

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Personal Income During Business Cycles

Volume Author/Editor: Daniel Creamer assisted by Martin Bernstein

Volume Publisher: Greenwood Press

Volume ISBN: 0-313-24421-9

Volume URL: <http://www.nber.org/books/crea56-1>

Publication Date: 1956

Chapter Title: Appendix B: Estimates of Factor Inputs and Returns, 1900-1950

Chapter Author: Daniel Creamer, Martin Bernstein

Chapter URL: <http://www.nber.org/chapters/c2773>

Chapter pages in book: (p. 128 - 135)

APPENDIX B

ESTIMATES OF FACTOR INPUTS AND RETURNS, 1900-1950 (CHART 3)

IN ALL but one of the series which appear in Chart 3 and Table B-1, the data were converted to an index on the base 1925 = 100. Wherever data in a given series were obtained from different sources and were not strictly comparable, the segments were spliced before conversion to the 1925 = 100 base. Since no data were available for 1925 for total nonfarm reproducible tangible assets (other than those of households, government, and nonprofit institutions) in 1929 prices (Table B-1, Part C), the series was placed on a 1929 = 100 base.

APPENDIX B

TABLE B-1

Indexes of Factor Inputs and Factor Returns by Type of Income, 1900-1950
 A. Labor: Farm and Nonfarm
 (1925 = 100)

	<i>Hired Farm Workers^a</i> (1)	<i>Composite Farm Wage Rate^b</i> (2)	<i>Full-Time Equivalent Nonfarm Employees^c</i> (3)	<i>Annual Full- Time Equivalent Earnings per Nonfarm Employee^d</i> (4)
1900	n.a.	n.a.	n.a.	38.8
1901	n.a.	n.a.	n.a.	39.9
1902	n.a.	n.a.	n.a.	40.6
1903	n.a.	n.a.	n.a.	42.1
1904	n.a.	n.a.	n.a.	42.0
1905	n.a.	n.a.	n.a.	42.8
1906	n.a.	n.a.	n.a.	43.8
1907	n.a.	n.a.	n.a.	45.4
1908	n.a.	n.a.	n.a.	43.4
1909	n.a.	n.a.	78.5	45.4
1910	99.7	52	82.0	47.2
1911	99.4	54	83.5	46.7
1912	100.1	56	85.8	48.7
1913	100.6	57	88.3	50.6
1914	101.1	56	91.4	48.3
1915	101.6	56	91.8	50.3
1916	102.7	61	93.6	57.0
1917	101.6	77	92.6	65.9
1918	98.4	97	99.8	76.3
1919	96.4	113	95.3	86.9
1920	99.9	132	96.4	99.9
1921	100.5	85	84.3	92.9
1922	101.0	84	89.3	91.7
1923	100.2	97	98.7	97.4
1924	99.5	99	97.9	98.1
1925	100.0	100	100.0	100.0
1926	104.3	101	104.5	102.0
1927	102.4	101	105.0	102.6
1928	102.3	101	105.7	103.9
1929	103.2	102	111.2	105.9
1930	98.1	96	104.6	103.1
1931	93.5	73	94.4	97.2
1932	87.6	55	83.2	86.3
1933	86.1	49	84.9	80.7
1934	83.9	55	96.0	83.3
1935	87.4	60	100.6	87.0
1936	93.9	64	111.1	91.4
1937	97.0	73	115.5	97.4
1938	97.1	70	110.0	96.5
1939	97.3	70	115.1	98.8

APPENDIX B

TABLE B-1 (continued)
 A. Labor: Farm and Nonfarm (continued)
 (1925 = 100)

	Hired Farm Workers ^a	Composite Farm Wage Rate ^b	Full-Time Equivalent Nonfarm Employees ^c	Annual Full- Time Equivalent Earnings per Nonfarm Employee ^d
	(1)	(2)	(3)	(4)
1940	97.2	72	121.9	101.4
1941	95.8	87	137.8	111.9
1942	95.9	114	155.2	130.8
1943	90.9	150	176.8	151.4
1944	83.5	179	182.1	163.1
1945	78.5	200	176.3	169.4
1946	80.6	218	154.2	176.6
1947	83.4	232	154.0	193.9
1948	86.1	243	156.7	209.9
1949	84.2	234	152.6	214.8

^a Base = 2,887,000 persons.

^b Index on 1910-1914 base converted to 1925 = 100.

