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# WHOLESALE PRICES FOR 213 YEARS, 1720 TO 1932

## PART I. WHOLESALE PRICES IN THE UNITED STATES FOR 135 YEARS, 1797 TO 1932

G. F. WARREN AND F. A. PEARSON

### A MONTHLY INDEX OF WHOLESALE PRICES FOR 135 YEARS

Up to the present time no monthly index numbers of wholesale prices covering the past century have been prepared, although a number of persons have prepared index numbers for a part of the period. It is the aim of this study to present comprehensive index numbers to correspond with the present index numbers of the United States Bureau of Labor Statistics. The collection of the data was made possible by a grant from the International Committee on Price History.<sup>1</sup>

Monthly prices for individual commodities are not published because of lack of funds. They are available in mimeographed form.

Prices previous to 1797 are those prepared by H. M. Stoker and described on pages 201 to 222. For convenience, they are included in the tables in Part I.

Prices for 116 commodities were used for 1800, and for 138 commodities for 1889.

Index numbers are given for the ten groups of commodities used by the Bureau of Labor Statistics: farm products, foods, hides and leather, textiles, fuel and lighting, metals and metal products, building materials, drugs and chemicals, house furnishings, and miscellaneous. A separate group for spirits was computed also.

From these groups, two all-commodity index numbers were prepared. One gives each group the same weight for the entire period. The other varies the group weights previous to 1890.

Commodities that were little used a century ago were generally very high in price. Any index numbers that give these commodities as high a weight as is given now, exaggerate the height of prices in the earlier period. The index here presented gives a reduced weight to textiles, fuel and lighting, metals, and chemicals in the earlier years, and an increased weight to farm products, foods, hides and leather, and spirits, as described on page 163. This index number of wholesale prices, which,

<sup>1</sup>The writers wish to acknowledge the cooperation of Carl Snyder and H. V. Roelse of the Federal Reserve Bank of New York, Professor A. H. Hansen of the University of Minnesota, and Ethelbert Stewart of the United States Bureau of Labor Statistics, all of whom furnished much valuable material. The Public Library of New York City and the New York Historical Society made available their extensive material on prices.

it is believed, best represents the general level of prices in the United States from 1797 to 1932, is given in figure 1 and table 1. An index number with constant weights is given in table 28 (page 69). The index numbers before 1890 are the ones prepared by the writers. For 1890

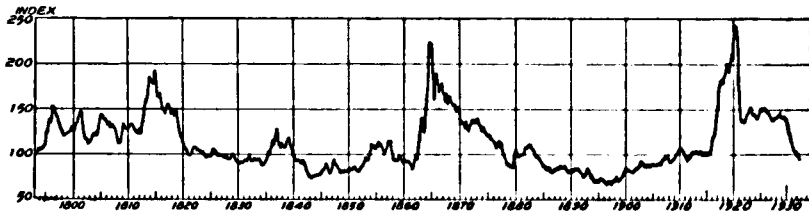


FIGURE 1. WHOLESALE PRICES IN THE UNITED STATES FOR 140 YEARS, 1793 TO 1932  
(1910-14 = 100)

Owing to financial inflation, prices rose to a very high point in 1814, 1864, and 1920. Owing to deflation, they declined below the pre-war level on each occasion. The declines following the World War were much more violent than those in either of the previous deflation periods.

and later years, the index numbers of the Bureau of Labor Statistics, converted to the 1910-14 base, are used. Index numbers for food products of farms, and a basic commodity index, are included also.

Details of the different groups of index numbers are given on pages 78 to 119. The methods used in their construction are described on pages 120 to 133.

TABLE 1. INDEX NUMBERS OF THE WHOLESALE PRICES OF ALL COMMODITIES WITH VARIABLE GROUP WEIGHTS, 1720 TO 1932\*  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1720....	58	58	56	53	52	54	54	54	58	58	.....	.....	.....
1721....	.....	.....	54	52	.....	.....	.....	.....	52	.....	.....	52	.....
1722....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1723....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1724....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1725....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1726....	.....	.....	.....	.....	54	.....	57	.....	60	60	.....	.....	.....
1727....	.....	60	59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1728....	.....	.....	54	.....	51	.....	.....	.....	.....	.....	.....	.....	.....
1729....	.....	50	46	46	.....	.....	49	50	51	.....	.....	.....	.....

\*On the 1926 base the average for all commodities of the Bureau of Labor Statistics for the five years 1910 to 1914 is 68.46. The index numbers for 1890 and later years are converted to the 1910-14 base by multiplying by 1.460707. The all-commodity index with variable group weights before 1890 is computed from the 11 groups with the following weights: farm products varied from 35 in 1799 to 25 in 1889; foods, from 27 to 25; hides and leather, from 5 to 4; textiles, from 8 to 10; fuel and lighting, from 4 to 10; metals and metal products, from 4 to 10; building materials, 10; drugs and chemicals, from 0.5 to 1.0; house furnishings, 1.0; spirits, from 5 to 3; and miscellaneous, from 1.5 to 1.0. In each case, when the weights were changed, one-ninetieth of the change was made each year.

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932

TABLE 1 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1730						63							
1731	53				50								
1732						45				47			
1733													
1734													
1735													
1736			45	44	44			40					
1737													
1738													
1739									53	50	50		
1740			53										
1741													
1742													
1743													
1744												43	
1745	42							44				50	
1746													
1747													
1748							75	75	75	75	75	75	
1749	77	75	74	73	71	67	66	61	59	62	66	64	68
1750	62	58	56	56	56	57	61	61	63	64	66	64	60
1751	64	63	66	62	62	63	66	68	68	65	67	67	65
1752	67	67	64	63	64	67	67	68	68	67	69	65	66
1753	68	67	65	65	65	65	65	65	65	64	65	65	65
1754	65	63	62	62	63	63	66	67	66	71	67	65	65
1755	66	64	62	66	64	65	66	68	69	69	70	66	66
1756	66	66	64	67	68	67	67	69	69	69	64	63	66
1757	62	60	60	61	64	66	68	69	69	70	68	68	65
1758	67	66	66	67	68	68	68	71	72	74	76	77	70
1759	78	79	79	78	77	78	77	81	84	79	80	79	79
1760	86	79	77	77	77	76	78	78	80	80	85	83	79
1761	83	84	78	77	75	78	73	71	72	77	78	78	77
1762	83	82	83	79	85	84	84	92	93	96	96	86	87
1763	93	92	83	80	76	80	76	75	75	75	75	73	79
1764	79	79	74	71	73	72	71	73	74	74	75	71	74
1765	72	76	68	68	72	71	73	73	73	74	74	77	72
1766	75	76	74	73	72	71	71	70	72	73	75	76	73
1767	72	74	75	75	78	81	81	76	78	78	76	76	77
1768	74	74	73	74	70	72	72	72	74	77	77	76	74
1769	76	77	76	75	77	76	75	76	76	80	78	78	77
1770	78	78	77	75	74	77	77	76	79	79	79	77	77
1771	72	72	73	75	76	80	83	84	83	85	81	83	79
1772	84	89	85	87	90	90	92	92	89	95	87	92	89
1773	89	89	89	87	85	82	81	85	80	80	80	74	84
1774	78	78	78	77	76	77	77	75	73	76	77	76	76
1775	75	74	72	72	72	71	74	75	78	79	79	76	75
1776	75	74	78	82	84	91	92	92	93	93	93	93	86
1777	109	124	124	124	124	124	124	124	124	124	124	124	123
1778	121	127	127	127	127	127	127	127	127	127	127	127	140
1779	165	232	232	232	232	232	232	232	232	232	232	232	226
1780	232	232	232	232	232	232	232	216	216	216	216	216	225
1781	216	216	216	216	216	216	216	216	216	216	216	216	216
1782	216	216											
1783													
1784													
1785	97	97	95	93	93	94	91	89	90	90	90	89	92
1786	89	89	89	87	87	87	85	85	90	94	96	97	90
1787	97	96	95	93	92	92	88	88	87	85	85	84	90
1788				82									85
1789	86	87	85	85	85	89	88	86	86	88	86	85	86

TABLE 1 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1790....	88	87	91	92	92	92	91	91	92	90	89	86	90
1791....	86	84	83	84	84	84	83	85	85	86	86	85	85
1792....													
1793....				98	100	101	102	105	106	103	103	100	102
1794....	106	106	108	103	105	106	108	108	110	111	111	115	108
1795....	124	123	123	126	131	136	139	137	135	136	134	134	131
1796....	141	143	152	151	152	151	148	144	144	148	143	142	146
1797....	140	142	136	132	132	131	129	128	128	124	127	126	131
1798....	127	125	123	123	121	119	120	120	120	121	122	123	122
1799....	124	123	123	122	123	124	126	126	127	129	130	130	126
1800....	127	125	125	123	125	127	129	131	133	134	135	134	129
1801....	140	142	144	145	146	147	148	146	145	139	136	129	142
1802....	126	121	119	117	116	117	117	116	116	115	113	111	117
1803....	113	113	114	114	115	116	118	122	123	123	119	122	118
1804....	123	123	124	122	120	121	122	124	128	130	134	139	126
1805....	140	141	145	144	142	143	140	139	139	139	140	139	141
1806....	137	137	134	132	133	132	136	135	135	133	129	130	134
1807....	131	133	132	130	131	131	130	129	129	128	127	126	130
1808....	124	119	115	112	112	112	112	113	113	113	117	121	115
1809....	124	126	135	133	132	132	129	129	130	127	129	128	130
1810....	128	130	128	129	131	130	133	132	134	133	133	131	131
1811....	132	128	127	127	128	124	124	126	124	125	124	122	126
1812....	127	129	128	126	122	125	128	133	135	137	142	144	131
1813....	150	152	153	157	160	158	159	161	164	171	178	186	162
1814....	186	184	182	182	179	179	178	177	177	183	187	193	182
1815....	193	185	176	166	164	165	163	165	166	166	168	163	170
1816....	160	160	158	151	150	150	150	149	148	144	145	149	151
1817....	152	155	156	156	157	154	149	153	147	145	144	146	151
1818....	149	151	149	144	142	144	142	147	146	151	149	145	147
1819....	141	137	134	130	125	124	121	119	119	120	117	114	125
1820....	114	113	109	106	108	106	104	107	106	103	100	100	106
1821....	100	99	98	98	100	99	100	103	105	107	108	109	102
1822....	109	108	108	108	107	107	106	104	104	104	106	104	106
1823....	104	104	103	103	102	103	104	104	103	102	99	100	103
1824....	98	97	97	96	97	98	98	98	98	99	99	98	98
1825....	97	98	98	102	106	107	106	105	106	105	104	103	103
1826....	103	102	100	100	98	99	101	98	98	98	98	98	99
1827....	99	99	99	99	98	97	96	96	96	96	96	99	98
1828....	98	97	95	94	94	95	95	95	95	96	99	101	97
1829....	102	100	99	99	97	97	93	92	92	92	92	91	96
1830....	91	91	91	89	90	91	91	92	93	92	91	90	91
1831....	91	92	93	95	95	94	98	92	94	95	96	96	94
1832....	100	98	97	93	93	92	92	92	93	94	95	96	95
1833....	96	94	93	94	94	93	93	95	96	96	96	95	95
1834....	92	92	90	88	88	88	88	88	89	90	90	91	90
1835....	92	93	94	97	100	102	104	104	102	101	102	106	100
1836....	107	108	112	116	115	111	110	112	115	120	122	123	114
1837....	123	129	127	120	110	110	113	111	107	107	110	114	115
1838....	112	109	108	108	109	107	107	107	110	115	115	116	110
1839....	117	119	118	119	116	114	111	109	108	106	104	102	112
1840....	99	99	97	97	95	93	92	93	94	94	94	94	95
1841....	93	93	91	90	91	89	90	92	95	93	92	91	92
1842....	90	88	86	84	83	82	81	79	77	77	75	76	82
1843....	76	74	73	74	75	75	76	76	77	75	77	77	75
1844....	76	77	77	78	78	77	77	77	77	77	78	78	77
1845....	79	79	81	83	83	82	82	83	85	85	85	85	83
1846....	89	87	86	85	83	81	79	78	78	82	83	83	83
1847....	84	80	82	83	83	81	79	78	80	88	89	87	90
1848....	85	85	84	84	83	80	79	79	81	82	80	80	82
1849....	83	83	83	82	81	80	81	81	83	82	81	82	82

