- 14 Case goods, stocks at manufacturers (Charts 94-95), series 30
- 15 Case goods, production (Charts 94-95), series 31

## LINSEED OIL

- 16 Stocks at factories and warehouses (Charts 96-98), series 20
- 17 Production (Charts 96 and 98), series 22
- 18 Shipments (Charts 97-98), series 21

## FINISHED CATTLE HIDE LEATHER

- 19 Stocks in tanners' hands (Charts 99-101), series 26
- 20 All cattle hide and kip leather production (Chart 99), series 28
- 21 Total shoe production (Chart 100), series 29

## CHAPTER 21

- 1 Gross national product and its components, 1919-38 (Tables 84-87)  
See notes to Table 1