^c Base = 29,047,000 persons.

^d Base = \$1,450.

n.a. = not available.

Column

Source

- 1 Average number of hired farm workers: *Agricultural Statistics, 1950*, Dept. of Agriculture, Table 638, p. 584.
- 2 Composite farm wage rate: *ibid.*, Tables 640 and 641, p. 586. Index on a 1910-1914 base.
- 3 Average number of full-time equivalent nonfarm employees: 1909-1919—nonfarm wages and salaries (see notes on columns 3 and 4, Table A-1) divided by average annual nonfarm full-time equivalent earnings (Stanley Lebergott, "Earnings of Nonfarm Employees in the U.S., 1890-1946," *Journal of the American Statistical Association*, March 1948, Table 2, pp. 76-77); 1919-1929—Simon Kuznets, *National Income and Its Composition, 1919-1938*, National Bureau of Economic Research, 1941, Table 51, pp. 314-315; 1929-1949—*National Income Supplement, 1951, Survey of Current Business*, Dept. of Commerce, Table 24, pp. 180-181, and *Survey of Current Business*, July 1952, Table 24, p. 22. The Department of Commerce series for 1929-1949 was extrapolated backward by the Kuznets series for 1919-1929 and by the 1909-1919 segment, with splicing ratios based on 1929 and 1919, respectively. The data were then converted to indexes on the base 1925 = 100.
- 4 Average annual full-time equivalent earnings of nonfarm employees: 1900-1946—Lebergott, *op. cit.*, Table 2, pp. 76-77; 1946-1949—nonfarm wages and salaries (*National Income Supplement, 1951*, Table 14, pp. 160-161, and *Survey of Current Business*, July 1952, Table 14, p. 18) divided by the number of full-time equivalent nonfarm employees (Table 24, pp. 180-181, and Table 24, p. 22, respectively, in the same sources). Lebergott's series for 1900-1946 was extrapolated forward by the Department of Commerce series with a splicing ratio based on 1946. The data were then converted to indexes on the base 1925 = 100.

APPENDIX B

TABLE B-1 (continued)

B. Proprietors: Farm and Nonfarm
(1925 = 100)

	<i>Family Workers in Agriculture^a</i> (1)	<i>Farm Proprietors' Net Income^b</i> (2)	<i>Nonfarm Proprietors^c</i> (3)	<i>Nonfarm Proprietors' Net Income^d</i> (4)
1909	n.a.	55.2	89.1	50.7
1910	108.0	58.1	89.6	48.6
1911	106.9	50.4	89.8	49.5
1912	106.6	58.0	90.0	53.3
1913	106.4	54.8	90.3	54.5
1914	105.9	54.0	90.8	51.8
1915	105.5	59.6	91.1	60.1
1916	105.5	75.3	91.3	71.5
1917	103.2	109.8	90.8	99.2
1918	99.2	136.2	85.8	73.2
1919	97.0	144.1	89.0	113.7
1920	98.8	110.0	89.4	88.0
1921	99.2	62.2	88.4	61.5
1922	99.4	67.6	91.2	83.2
1923	99.0	80.1	93.7	93.7
1924	98.9	86.5	96.9	92.0
1925	100.0	100.0	100.0	100.0
1926	99.1	92.3	101.8	101.6
1927	96.6	91.6	103.8	96.2
1928	97.2	89.9	105.3	100.5
1929	96.8	96.0	108.0	101.7
1930	97.1	66.6	109.1	86.6
1931	99.8	49.1	107.7	65.4
1932	102.0	29.1	105.7	39.5
1933	103.3	38.7	104.2	36.0
1934	103.3	39.4	105.0	52.6
1935	106.4	82.5	106.0	61.4
1936	104.6	65.5	108.3	74.8
1937	103.2	95.2	110.2	81.6
1938	103.2	74.9	111.1	78.1
1939	103.9	76.3	112.4	83.4
1940	103.3	83.7	113.9	95.0
1941	100.9	117.6	111.9	117.8
1942	101.3	177.4	109.1	154.8
1943	101.5	199.4	99.9	184.2
1944	100.7	200.6	100.8	211.2
1945	99.6	212.3	109.1	230.4
1946	102.2	250.6	124.2	253.4
1947	102.1	264.1	133.8	243.5
1948	100.2	299.3	138.1	271.9
1949	97.1	216.5	138.0	266.3
1950		226.2	140.0	291.4

APPENDIX B

Notes to Table B-1 (B)

^a Base = 8,579,000 persons.