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932

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TABLE 1 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1850....	83	84	85	84	84	84	84	83	83	84	85	85	84
1851....	87	87	86	85	84	82	81	81	81	81	81	81	83
1852....	83	85	87	86	86	86	88	90	91	91	93	95	88
1853....	96	97	97	95	94	93	93	95	97	101	102	103	97
1854....	105	112	109	109	109	110	106	108	110	105	108	107	108
1855....	107	107	109	111	114	115	109	109	109	109	111	112	110
1856....	108	107	106	105	102	99	102	104	103	105	107	108	105
1857....	111	113	115	114	115	114	114	115	114	108	101	98	111
1858....	93	93	95	95	94	92	92	94	94	94	92	93	93
1859....	95	99	99	98	97	97	95	92	91	90	92	93	95
1860....	94	94	94	93	93	91	92	92	92	93	93	91	93
1861....	92	90	90	89	88	85	83	85	86	89	92	94	89
1862....	98	99	98	98	95	94	98	105	107	111	120	123	104
1863....	126	137	141	137	130	126	127	127	123	134	142	148	133
1864....	153	156	161	168	174	189	219	225	225	207	216	222	193
1865....	223	217	206	179	169	159	161	168	179	190	189	184	185
1866....	181	176	173	166	171	172	174	175	174	179	175	169	174
1867....	168	167	166	167	168	159	158	168	158	159	156	155	162
1868....	157	158	163	165	163	158	157	158	157	154	153	157	158
1869....	155	157	154	151	149	147	148	153	152	149	149	147	151
1870....	142	138	135	134	136	135	135	134	134	133	131	128	135
1871....	131	135	137	132	129	127	127	125	128	130	130	133	130
1872....	133	133	135	138	138	137	135	136	137	134	138	136	136
1873....	136	139	139	139	136	132	132	132	132	129	125	128	133
1874....	130	130	130	128	127	124	125	124	124	122	121	121	126
1875....	121	121	121	122	119	117	117	118	117	117	116	115	118
1876....	114	114	114	113	109	106	106	107	108	110	111	113	110
1877....	115	112	107	110	112	106	107	103	102	102	100	100	106
1878....	97	96	94	93	90	88	89	90	90	89	88	86	91
1879....	87	88	87	86	86	85	86	86	89	94	99	102	90
1880....	105	105	106	102	99	97	97	97	98	98	99	100	100
1881....	99	100	100	101	100	100	101	103	107	108	107	107	103
1882....	107	108	108	109	110	111	110	111	108	107	106	105	108
1883....	105	106	105	104	103	100	98	98	97	97	96	97	101
1884....	97	97	97	95	93	93	92	92	91	90	88	87	93
1885....	87	88	86	87	85	83	84	84	83	83	84	86	85
1886....	84	84	83	82	80	79	80	81	81	81	81	82	82
1887....	84	85	85	85	85	84	83	84	83	84	85	87	85
1888....	88	87	87	86	85	84	85	85	85	86	87	87	86
1889....	84	83	82	82	80	80	80	80	81	81	81	82	81
1890....	80	80	80	80	81	81	81	84	85	85	83	83	82
1891....	82	83	84	85	84	82	81	81	80	80	79	79	82
1892....	77	77	75	74	74	74	76	77	77	77	79	80	76
1893....	83	84	82	81	80	78	76	73	76	77	75	74	78
1894....	72	71	69	69	69	69	69	71	72	70	70	69	70
1895....	69	69	69	72	73	74	73	72	72	72	72	71	71
1896....	70	69	69	68	67	66	66	66	66	68	70	70	68
1897....	68	68	68	67	66	66	66	69	71	70	70	70	68
1898....	70	71	71	71	76	71	70	70	70	70	70	71	71
1899....	71	73	73	74	74	75	76	77	80	81	82	83	77
1900....	83	84	84	84	83	81	82	81	82	81	81	80	82
1901....	81	80	80	79	79	79	80	81	82	82	83	84	81
1902....	83	83	83	84	85	86	86	85	86	92	89	90	86
1903....	91	91	88	88	86	86	86	86	87	86	85	85	87
1904....	87	89	88	87	85	85	85	86	87	87	89	89	87
1905....	89	89	88	88	87	87	87	88	87	87	88	89	88
1906....	89	89	89	89	90	90	87	89	90	92	93	94	90
1907....	93	95	94	94	96	97	97	97	97	96	94	92	95
1908....	91	90	90	91	91	91	91	92	92	93	94	95	92
1909....	94	95	95	97	98	99	99	100	101	103	104	105	99



TABLE 1 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1910....	104	104	106	107	105	104	104	103	102	99	97	97	103
1911....	97	94	95	92	92	92	93	96	97	97	96	95	95
1912....	96	97	99	102	102	101	101	102	103	103	103	102	101
1913....	103	102	102	102	101	101	102	102	103	103	102	101	102
1914....	100	100	99	99	98	98	99	101	103	99	99	98	99
1915....	99	100	100	100	101	100	101	100	100	103	105	108	101
1916....	112	115	117	119	121	121	123	124	127	133	142	145	125
1917....	149	153	157	167	176	176	180	182	180	178	179	180	172
1918....	183	179	185	187	187	188	193	196	201	199	199	199	191
1919....	196	190	192	194	198	198	206	211	206	207	211	220	202
1920....	230	229	232	242	244	243	242	236	227	211	195	176	226
1921....	167	153	150	144	141	136	136	137	136	137	138	136	143
1922....	134	136	136	136	140	141	145	144	145	145	147	147	141
1923....	149	151	153	152	149	147	144	143	146	145	144	143	147
1924....	145	146	144	142	140	139	140	142	142	143	145	148	143
1925....	150	152	152	149	148	150	152	152	151	151	153	151	151
1926....	151	149	147	147	147	147	145	145	146	145	144	143	146
1927....	141	140	138	137	138	137	138	139	141	141	141	141	139
1928....	141	140	139	141	142	141	142	143	144	141	140	140	141
1929....	140	139	140	139	138	139	141	141	140	139	137	136	139
1930....	135	134	132	131	130	127	123	123	123	121	119	116	126
1931....	114	112	111	109	107	105	105	105	104	103	103	100	107
1932....	98	97	96	96	94	93	94	95	95	94	93	91	95

Prices have never been more than approximately stable for more than a few months at a time. Previous to the War of 1812, prices were high, probably because of financial conditions due to the Napoleonic Wars. With the outbreak of the War of 1812, prices rose rapidly. Following the war, prices declined by two precipitous jumps—one beginning in 1815 and the other in 1818. In ten years following the beginning of the decline, prices were almost cut in two. This great drop in prices resulted in innumerable business and bank failures.

The tremendous losses of property caused by the steadily rising value of the dollar, led to a change in financial policy which resulted in five years of higher prices and better times; but a policy of deflation was again adopted, and prices declined to a very low level.

In the Civil War period, prices rose to more than twice the pre-war level. A considerable part of the rise was due to the large volume of greenbacks issued during the Civil War. After the return to the gold standard, prices continued to decline for two decades.

In the late nineties, large quantities of gold were discovered in South Africa, the United States, and Alaska.

The comparative price declines in the different war periods are shown in figures 2 and 3. After each war, prices were cut in two. Both the rise and the decline were more violent in the World War period than in previous war periods.

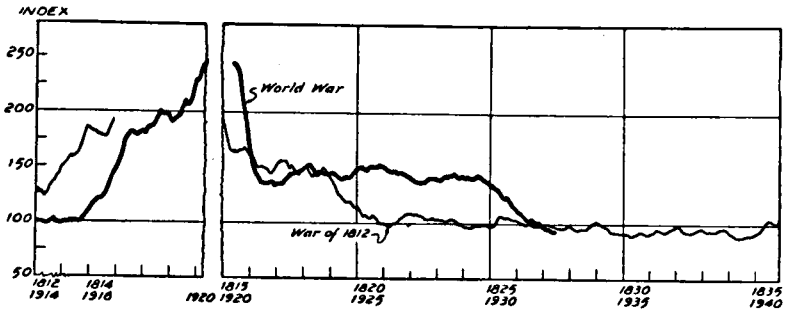


FIGURE 2. INDEX NUMBERS OF WHOLESALE PRICES, WAR OF 1812 AND WORLD WAR PERIODS (1910-14 = 100)

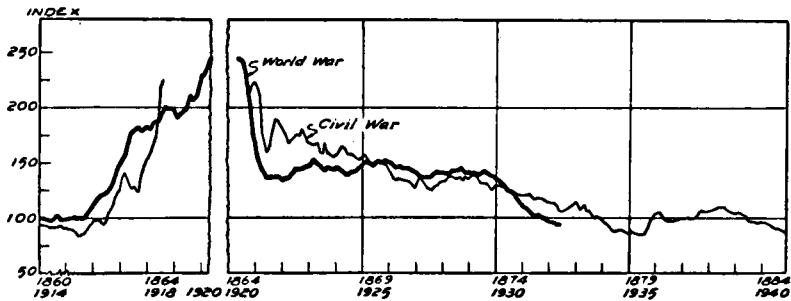


FIGURE 3. INDEX NUMBERS OF WHOLESALE PRICES IN THE CIVIL WAR AND WORLD WAR PERIODS (1910-14 = 100)

The price declines following the World War were similar to the declines following the Civil War, but were more violent

During the World War period, prices more than doubled. They reached 244 in May, 1920, with 1910-14 considered as 100. A precipitous decline then occurred, reaching a level of 134 in January, 1922. Some recovery followed, and a price level of about 145 continued for eight years. Late in 1929 a second precipitous decline began, which continued until June, 1932. This decline was much more precipitous than that following the Civil War.

## PRICES IN DIFFERENT COUNTRIES

Prices in different countries following the World War are shown in table 2 and figures 4 and 5. Prices in England in November, 1931, were 67 per cent below the average for the year 1920 and 28 per cent below

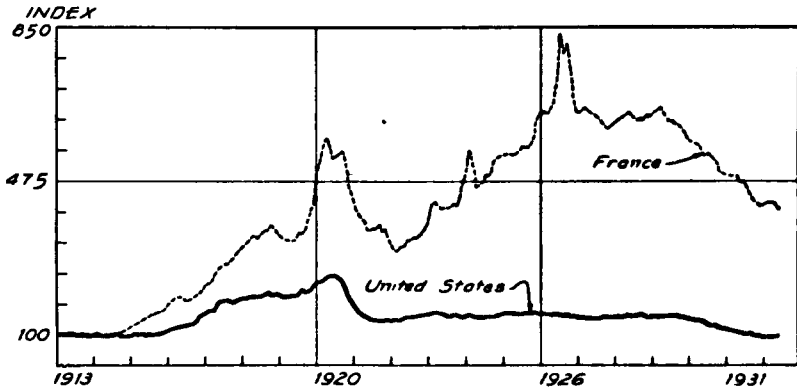


FIGURE 4. INDEX NUMBERS OF PRICES IN THE UNITED STATES AND PRICES IN FRANCE, 1913 TO 1932 (1910-14 = 100)

France changed to a gold basis in 1928, but, since the currency was revalued, prices were about five times as high as in England or the United States

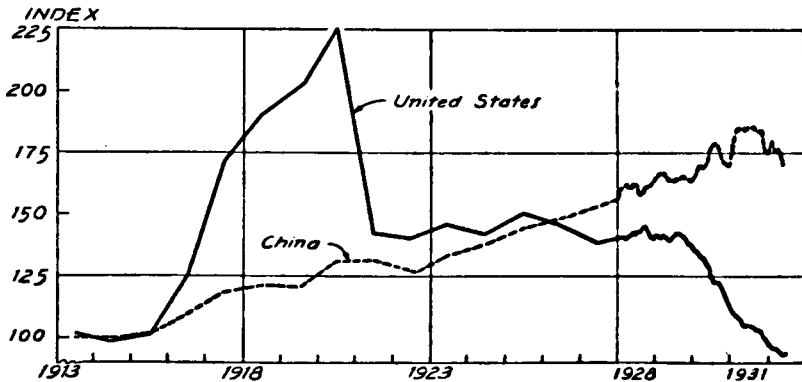


FIGURE 5. INDEX NUMBERS OF PRICES IN THE UNITED STATES AND IN CHINA, 1913 TO 1932 (Pre-war = 100\*)

From 1913 to 1920, prices rose much more rapidly in the United States than in China. After 1920, prices in China continued to rise and prices in the United States fell. Prices were extremely erratic in both countries, but more stable in China than in the United States

\* From 1913 to 1928, annual index numbers were used; thereafter, monthly index numbers

TABLE 2. COMPARATIVE PRICE DECLINES\*

	England Statist- Sauerbeck index† 1910-14 = 100	France Statist- tique Générale index‡ 1910-14 = 100	Italy Riccardo Hachi index§ 1913 = 100	Germany Statist- isches Reichsamtl index¶ 1913 = 100	United States all-com- modity index 1910-14 = 100	United States 36-basic- commodity index¶ 1910-14 = 100	North China index** 1913 = 100
Peak year.....	304a	709b	618b	.....	226a	231a	.....
Year 1929.....	139	617	440	.....	139	141	165
November 1931.....	100	412	320	.....	103	84	179
Per cent decline from peak.....	67	42	48	.....	54	64	.....
Per cent decline since 1929.....	28	33	27	.....	26	40	.....
Per cent advance.....	.....	.....	.....	.....	.....	.....	8

\* Warren, G. F., and Pearson, F. A. Prices in different countries. *Farm economics*, no. 74, p. 1863. February, 1932.

† *The Statist*, vol. 114, no. 2812, page 80. January 16, 1932. The index numbers on the 11-year base 1867-77 were converted to the five years 1910-14 by multiplying by 1.2107.

‡ *Annuaire Statistique* for 1928, vol. 44, p. 115. 1929. To convert to the 1910-14 base from the 1901-10 base, multiply by 0.8726; from the July, 1914, base, by 0.9888; and from the 1913 base, by 1.0096.

§ *Monthly Labor Review*, United States Bureau of Labor Statistics, vol. 33, no. 6, p. 238. December, 1931. The November, 1931, index numbers were supplied by Ethelbert Stewart.

¶ Warren, G. F., and Pearson, F. A. Wholesale prices in the United States for 135 years. *Farm economics*, no. 72, p. 1587. September, 1931. (Also, *Farm economics*, no. 74, p. 1634, table 1. February, 1932.)

\*\* *Farm economics*, no. 74, p. 1704, table 1. February, 1932.

\*\*\* Nankai University Statistical Service, Nankai Institute of Economics, Nankai University, Tientsin, China. Vol. 3, no. 22, p. 109, June 2, 1930; vol. 4, no. 49, p. 223, December 21, 1931.

a 1920.

b 1926.

the average for 1929. The long decline followed by the crash after 1929 resulted in so much unemployment, business failures, and other distress, that England discontinued the gold standard on September 21, 1931. Rarely, if ever, has a country stood a decline of 67 per cent in its price level without a revolution or a currency change.

During the first six years of declining prices in England and the United States, France inflated her currency. Prices rose, production was profitable, and there was full employment. All the other conditions were such as accompany rising prices. Instead of attempting a complete deflation, as was attempted in England and the United States, France reduced the weight of gold in the franc to one-fifth of the pre-war amount on June 25, 1928. No serious decline in prices occurred until 1930-31. Prices in November, 1931, were four times the pre-war level (figure 4). Any debts incurred at pre-war prices or at four times pre-war prices could be readily paid. Farm land was, of course, worth much more than before the war, and a house built before the war was valuable property. But France was becoming adjusted to a price

TABLE 3. STATIST-SAUERBECK MONTHLY INDEX NUMBERS OF PRICES OF 45 COMMODITIES IN ENGLAND, 1885 TO 1932\*

(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1885....	88	88	88	88	89	88	87	87	86	85	86	86	87
1886....	85	85	85	84	84	83	83	84	83	83	85	84	84
1887....	84	83	83	83	83	82	82	83	83	82	84	88	82
1888....	86	86	85	85	82	82	84	85	87	88	88	89	85
1889....	88	89	87	87	86	87	88	86	87	87	89	89	87
1890....	89	88	87	86	86	85	86	88	87	88	86	86	87
1891....	86	87	87	88	88	87	87	87	87	86	86	86	87
1892....	85	85	84	83	83	82	82	82	81	82	83	82	82
1893....	83	84	82	82	82	82	82	81	83	83	82	81	82
1894....	80	79	78	77	76	76	76	76	76	75	74	73	76
1895....	73	73	74	75	76	76	76	77	77	77	75	74	75
1896....	74	74	73	73	73	72	72	72	74	76	76	75	74
1897....	75	75	75	74	74	74	75	77	77	76	76	76	75
1898....	76	77	76	79	80	78	78	77	77	77	77	77	77
1899....	79	80	79	80	81	81	82	83	85	87	87	85	82
1900....	90	91	92	92	91	92	92	92	91	90	89	89	91
1901....	87	87	86	85	85	85	84	85	84	84	84	83	85
1902....	83	83	84	84	86	85	85	84	84	83	83	84	84
1903....	84	85	85	84	84	84	84	85	84	84	84	85	84
1904....	85	86	86	85	85	84	85	85	86	86	86	86	85
1905....	86	86	87	87	87	87	88	88	88	89	90	91	87
1906....	91	91	92	93	93	93	92	93	94	95	95	96	93
1907....	97	98	97	98	100	99	98	96	96	95	93	92	97
1908....	92	90	90	89	89	88	89	87	88	87	87	85	88
1909....	87	87	88	90	91	91	91	91	90	91	91	92	90
1910....	93	95	96	95	95	93	95	95	94	93	94	94	94
1911....	95	95	96	97	97	97	96	96	97	98	98	98	97
1912....	99	100	102	103	103	104	105	104	105	104	103	105	103
1913....	105	105	105	104	104	102	102	103	104	102	101	101	103
1914....	101	101	100	100	100	98	100	106	108	109	108	111	103
1915....	117	122	126	128	130	129	129	130	131	133	137	143	131
1916....	150	154	158	162	164	159	158	163	163	171	183	187	165
1917....	193	199	205	209	212	218	214	213	214	219	221	224	212
1918....	225	227	228	230	231	233	234	237	239	239	236	237	232
1919....	230	227	224	224	236	241	250	254	260	272	280	285	249
1920....	297	315	317	322	315	310	308	307	301	290	271	251	304
1921....	239	222	215	206	196	189	192	187	181	168	166	162	198
1922....	160	160	161	163	164	164	162	157	155	158	158	156	159
1923....	158	160	161	162	160	155	151	151	155	155	160	161	156
1924....	166	168	166	166	165	165	168	167	171	177	176	179	168
1925....	175	173	170	166	164	159	163	163	161	158	161	158	165
1926....	157	155	153	152	152	151	153	154	155	159	158	150	153
1927....	149	150	150	149	150	149	148	149	147	146	147	147	149
1928....	146	147	150	152	153	148	146	143	141	141	143	143	145
1929....	142	145	146	141	137	137	139	138	136	135	131	132	139
1930....	129	127	125	123	120	116	114	112	110	109	107	105	117
1931....	104	104	104	102	100	100	97	96	98	100	100	103	101
1932....	103	105	102	100	97	93	96	98	97	94	94	94	98

\*Editor of the Statist. Wholesale prices in 1930. Journal of the Royal Statistical Society, vol. 94, part 2, p. 275. March, 1931. The Statist, July 16, 1932. The index on the base 1887-77=100, with the five years 1910-14 equal to 82.6, was converted to the 1910-14 base by multiplying by 1.2107.