^b Base = \$5,902,000.

^c Base = 4,417,000 persons.

^d Base = \$8,123,000.

n.a. = not available.

Column	Source
1	Average number of family workers in agriculture: <i>Agricultural Statistics, 1950</i> , Table 638, p. 584.
2	Net income of farm proprietors: see Table A-1, note on column 11. The Department of Commerce series for 1929-1950 was extrapolated backward by the 1919-1929 and 1909-1919 segments, with splicing ratios based on 1929 and 1919, respectively. The data were then converted to indexes on the base 1925 = 100.
3	Average number of nonfarm proprietors: 1909-1919—Willford Isbell King, <i>The National Income and Its Purchasing Power</i> , NBER, 1930, Table vi, p. 62; 1919-1929—Kuznets, <i>op. cit.</i> , Table 53, pp. 316-317; 1929-1950— <i>National Income Supplement, 1951</i> , Table 27, pp. 186-187, and <i>Survey of Current Business</i> , July 1952, Table 27, p. 23. Series spliced in manner similar to that described in note on column 2 of the present table.
4	Net income of nonfarm proprietors: see Table A-1, note on column 12. Series spliced in manner similar to that described in note on column 2 of the present table.

TABLE B-1 (continued)

C. Capital: Input and Rate of Return

	Ratio of Net Dividend Disbursements to Corporate Net Worth ^a (1925 = 100) (1)	Total Nonfarm Reproducible Tangible Assets (Other than Those of Households, Government, and Nonprofit Institutions) in 1929 Prices ^b (1929 = 100) (2)
1900	n.a.	37.6
1904	n.a.	44.2
1908	n.a.	53.1
1909	69.7	n.a.
1910	73.9	n.a.
1911	72.3	n.a.
1912	75.4	59.5
1913	79.6	n.a.
1916	n.a.	66.4
1918	113.4	n.a.
1919	91.6	n.a.
1920	89.6	78.3
1921	76.5	n.a.
1922	80.1	79.5
1923	99.2	n.a.
1924	88.2	85.1

APPENDIX B

TABLE B-1 (continued)

1925	100.0	n.a.
1926	103.6	n.a.
1927	98.9	n.a.
1928	101.1	96.1
1929	104.8	100.0
1930	91.0	n.a.
1931	72.5	n.a.
1932	49.0	93.4
1933	41.7	n.a.
1934	48.2	n.a.
1935	52.7	n.a.
1936	90.2	87.9
1937	89.1	n.a.
1938	62.2	n.a.
1939	75.6	88.2
1940	79.8	91.2
1941	86.8	n.a.
1942	87.7	n.a.
1943	88.8	n.a.
1944	89.4	95.3
1945	87.1	n.a.
1946	103.4	102.7
1947	107.6	n.a.
1948	110.1	116.8
1949	103.4	n.a.
1950	116.2	n.a.

^a Base = 3.57 per cent.

^b Base = \$128.6 billion.

n.a. = not available.

Column

Source

- 1 Ratio of net dividend disbursements to corporate net worth: (a) net dividend disbursements (see Table A-1, note on column 14) divided by (b) corporate net worth (1909-1913 and 1918-1937—Martin Taitel, *Profits, Productive Activities and New Investment*, Temporary National Economic Committee, Monograph 12, 1941, p. 18; 1914-1917—no data available; 1938-1947—since data on net worth are available only for corporations with balance sheets in *Statistics of Income* [Bureau of Internal Revenue], the procedure used by Taitel for 1931-1937 was adopted to adjust the balance sheet data to the level of all corporations and to place the estimates at the beginning of the year; 1948-1950—extrapolations were made by the use of data for about 3,300 leading corporations from the *Monthly Letter* of the National City Bank of New York [April issues, 1949-1951]).
- 2 Total nonfarm reproducible tangible assets (other than those of households, government, and nonprofit institutions) in 1929 prices: 1900-1948, *selected years*—the sum of the following reproducible tangible assets: (a) nonfarm nonresidential structures, including mining and excluding institutional and governmental structures, (b) producers' durable equipment, and (c) nonfarm private inventories (Raymond W. Goldsmith, "A Perpetual Inventory of National Wealth," *Studies in Income and Wealth, Volume Fourteen*, NBER, 1951, Table 1, pp. 18-19).