The average of monthly index numbers for any one year does not always agree with the index for that year. This is owing to the fact that the monthly index numbers are based on prices at the end of each month, while the yearly index numbers are calculated from prices based on an average for 52 weekly quotations.

level of about six times the pre-war level. A price level only four times the pre-war level was a serious matter, and unemployment resulted.

Italy revalued her currency on December 22, 1927, so that prices remained far above the pre-war average. But Italy was becoming adjusted to a price level of about four times the pre-war level, so that a drop to an index of three times the pre-war figure, or a decline of 27 per cent, has resulted in 1931 in about one million unemployed, a record for Italy.

Prices in Germany have declined 22 per cent, and in the latter part of 1931 it was reported that five and one-half million were unemployed, the highest number ever reported.

In the United States, prices declined 54 per cent from 1920 to 1931. No other important country that had such a large price decline continued without some monetary change. Prices declined 26 per cent from 1929 to 1931. The number unemployed in the United States in 1931 was variously estimated at from six to eight million.

From 1929 to 1931, the declines in prices in France, England, Italy, the United States, and Germany were very similar: France, 33 per cent; England, 28; Italy, 27; the United States, 26; Germany, 22.

From 1929 to 1931, prices in China rose 8 per cent. China is on a silver basis. In the same period, prices in gold-using countries declined 22 to 33 per cent. At the same time that other countries were feeling the effects of declining prices, China was feeling the effects of rising prices (figure 5). It does not follow that the prices in the gold-using countries would have been the same as the prices in China had these countries been on a silver basis. The use of any metal as money changes the demand for it and hence changes its value.

Prices in England for the World War and the Napoleonic Wars are shown in figure 7. Following the two wars the course of prices was somewhat similar, but the reactions were much more violent following the World War.

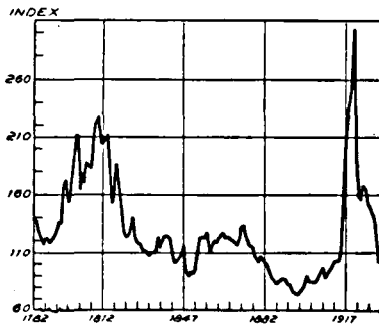


FIGURE 6. INDEX NUMBERS OF WHOLESALE PRICES IN ENGLAND, 1782 TO 1931 (1910-14 = 100)

During the Napoleonic Wars, prices in England rose 94 per cent in the 22-year period from 1789 to 1810. During the World War, prices rose 195 per cent in 7 years.

Following the Napoleonic Wars, prices declined 48 per cent and it took 18 years for them to reach the pre-war level. Following the World War, prices declined 67 per cent and returned to the pre-war level in 12 years.

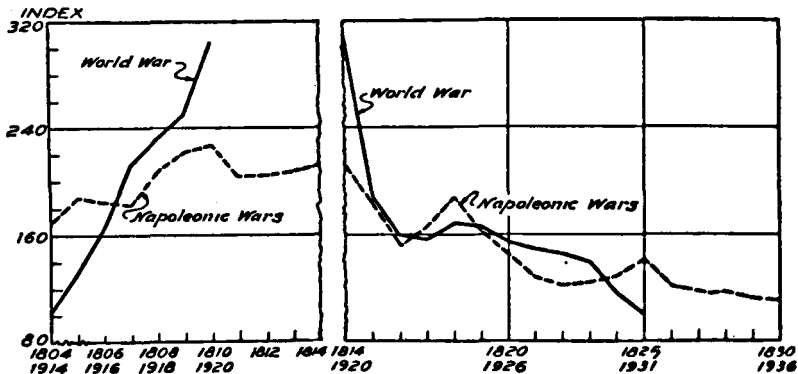


FIGURE 7. INDEX NUMBERS OF WHOLESALE PRICES IN ENGLAND, NAPOLEONIC WAR AND WORLD WAR PERIODS  
(Pre-war = 100)

The course of prices was somewhat similar following the two wars, but was much more violent following the World War than following the Napoleonic Wars

TABLE 4. INDEX NUMBERS OF WHOLESALE PRICES OF 45 COMMODITIES IN FRANCE, 1901 TO 1932\*  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1901....	85	85	83	83	83	83	83	83	83	83	82	82	83
1902....	82	83	83	83	83	83	83	82	81	80	81	82	82
1903....	82	84	85	86	86	85	84	83	82	82	82	83	84
1904....	83	83	83	82	82	82	82	82	82	82	83	84	82
1905....	84	85	85	86	86	86	86	86	85	87	86	88	86
1906....	88	88	88	90	91	91	91	91	91	93	94	95	91
1907....	95	96	97	97	99	99	99	95	94	94	92	90	95
1908....	90	89	89	88	88	88	88	90	90	88	87	86	88
1909....	86	86	86	87	88	89	89	88	88	88	89	92	88
1910....	92	92	93	95	95	94	95	96	93	93	93	93	94
1911....	95	99	99	99	100	99	96	96	99	100	99	99	99
1912....	101	101	103	103	104	106	103	104	103	102	102	101	103
1913....	102	101	101	102	101	102	99	99	101	99	99	99	101
1914....	100	101	100	99	100	100	99	103	104	105	107	112	103
1915....	120	126	131	134	136	139	141	142	146	153	161	165	141
1916....	175	180	188	193	192	190	186	188	180	195	199	205	190
1917....	217	228	231	250	258	269	271	272	283	286	296	307	264
1918....	316	322	330	336	339	332	340	353	359	363	361	356	342
1919....	351	344	339	335	328	332	352	351	363	365	408	427	360
1920....	491	526	559	592	555	497	500	506	531	506	465	439	514
1921....	410	380	363	350	332	328	333	334	347	334	335	329	348
1922....	317	309	310	317	319	328	328	334	332	340	335	365	330
1923....	360	426	428	418	410	412	410	417	428	424	447	462	422
1924....	498	549	502	454	462	469	485	481	490	502	508	511	493
1925....	519	519	518	517	524	547	562	562	590	578	611	638	555
1926....	639	641	637	656	694	745	844	777	794	758	690	632	709
1927....	627	637	647	642	634	628	626	623	606	592	599	609	622
1928....	612	614	628	629	638	632	629	622	625	622	631	629	625
1929....	636	644	646	633	629	617	619	603	603	596	590	582	617
1930....	569	569	556	553	547	538	543	537	529	513	499	493	537
1931....	489	487	487	489	475	472	461	450	432	418	412	408	457
1932....	409	416	422	420	416	403	399	390	393	388	387	386	402

\*Annuaire Statistique for 1928, vol. 44, p. 115. 1929. To convert from the 1901-10 base, multiply by 0.8726; from the July, 1914, base, by 0.9888; and from the 1913 base, by 1.0096.

VALUE OF GOLD IN ENGLAND

The value of gold in England is shown in table 5 and in figure 8. This is the reciprocal of the index number of wholesale prices in gold, and shows the relative amount of commodities that a given weight of gold would exchange for. Gold had a low value in 1873. It rose

TABLE 5. WHOLESALE PRICES AND VALUE OF GOLD IN ENGLAND, 1782 TO 1931\* (1910-14 = 100)

Year	Prices in currency	Prices in gold	Value of gold	Year	Prices in currency	Prices in gold	Value of gold	Year	Prices in currency	Prices in gold	Value of gold	Year	Prices in currency	Prices in gold	Value of gold
1782	136	138	72	1830	146	142	70	1858	110	110	91	1896	74	74	135
1783	138	138	72	1831	128	128	78	1859	114	114	88	1897	75	75	133
1784	138	128	78	1832	122	122	82	1860	120	120	83	1898	76	76	129
1785	124	124	81	1833	124	124	81	1861	118	118	85	1899	82	82	123
1786	117	117	85	1834	128	128	78	1862	122	122	82	1900	91	91	110
1787	121	121	83	1835	141	141	71	1863	124	124	81	1901	85	85	118
1788	121	121	83	1836	121	121	83	1864	127	127	79	1902	84	84	119
1789	117	117	85	1837	117	117	85	1865	122	122	82	1903	84	84	119
1790	121	121	83	1838	117	117	85	1866	123	123	81	1904	85	85	118
1791	123	123	81	1839	112	112	89	1867	121	121	83	1905	87	87	115
1792	128	128	78	1830	110	110	91	1868	120	120	83	1906	93	93	108
1793	136	136	74	1831	111	111	90	1869	118	118	85	1907	97	97	103
1794	135	135	74	1832	107	107	93	1870	116	116	86	1908	88	88	114
1795	162	162	62	1833	110	110	91	1871	121	121	83	1909	90	90	111
1796	173	173	58	1834	109	109	92	1872	132	132	76	1910	94	94	106
1797	162	162	66	1835	111	111	90	1873	134	134	75	1911	97	97	103
1798	163	163	61	1836	123	123	81	1874	123	123	81	1912	103	103	97
1799	180	180	56	1837	114	114	88	1875	116	116	86	1913	103	103	97
1800	194	194	52	1838	120	120	83	1876	115	115	87	1914	103	104	96
1801	211	193	52	1839	124	124	81	1877	114	114	88	1915	131	128	78
1802	164	152	66	1840	124	124	81	1878	105	105	95	1916	165	161	62
1803	178	173	58	1841	122	122	82	1879	101	101	99	1917	212	207	48
1804	169	164	61	1842	110	110	91	1880	107	107	93	1918	232	227	44
1805	188	182	55	1843	100	100	100	1881	103	103	97	1919	249	227	44
1806	184	180	56	1844	101	101	99	1882	101	101	99	1920	304	229	44
1807	182	179	55	1845	105	105	95	1883	99	99	101	1921	188	149	67
1808	207	200	50	1846	107	107	93	1884	92	92	109	1922	159	145	68
1809	222	216	46	1847	115	115	87	1885	87	87	115	1923	156	147	70
1810	227	196	51	1848	94	94	106	1886	84	84	119	1924	168	153	65
1811	203	188	53	1849	89	89	112	1887	82	82	122	1925	165	164	61
1812	204	167	60	1850	93	93	108	1888	85	85	118	1926	153	153	65
1813	207	159	63	1851	91	91	110	1889	87	87	115	1927	148	148	68
1814	211	157	64	1852	94	94	106	1890	87	87	115	1928	145	145	69
1815	182	150	67	1853	115	115	87	1891	87	87	115	1929	139	139	72
1816	151	125	80	1854	123	123	81	1892	82	82	122	1930	117	117	85
1817	165	162	62	1855	122	122	82	1893	82	82	122	1931	101	94	106
1818	187	182	55	1856	122	122	82	1894	76	76	132	1932	98	71	141
1819	162	154	65	1857	127	127	79	1895	75	75	133				

\* Prices are from the following authorities: From 1782 to 1820, Jevons, W. S. (On the variation of prices of the currency since 1782. Journal of the Royal Statistical Society, vol. 28, p. 314-315, June, 1865.) From 1821 to 1845, Sauerbeck, Augustus. (Prices of commodities and the precious metals. Journal of the Royal Statistical Society, vol. 49, p. 634 - September, 1886.) From 1846 to 1885, Sauerbeck, Augustus. (Prices of commodities and the precious metals. Journal of the Royal Statistical Society, vol. 49, p. 648, September, 1886.) From 1886 to 1920, Editor of *The Statist*. (Wholesale prices of commodities in 1920. Journal of the Royal Statistical Society, vol. 84, part 2, p. 260, March, 1921.) From 1921 to 1929, Editor of *The Statist*. (Wholesale prices of commodities in 1928. Journal of the Royal Statistical Society, vol. 92, part 2, p. 247, March, 1929.)

The data on the 1867-77 base were converted to the 1910-14 base by multiplying by 1.2107.

Similar material was presented by G. F. Warren and F. A. Pearson in *The Agricultural Situation*, p. 263. (August, 1924.)



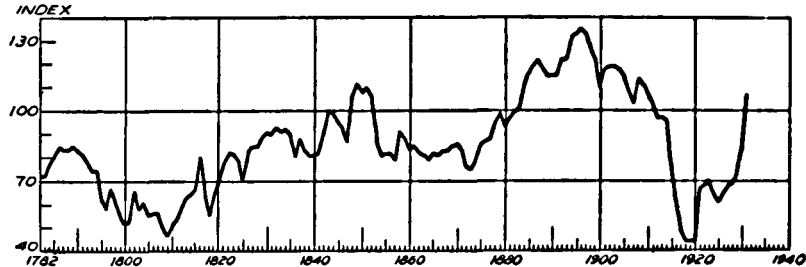


FIGURE 8. VALUE OF GOLD IN ENGLAND, 1782 TO 1931  
(1910-14 = 100)

The quantity of commodities that a given weight of gold will buy has been extremely variable. The highest value occurred in 1896 and the lowest in 1920.

steadily until 1896, and then declined until 1920. Thereafter it rose. The highest value of gold in 150 years occurred in 1896, and the lowest value in 1920. The next lowest occurred in 1809. In 1809 and again in 1920, a considerable part of the world was not using gold as money, and its value declined.

#### CURRENCY PRICE OF GOLD IN LONDON

From 1801 to 1820, England was not on a gold basis. In 1814 it took 104 paper shilling notes to purchase a troy ounce of gold of standard fineness<sup>2</sup> (table 6). Normally the price of an ounce of gold

TABLE 6. CURRENCY PRICE OF GOLD PER OUNCE IN LONDON, 1798 TO 1821\*

Year	Price of gold		Index	Year	Price of gold		Index
	s.	d.			s.	d.	
1798.....	77	10.5	100	1810.....	90	0	116
1799.....	..	..	100	1811.....	84	6	109
1800.....	..	..	100	1812.....	95	6	123
1801.....	85	0	109	1813.....	101	0	130
1802.....	84	0	108	1814.....	104	0	134
1803.....	80	0	103	1815.....	93	6	120
1804.....	..	..	103	1816.....	93	6	120
1805.....	..	..	103	1817.....	80	0	103
1806.....	..	..	103	1818.....	80	0	103
1807.....	..	..	103	1819.....	81	6	105
1808.....	..	..	103	1820.....	79	11	103
1809.....	..	..	103	1821.....	77	10.5	100

\*Jevons, S. On the variation of prices and the value of currency since 1782. *Journal of the Royal Statistical Society*, vol. 28, part 2, p. 309. June, 1865.

in London is 77 shillings and 10½ pence. Gold therefore brought a premium of 34 per cent.

<sup>2</sup>The English gold sovereign weighs 123.27447 grains troy of standard metal 11/12 fine gold, or 113.0016 grains of pure gold. Therefore any one who brings an ounce troy of gold to the mint normally receives 3 pounds, 17 shillings, and 10½ pence.

TABLE 7. CURRENCY PRICE OF GOLD IN LONDON PER OUNCE, 1910 TO 1932\*

Year	January		February		March		April		May		June		July		August		September		October		November		December	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
1910.....	77	9	77	9½	77	9½	77	9	77	9	77	9½	77	9½	77	9½	77	9½	77	9½	77	9	77	9½
1911.....	77	9½	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9
1912.....	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9½	77	9½	77	9	77	9
1913.....	77	9	77	9½	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9
1914.....	77	9	77	9½	77	9½	77	9½	77	9½	77	9	77	9	77	9	77	9	77	9	77	9	77	9
1915.....	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9
1916.....	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9
1917.....	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9
1918.....	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9
1919.....	77	9	77	9	77	9	77	9	77	9	77	9	77	9	77	9	91	11	99	0	101	0	108	2
1920.....	112	10	121	11	109	3	105	6½	107	1½	104	2	108	6	114	4½	118	6½	118	½	119	6	116	1¼
1921.....	107	10½	105	9½	105	1½	104	8½	104	7½	109	7	114	3	111	2	111	3	105	7	103	4	98	½
1922.....	97	0	94	5	95	8	93	4	93	0	92	11½	92	8½	93	3	93	5½	92	8	91	8½	88	8½
1923.....	88	9	88	¾	88	5	88	9½	89	½	89	7½	89	9½	90	5	90	8½	91	6½	95	½	94	10½
1924.....	96	11½	95	11½	96	1½	94	6½	95	1½	95	5	94	½	91	4½	92	8½	91	11½	89	8½	88	5½
1925.....	87	1	86	11½	86	5½	85	9½	84	11½	84	11½	84	11	84	11	84	11½	84	11	84	11½	84	11
1926.....	84	10½	84	10½	84	10½	84	11½	84	11½	84	10½	84	10½	84	10½	84	11	84	11½	84	11½	84	11½
1927.....	84	11	84	11½	84	10½	84	11½	84	11½	84	11½	84	11½	84	11½	84	11½	84	11½	84	11½	84	11½
1928.....	84	11½	84	11	84	11½	84	11½	84	10½	84	10½	84	11	84	11½	84	11½	84	11½	84	11½	84	11½
1929.....	84	11½	84	11½	84	11½	84	11½	84	11½	84	11½	84	11½	84	11½	84	10½	84	11½	84	11½	84	10½
1930.....	84	11½	84	11½	84	11½	84	11½	84	11½	84	11½	85	½	85	0	85	0	84	11½	85	1½	85	1½
1931.....	84	11½	84	11½	84	10½	84	9½	84	10½	84	10½	84	11½	84	10½	95	1½	107	0	113	8	120	6
1932.....	118	9	119	2	111	6½	111	3½	113	0	113	9½	116	10	118	7½	118	11½	122	7½	127	3½	124	6½

\*For 1910 to 1919, the price of gold per standard ounce ½ fine was tabulated from *Rapport au Ministre des Finances*, no. 17, p. 82-85, 1912, no. 19, p. 108-111, 1915, no. 20, p. 126-129, 1920, and no. 21, p. 152-157, 1923. For 1920 to 1927, the price per fine ounce was tabulated from *Accounts and Papers*, 13, vol. 22, p. 248-249, 1928-29; for 1928, from *The Statistical Abstracts for British India*; for 1929 to 1932, from *The Economist*.

During the World War, gold again commanded a premium in London. In February, 1920, an ounce of gold sold for an average of 121 shillings and 11 pence. This is equivalent to a premium of 57 per cent.

In December, 1931, the gold sold for 120 shillings and 6 pence per ounce, thus commanding a premium of 55 per cent. At the same time, in New York, sterling exchange on London was 69.3 per cent of par.

TABLE 8. AVERAGE MONTHLY EXCHANGE RATES ON LONDON, 1912 TO 1932\*  
(Par = \$4.8665)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1912	4.8690	4.8728	4.8721	4.8710	4.8720	4.8756	4.8753	4.8725	4.8904	4.8574	4.8506	4.8508	4.8667
1913	4.8698	4.8746	4.8729	4.8688	4.8651	4.8670	4.8678	4.8640	4.8568	4.8580	4.8526	4.8535	4.8542
1914	4.8623	4.8570	4.8628	4.8698	4.8831	4.8849	4.8878	5.0000	4.9813	4.9530	4.9031	4.8715	4.9014
1915	4.8423	4.8206	4.8018	4.7945	4.7925	4.7755	4.7648	4.7063	4.6913	4.6858	4.6706	4.7208	4.7556
1916	4.7506	4.7591	4.7641	4.7648	4.7581	4.7579	4.7577	4.7575	4.7574	4.7567	4.7567	4.7479	4.7574
1917	4.7567	4.7550	4.7544	4.7567	4.7555	4.7544	4.7553	4.7545	4.7548	4.7523	4.7520	4.7517	4.7544
1918	4.7525	4.7525	4.7525	4.7550	4.7550	4.7538	4.7525	4.7525	4.7550	4.7550	4.7558	4.7563	4.7559
1919	4.7658	4.7649	4.7147	4.6617	4.6676	4.6211	4.4287	4.2720	4.1790	4.1840	4.0982	3.8123	4.4308
1920	3.8779	3.3810	3.7258	3.9310	3.8477	3.9498	3.8647	3.8219	3.5103	3.4751	3.4372	3.4924	3.5696
1921	3.7420	3.8758	3.9111	3.9292	3.9754	3.7915	3.6321	3.6536	3.7240	3.8729	3.9792	4.1591	3.8520
1922	4.2248	4.3620	4.3757	4.4134	4.4461	4.4519	4.4494	4.4647	4.4307	4.4395	4.4799	4.6096	4.4287
1923	4.6546	4.6908	4.6957	4.6555	4.6257	4.6147	4.5834	4.5603	4.5422	4.5237	4.3922	4.3601	4.5741
1924	4.2591	4.3077	4.2906	4.3513	4.3608	4.3199	4.3704	4.4995	4.4605	4.4870	4.6067	4.6658	4.4177
1925	4.7817	4.7724	4.7763	4.7953	4.8547	4.8904	4.8596	4.8569	4.8465	4.8428	4.8459	4.8498	4.8285
1926	4.8579	4.8634	4.8608	4.8623	4.8615	4.8661	4.8635	4.8596	4.8542	4.8503	4.8498	4.8513	4.8583
1927	4.8526	4.8503	4.8540	4.8565	4.8570	4.8561	4.8551	4.8602	4.8635	4.8697	4.8740	4.8825	4.8610
1928	4.8753	4.8748	4.8799	4.8820	4.8816	4.8803	4.8836	4.8535	4.8505	4.8495	4.8492	4.8524	4.8661
1929	4.8499	4.8521	4.8526	4.8532	4.8508	4.8482	4.8510	4.8485	4.8482	4.8699	4.8775	4.8816	4.8570
1930	4.8688	4.8618	4.8631	4.8631	4.8597	4.8587	4.8657	4.8707	4.8611	4.8590	4.8564	4.8566	4.8921
1931	4.8547	4.8584	4.8583	4.8599	4.8640	4.8649	4.8561	4.8577	4.5313	3.8993	3.7199	3.7377	4.5350
1932	3.4312	3.4563	3.6393	3.7500	3.6751	3.6466	3.5496	3.4757	3.4711	3.3982	3.2753	3.2817	3.5040