APPENDIX B

TABLE B-1 (continued)

D. Capital: Rate of Return
(1925 = 100)

	RENT INDEX IN BLS CONSUMERS PRICE INDEX ^a	AVERAGE YIELD OF HIGH-GRADE CORPORATE BONDS ^b	AVERAGE YIELD OF LONG-TERM UNITED STATES GOVERNMENT BONDS ^c	
			<i>Partially Tax-Exempt^d</i>	<i>Taxable^e</i>
	(1)	(2)	(3)	(4)
1900		91.1	56.5	
1901		88.8	51.0	
1902		88.0	51.3	
1903		91.7	51.6	
1904		91.1	54.1	
1905		86.8	51.8	
1906		88.8	52.8	
1907		95.7	56.5	
1908		96.6	63.2	
1909		91.5	66.8	
1910		93.3	71.8	
1911		92.9	69.9	
1912		93.3	72.8	
1913	60.6	97.0	72.0	
1914	60.6	96.3	74.4	
1915	61.0	98.0	74.6	
1916	61.8	95.9	71.2	
1917	61.2	101.2	84.5	
1918	62.4	111.0	116.6	
1919	67.5	111.8	122.5	
1920	79.3	125.4	137.8	
1921	91.1	122.3	131.9	
1922	93.8	104.9	111.4	
1923	96.2	105.9	113.0	
1924	99.6	102.8	105.2	
1925	100.0	100.0	100.0	
1926	99.0	96.8	95.3	
1927	97.4	94.3	86.5	
1928	95.1	93.9	86.3	
1929	92.9	98.6	93.3	
1930	90.3	95.5	85.2	
1931	85.6	92.3	86.5	
1932	76.8	107.1	95.3	
1933	66.2	95.1	85.8	
1934	62.0	84.0	80.8	
1935	61.9	73.2	72.3	
1936	63.3	67.7	68.7	
1937	66.3	66.9	69.4	
1938	68.4	64.9	66.3	
1939	68.5	61.3	61.1	
1940	68.7	59.2	57.3	

APPENDIX B

TABLE B-1 (continued)

D. Capital: Rate of Return (continued)
(1925 = 100)

	RENT INDEX IN BLS CONSUMERS PRICE INDEX ^a	AVERAGE YIELD OF HIGH-GRADE CORPORATE BONDS ^b	AVERAGE YIELD OF LONG-TERM UNITED STATES GOVERNMENT BONDS ^c	
			<i>Partially Tax-Exempt^d</i>	<i>Taxable^e</i>
	(1)	(2)	(3)	(4)
1941	69.9	57.6	50.5	
1942	71.5	57.8	54.1	63.7
1943	71.4	56.8	51.3	64.0
1944	71.7	56.4	49.7	64.2
1945	71.9	52.9	43.0	61.4
1946	72.3	50.9		56.7
1947	74.6	52.3		58.3
1948	79.6	56.8		63.2
1949	83.0	53.8		59.8
1950	86.1	52.5		

^a Index on 1935-1939 base converted to 1925 = 100; index begins in 1913.

^b Base = 4.93 per cent.

^c Base = 3.86 per cent; see note on column 4 below.

^d Series ends in 1945.

^e Series begins in 1942.

Column

Source

- 1 Rent index in Bureau of Labor Statistics Consumers Price Index: rent index on 1935-1939 = 100 base from *Handbook of Labor Statistics*, BLS, Bulletin 1016, 1950, p. 100, and *Monthly Labor Review*, BLS, October 1952, p. 153.
- 2 Average yield of high-grade corporate bonds: *Security Price Index Record*, Standard and Poor's Corp., 1952, p. 153.
- 3 Average yield of long-term United States government bonds, partially tax-exempt: 1900-1918—from table submitted by the Department of Research and Statistics, Savings Banks Trust Co., New York City; 1919-1945—*Historical Statistics of the United States, 1789-1945*, Dept. of Commerce, 1949, p. 280.
- 4 Average yield of long-term United States government bonds, taxable: 1942-1945—*Statistical Abstract of the United States, 1948*, Dept. of Commerce, Table 496, note 1, p. 465; 1946-1949—*Statistical Abstract of the United States, 1950*, Table 482, p. 421. Although fully taxable United States government bonds were initially issued in 1941, the yields of these bonds are related to the base-year yield of partially tax-exempt bonds in order to indicate the level of the two types of bond yields during the overlapping years 1942-1945.