\* The rates from January, 1912, to October, 1918, were furnished from tabulations of the Bureau of Agricultural Economics. The original source was the *International Yearbook of Agricultural Statistics, 1909-1921*. Institute of International Agriculture, p. 504, 1922. From November, 1918, to December, 1927, from the *Federal Reserve Bulletin*, vol. 14, p. 56-58, January, 1928. From January, 1928, to December, 1929, from the *Federal Reserve Bulletin*, vol. 16, p. 28, January, 1930. From January, 1930, to December, 1931, from the *Federal Reserve Bulletin*, vol. 18, p. 54-55, January, 1932. From January to July, 1932, from the *Federal Reserve Bulletin*, vol. 18, p. 515, August, 1932.

#### PRICES OF INDIVIDUAL COMMODITIES AS COMPARED WITH THE GENERAL PRICE LEVEL<sup>1</sup>

The movements of the general price level in the Civil War period, and the fluctuations in the price of hogs about the general level of commodity prices, are shown in figure 9. The hog cycle was important, but the most serious factor was the decline in the general level of commodity prices which dragged the hog cycle down. The same com-

<sup>1</sup> Warren, G. F., and Pearson, F. A. Commodity prices. *Farm economics*, no. 74, p. 1659. February, 1932.

TABLE 9. MONTHLY AVERAGE QUOTATIONS FOR THE ENGLISH POUND STERLING AT NEW YORK CITY, 1910 TO 1932 (Per cent of par)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1910....	100.1	100.0	100.2	100.3	100.2	100.1	99.8	99.9	100.0	100.0	99.9	99.9	100.0
1911....	99.9	100.0	100.0	100.0	100.0	99.9	100.0	99.9	100.0	100.1	100.1	100.0	100.0
1912....	100.2	100.2	100.2	100.2	100.1	100.2	100.3	100.2	99.9	99.9	99.8	99.8	100.1
1913....	100.2	100.3	100.3	100.1	100.0	100.1	100.1	100.0	99.9	99.9	99.8	99.9	100.0
1914....	99.9	99.8	99.9	100.1	100.3	100.4	100.7	103.9	102.5	101.6	100.5	100.1	100.8
1915....	99.5	99.0	98.6	98.5	98.4	98.1	97.9	96.4	96.1	96.0	95.9	97.0	97.6
1916....	97.8	97.8	97.9	97.9	97.8	97.8	97.8	97.8	97.7	97.7	97.7	97.7	97.8
1917....	97.8	97.7	97.6	97.7	97.7	97.7	97.7	97.7	97.7	97.6	97.6	97.6	97.7
1918....	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.7	97.9	97.9	97.7
1919....	97.9	97.9	96.9	95.8	95.9	95.0	91.0	87.8	85.9	86.0	84.2	78.3	91.0
1920....	75.6	69.5	76.6	80.8	79.1	81.2	79.4	74.4	72.1	71.4	70.6	71.8	75.2
1921....	76.9	79.6	80.4	80.7	81.7	77.7	74.6	75.1	76.5	79.6	81.6	85.4	79.2
1922....	86.8	89.6	89.9	90.7	91.4	91.5	91.4	91.7	91.0	91.2	92.1	94.7	91.0
1923....	95.6	96.4	96.5	95.7	95.1	94.8	94.2	93.7	93.3	93.0	90.0	89.6	94.0
1924....	87.5	88.5	88.2	89.4	89.6	88.8	89.8	92.5	91.7	92.2	94.7	96.5	90.8
1925....	98.3	98.1	98.1	98.5	99.8	99.9	99.9	99.8	99.6	99.5	99.6	99.7	99.2
1926....	99.8	99.9	99.9	99.9	99.9	100.0	99.9	99.8	99.7	99.7	99.6	99.7	99.8
1927....	99.7	99.7	99.7	99.8	99.8	99.8	99.8	99.9	99.9	100.0	100.2	100.3	99.9
1928....	100.2	100.2	100.3	100.3	100.3	100.3	99.9	99.7	99.7	99.7	99.6	99.7	100.0
1929....	99.7	99.7	99.7	99.7	99.7	99.6	99.7	99.6	99.6	100.1	100.2	100.3	99.8
1930....	100.0	99.9	99.9	99.9	99.9	99.8	100.0	100.1	99.9	99.8	99.8	99.8	99.9
1931....	99.8	99.8	99.8	99.9	99.9	100.0	99.8	99.8	93.1	79.9	76.4	69.3	93.2
1932....	70.5	71.0	74.8	77.1	75.5	74.9	72.9	71.4	71.3	69.8	67.3	67.4	72.0

parisons for the World War period are shown in figure 10. The whole price structure declined from 244 in May, 1920, to 100 in December, 1931. The major part of the decline in the price of hogs was not due to the hog cycle, but to a general collapse in all prices.

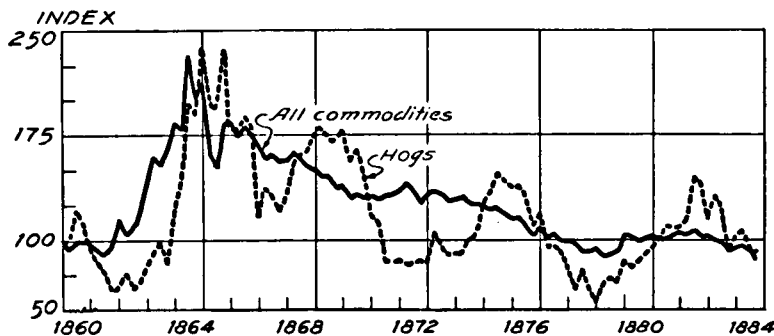


FIGURE 9. INDEX NUMBERS OF WHOLESALE PRICES OF ALL COMMODITIES AND OF PRICES OF HOGS AT NEW YORK CITY, 1860 TO 1884 (1856-60 = 100)

The usual hog cycle continued, but fluctuated about a declining base

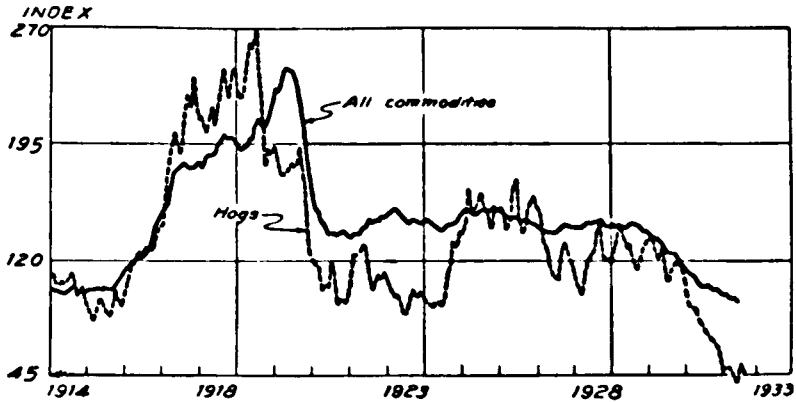


FIGURE 10. INDEX NUMBERS OF WHOLESALE PRICES OF ALL COMMODITIES AND PRICES OF HEAVY HOGS AT CHICAGO, 1914 TO 1932  
(1910-14 = 100)

As in the Civil War period, the hog cycle continued but was dragged downward by the decline of the whole price structure. It is to be expected that hog prices will continue to fluctuate about the general price level.

Similar comparisons for wheat during the Civil War period are shown in figure 11. Wheat prices fluctuate violently, primarily because of variations in weather. Following the Civil War, these fluctuations were about a steadily declining base. Wheat prices and all-commodity prices

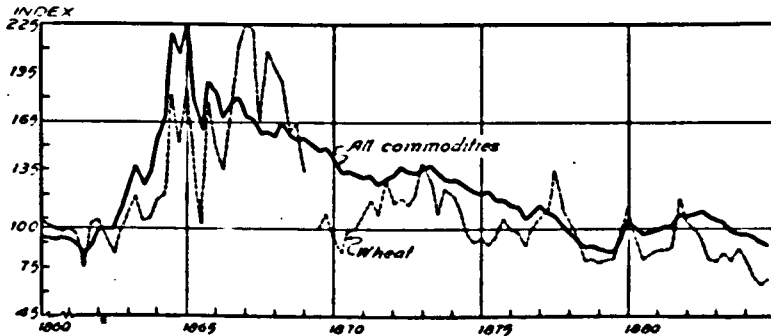


FIGURE 11. INDEX NUMBERS OF WHOLESALE PRICES OF ALL COMMODITIES AND PRICES OF WINTER WHEAT AT NEW YORK CITY, 1860 TO 1884  
(1856-60 = 100)

Wheat prices fluctuated about the general price level, which steadily declined

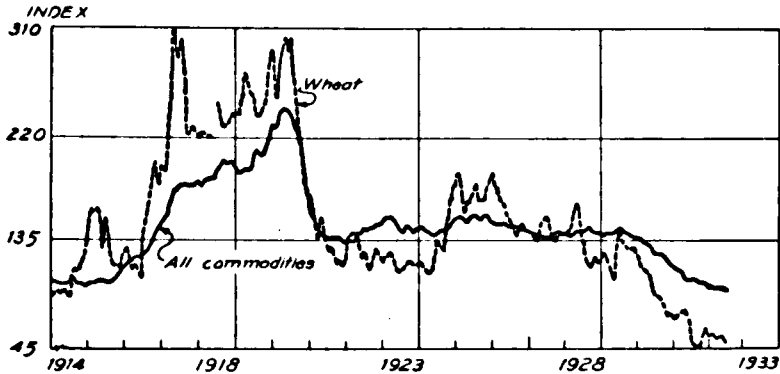


FIGURE 12. INDEX NUMBERS OF WHOLESALE PRICES OF ALL COMMODITIES AND PRICE OF NO. 2 HARD WINTER WHEAT AT KANSAS CITY, 1914 TO 1932  
(1910-14 = 100)

Wheat prices fluctuated about the general price level. It is to be expected that this relationship will continue

for the World War period are shown in figure 12. Wheat prices again fluctuated around a declining base. It is to be expected that wheat prices will continue to follow the general price level and fluctuate about it. There seems to be no fundamental reason for anticipating a change in these relationships at the present time.

It is extremely difficult to imagine a fluctuating price fluctuating about a fluctuating base. The inability to imagine the conditions shown in figures 9 to 12 leads to erroneous actions. It also makes it difficult to appreciate the underlying principles governing prices. Many persons imagine that a stable general average of commodity prices would mean stability in each commodity. It would mean that the hog cycle would fluctuate about a stable base. Price changes would therefore be due to changes in the supply of or demand for hogs, rather than to a crash in the foundations of the whole price structure. Violent changes in the general price level do increase somewhat the violence of price changes due to other causes.

The statement is commonly made that prices are due to supply and demand. This is a half truth. It has led to tremendous losses on the farms and in the cities, and has led to the adoption of erroneous public policies. Price is a ratio of the supply of and demand for gold, to the supply of and demand for a commodity. In short periods of time, credit may act independently of gold to increase or decrease prices. Also, in short periods of time, speculation may act independently of the supply

of or the fundamental demand for the commodity. But prices due to speculation are generally brought back with a jerk. Similarly, if credit gets very far from its normal relationship to gold, it is brought back with a jerk.

The movements of the general price level are primarily due to monetary factors. Mere adjustment of the wheat acreage does not solve this problem.

The movements of the commodity prices due to monetary causes have been of overwhelming importance for more than half the time during the past 135 years (table 26, page 56).

#### EFFECTS OF DECLINING COMMODITY PRICES

##### THE BUILDING INDUSTRY

The effect of declining commodity prices can be illustrated by considering the building industry.

If we were in an ideal state of economic equilibrium, with no more houses than we need and no over- or under-production of anything else, and if the costs of building should decline 20 per cent, a panic would ensue and during the panic there would be the appearance of great over-building.

In a perfect situation there would be tenants who were thinking of buying or building, others who had bought homes on contract with payments all the way from a few dollars to a high percentage. There would be sales between relatives with little or no cash payment. Builders would have houses in all degrees of completeness and would have made sales with various down-payments. Banks and lumber dealers would be financing these builders. Bankers and mortgage companies would have mortgages representing various percentages of the value of the property.

The next real customer is the man who is thinking of buying a home. If costs of building decline, he will see his neighbors who have made small payments lose their equities, and the properties anxiously seeking buyers. Such a warning discourages most prospective buyers. Builders, credit agencies, and home owners with small equities, must sell. In such a situation, although costs of building decline only 20 per cent, it might be necessary to offer properties at twice this reduction. This in turn would wipe out the equities of still other persons and force more properties on the market. Most building would stop. This would throw men out of work. Since building is one of the great basic industries, all kinds of industrial establishments would have to discharge workmen. These unemployed people use less home room in such a period, and vacant properties would appear. The popular explanation would be

over-production. This discussion began with the assumption of perfect equilibrium except that costs of new construction dropped.

If in such a period a way were found to still further reduce building costs, it would make the matter much worse, because properties would drop still further in value, and persons with higher equities would be wiped out and more properties thrown on the market. There is only one remedy for declining prices, and that is stable prices.<sup>4</sup>

Although in such a period there is very severe unemployment, wages of the few persons engaged in the building industry remain high. In view of this, it is frequently proposed that the way to start building is to reduce wages so that houses can be built still more cheaply. This erroneously assumes that a reduced cost would start buying and new building. The fact is that it was the reduced costs that stopped buying and building. Buying and building do not begin until liquidation is completed: that is, until those who have lost their equities either find a way to pay or allow the properties to pass into the hands of those who can hold them. When forced selling is completed, building can begin. The ratio of costs to prices and rents then becomes important. But low costs never encourage building unless properties can be readily sold or rented. This cannot be done during a period of liquidation to a new cost basis.

The first step in the process of liquidation is to have houses pass into the hands of creditors. They pass from the hands of persons who want them into the hands of persons who do not want them. This creates a multitude of distressed sellers. Buyers disappear as if by magic. Prices fall far below costs. New purchasers for the properties must be tempted to buy so that the properties will again be in the hands of those who want them. This process must be completed before building begins. It is a slow process.

The prices of white pine and brick in the Civil War period, and of yellow pine and brick in the World War period, are shown in figure 13.

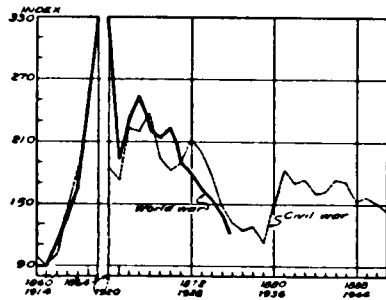


FIGURE 13. PRICES OF WHITE PINE AND BRICK FOR THE CIVIL WAR PERIOD, AND OF YELLOW PINE AND BRICK FOR THE WORLD WAR PERIOD

(Pre-war = 100)

The course of prices is similar in the two war periods, but fluctuations were more violent following the World War. If the similarity continues, prices will rise in 1936.

<sup>4</sup> Warren, G. F. and Pearson, F. A. Effects of a decline in commodity prices. Farm economics, no. 71, p. 1549. June, 1931.



City homes are much like agriculture in that they have a very slow turnover. Most industrial and mercantile operations have a relatively rapid turnover, so that adjustment is completed before many years. Agriculture, being a biological industry, has a slow turnover, and homes last for many years.

After the panic of 1873, building materials declined in price for six years. Apparently building equities were then liquidated, for prices of building materials rose. If the readjustment requires the same period of time in this depression, home building would be expected to begin in 1936.

House rents for five large cities in the Civil War period and eight large cities in the World War period are shown in figure 14 and table 10. Rents reach bottom and become stabilized before building starts.

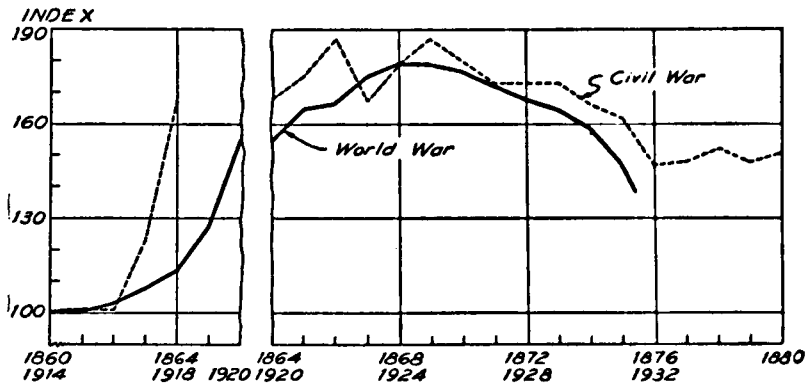


FIGURE 14. RENTS IN FIVE LARGE CITIES IN THE CIVIL WAR PERIOD, AND IN EIGHT LARGE CITIES IN THE WORLD WAR PERIOD  
(Pre-war = 100)

Thus far the experiences of the Civil War have been repeated

#### LOSSES ON INVENTORIES

When prices decline, there is a steady loss on inventories. For example, a feed dealer must have feed on hand, feed on the railroad, and feed in the process of manufacture. If prices decline, the dealer is always selling feed that cost more than the present market justifies him in asking for it. If the turnover is rapid, or if the decline is slow, the business may succeed. If the turnover is very slow, or if the decline is rapid, the business may be overwhelmed by declining prices regardless of how efficiently it is operated.

TABLE 10. RENTS IN LARGE AND SMALL CITIES IN THE UNITED STATES, 1800 TO 1880 AND 1914 TO 1932

Civil War*		World War†		
Year	Five large cities (1860 = 100)	Year	Eight large cities (1914 = 100)	Ten lesser cities (1914 = 100)
1860.....	100	1914.....	100	100
1861.....	101	1915.....	100	97
1862.....	101	1916.....	103	95
1863.....	123	1917.....	108	94
1864.....	168	1918.....	114	111
1865.....	175	1919.....	128	128
1866.....	187	1920.....	155	146
1867.....	167	1921.....	165	151
1868.....	179	1922.....	167	149
1869.....	187	1923.....	175	149
1870.....	180	1924.....	179	147
1871.....	173	1925.....	179	146
1872.....	173	1926.....	177	145
1873.....	173	1927.....	172	140
1874.....	166	1928.....	168	133
1875.....	162	1929.....	165	130
1876.....	147	1930.....	159	125
1877.....	148	1931.....	147	118
1878.....	152	1932.....	126	103
1879.....	148			
1880.....	151			

\*The rents for five large cities from 1860 to 1880 are for Boston, Philadelphia, Cincinnati, Louisville, and St. Louis. (Weeks, J. D. Report on the average retail price of necessities of life in the United States. Report on the statistics of wages in manufacturing industries, Tenth Census of the United States, Census Office, Department of the Interior, vol. 20, p. 104-107, 1886.)

†Cost of living. Monthly Labor Review, United States Bureau of Labor Statistics, vol. 28, no. 2, p. 178, February, 1929, and later numbers. The rents for eight large cities from 1914 to 1932 are for Baltimore, Boston, Buffalo, Chicago, Cleveland, Detroit, New York, and Philadelphia. The rents for ten lesser cities are for Houston, Jacksonville, Los Angeles, Mobile, Norfolk, Portland (Maine), Portland (Oregon), San Francisco (and Oakland), Seattle, and Washington (D. C.).

For a number of retail feed stores in New York State, it required 3.75 months to make sales equal to the average quantity of feed on hand.<sup>5</sup> In the two years ending with October, 1931, the average price of a dairy ration in New York declined 51 per cent, or an average decline of 5 per cent in 3.75 months. This is more than the normal net profit for a highly successful store.

The same principle applies to farming or any other industry. The chief difference is that agriculture is a very slow industry. On intensive dairy farms in Chenango County, it required 3.5 years to make sales equal to the capital invested.<sup>6</sup> For agriculture as a whole, it requires over 7 years to make sales equal to the capital.<sup>7</sup> An industry with such a slow turnover is very susceptible to injury from declining prices.

<sup>5</sup> Perregaux, E. A. An economic study of retail feed stores in New York State, p. 43. Cornell Univ. Agr. Exp. Sta. Bul. 471. November, 1928.

<sup>6</sup> Misner, E. G. Economic studies of dairy farming in New York, IV, p. 6. Cornell Univ. Agr. Exp. Sta. Bul. 452. August, 1926.

<sup>7</sup> Warren, G. F., and Pearson, F. A. The agricultural situation, p. 25. 1924.

From October, 1929, to June, 1932, the average of all wholesale prices declined from an index of 139 to 93, or a decline of 12 per cent per year. Since a return of 5 per cent on agriculture is a good return, such a decline in two years would wipe out all profits hoped for in five years. The situation is far worse than this indicates, because prices which farmers received declined far more than this, and prices which farmers paid for the articles that they purchased declined much less.

In a period of declining prices, every one tries to keep his inventories as low as possible. This slows up production and throws more people out of work and reduces buying power.

Factories usually try to operate as long as possible in order to protect the labor force and hold it intact, but finally factories close and throw a large part of the burden on unemployed workers.

#### FARMS NOT OPENED AND CLOSED LIKE FACTORIES

Another reason why agriculture is particularly affected by declining prices is that farms are biological establishments. They cannot be closed as can a factory. If the land is left idle, the weeds take it. The livestock cannot be put in cold storage while waiting for prices to rise.

#### THE FARM A HOME AS WELL AS A BUSINESS

Still another reason why agriculture is peculiarly injured by declining prices is that it is a family industry. A factory may be closed until prices warrant the beginning of operations. Much of the loss is carried by the workers who are unemployed. The farmer cannot discharge himself. If a farmer closes his farm, ordinarily he must abandon his home and his business.

#### INJURY TO DEBTORS FROM DECLINING PRICES

When prices fall, the debtor must pay the creditor more than was contemplated. It is true that he pays the number of dollars agreed upon, but the difficulty of obtaining the dollars is increased and the value of the dollar is greater than either party anticipated.<sup>9</sup>

The injury to debtors is not offset by a gain by creditors. The debtor who pays loses, but the debtor who loses everything does not pay. The creditor therefore gains from one debtor, but commonly loses so much from another than he too loses from falling prices. Persons who do not understand this think that the creditors gain; but life-insurance companies, savings banks, universities, hospitals, and other institutions that depend on investments, have difficulty in earning the usual return

<sup>9</sup> Warren, G. F., and Pearson, F. A. Effect of rising and falling commodity prices on prices of securities. *Farm economics*, no. 71, p. 1555. June, 1931.

because of so many losses of principal. If the period of declining prices continues, interest rates ultimately decline.

Commodities are the basis of the most credit. Brazil expected to pay its debts with coffee. Australia expected to pay with wheat and wool. The State of Georgia and its farmers expected to pay with cotton.

Most of the security for debts is commodities, either movable ones or those that have been built into homes or factories. Most of the taxes are raised by assessing such property. If commodities drop in value, the movable commodities, as well as railroad ties, rails, electric lines, and houses, decline in value. The public and private debts and taxes of 1931 would not have been particularly burdensome at the price level at which they were incurred, that is, at a wholesale commodity price level of about 150. A large part of the indebtedness could not be paid at a price level of 100.

The States and countries that produce a surplus of food and raw materials are commonly in debt. They expect to pay their debts with commodities. Few of them have any gold mines. If commodities drop in price, they are unable to pay. If the drop is severe enough, the bonds drop in value or may become worthless. In 1931 the bonds of most of the countries in the Southern Hemisphere sold for 5 to 50 per cent of their par value, making the interest rate from 15 to 100 per cent, if paid.

Since the debts could not be paid with goods because commodities were so cheap, gold was shipped in large quantities to the creditor countries. This depletion of the gold stocks made it still more difficult to borrow. The same principle holds for Western States that are in debt.

A drop in commodity prices inevitably results in draining the gold from debtor regions to the money centers. For this and many other reasons, a drop in commodity prices results in radical political acts in Western States and revolutions in countries that are far from money centers.

Extremely rough estimates of the total indebtedness are shown in table 11. The total debt is approximately \$1700 per capita. The National Industrial Conference Board estimated the total wealth in 1929 as 362 billion dollars.\* The estimated debt of 203 billion dollars (table 12) was, therefore, 56 per cent of the estimated wealth.

If the value of commodities were to drop one-third and remain at that level, the debt would become about 84 per cent of the value of the property in the Nation. So much of this can never be collected that it is probable that the lenders would have a greater buying power

\* Conference Board Bulletin no. 62, p. 496, February 20, 1932.

TABLE 11. ROUGH APPROXIMATION OF PUBLIC AND PRIVATE DEBTS

Debt	Amount, billions	Per cent	Per capita
Corporations.....	\$76	37.4	\$618
Urban mortgages*	37	18.2	301
Bank loans.....	35	17.3	284
State, county, and local.....	21	10.3	171
National.....	18	8.9	146
Farm mortgages.....	9	4.4	73
Life-insurance-policy loans and premium notes...	3	1.5	24
Retail installment paper†	3	1.5	24
Pawn-brokers' loans and unlawful loans of all kinds‡	1	0.5	8
Total.....	\$203	100.0	\$1,649

\* Based on estimates furnished through the courtesy of George Terborgh, of the Brookings Institution.

† Based on reports of the National Association of Finance Companies.

‡ Ryan, F. W. Family finance in the United States. *Journal of Business of the University of Chicago*, vol. 3, no. 4, part 1, p. 404, October, 1930.

if they were paid in full at a price level of 150. The usual argument for reducing wages is that a dollar has more buying power. This same argument might be applied to debts, which are the most serious result of deflation.

Unliquidated public and private debts constitute the most serious problem in the United States at the present time. If prices continue at pre-war levels, debts will be the most serious problem for some years. They are one of the basic factors in unemployment. Most of these debts could be paid at the price level at which they were incurred. Many of them cannot be paid at a pre-war price level.

The decline in commodity prices has resulted in many business failures. During the past two years 3643 banks have suspended, with deposits of \$2,556,000,000. In the same period, 54,640 business failures have occurred, with liabilities of \$1,405,000,000.

Rough approximations of the indebtedness of the United States are given in table 12. In the eleven years 1912 to 1922 the total indebtedness increased about 116 per cent. From 1922 to 1929 the increase was about 49 per cent. Debts in 1930 were about three times those of 1912.

TABLE 12. ESTIMATED PUBLIC AND PRIVATE DEBTS IN THE UNITED STATES IN 1912, 1922, 1929, AND 1932

Year	Public debts, in billions of dollars	Private debts, in billions of dollars	Total debts, in billions of dollars	Public debts per capita	Private debts per capita	Total debts per capita
1912.....	5	58	63	\$ 53	\$ 610	\$ 663
1922.....	31	105	136	282	956	1,238
1929.....	33	170	203	272	1,400	1,672
1932.....	38	137	175	304	1,098	1,402

A slight rise in the price level greatly increases the ability to pay debts. Conversely, a small drop in the price level greatly reduces the ability. Since such a drop always results in unemployment, the situation is made worse, because it is impossible to sell goods even at the lower price level.

So many charges are fixed or semi-fixed that the ability to pay debts increases very rapidly as prices rise. A drop of 25 per cent in the price level does not mean a drop of 25 per cent in the ability to pay taxes or debts. It may mean a drop of 100 per cent. The ability to pay debts increases at a compound rate as prices rise.

In 1929 the indebtedness represented a larger percentage of the national wealth than it did in 1912. The ability to pay also had risen faster than had the national wealth, so that neither the debts nor the taxes were an impossible burden at the price level of 1929.

The taxes alone became an impossible burden on much property after prices fell. Falling prices stop business, cause two families to occupy the space formerly occupied by one family, stop sales of real estate, reduce the cost of building and consequently reduce the value of all properties, and so largely destroy demand that a tax burden of 2 per cent in 1929 often became more than the total income in 1931.

Public debts incurred at a price level of 150 become extremely difficult to pay with a price level of 100. Public debts take preference over private debts because taxes are the first lien on the property. After the preferred creditor has been paid in full, there are times when there is nothing left for the other creditors. To make the tax problem still worse, taxes that are based on profits are greatly reduced and many taxpayers are unable to pay. This necessitates new taxes or heavier taxes on those who can pay. To make matters still worse, falling commodity prices result in increased public expenditures for charity, and the Federal Government is called on to assist banks, railways, agriculture, and laborers.

The major part of the difficulty could be remedied if violent fluctuations in the general price level could be prevented. There is much heated discussion about tax reduction. Public debts and fixed charges make reduction very difficult. The only way to provide real tax relief is to continue the price level to which debts and business were adjusted.

#### ENGLISH DEBTS

The increase in debts in the United Kingdom, Canada, and Australia, is shown in table 13. In 1929 the debt of the United Kingdom was more than ten times the pre-war amount. With smaller population and less wealth per capita, the debt burden is many times as serious as the national debt in the United States. Data are not available to indicate the debts of smaller units of government, and private debts. It is

certain that the debts will be difficult if not impossible to pay with a pre-war level of commodity prices. Very little progress in paying national debts was being made even at the price level of 1921-29.

TABLE 13. DEBT OF THE UNITED KINGDOM, CANADA, AND THE COMMONWEALTH OF AUSTRALIA  
(000,000 omitted)

Year	Aggregate gross liabilities of the United Kingdom*	Total debt of Canada†	Total public debt of the Commonwealth of Australia‡
	(Pounds)	(Dollars)	(Pounds)
1912.....	718	608	.....
1913.....	711	483	.....
1914.....	706	544	19
1915.....	1,162	700	37
1916.....	2,190	937	101
1917.....	4,064	1,382	169
1918.....	5,921	1,863	284
1919.....	7,481	2,677	326
1920.....	7,876	3,042	381
1921.....	7,623	2,902	402
1922.....	7,721	2,902	416
1923.....	7,813	2,889	411
1924.....	7,708	2,820	416
1925.....	7,666	2,818	431
1926.....	7,634	2,769	458
1927.....	7,653	2,726	461
1928.....	7,631	2,677	494
1929.....	7,621	2,647	542

\* Statistical abstract for the United Kingdom, Seventieth number, p. 116, 1927, and Seventy-third number, p. 122, 1930.

† The Canada year book, 1930, p. 815.

‡ Official year book of the Commonwealth of Australia: no. 13, 1920, p. 784; no. 14, 1921, p. 697; no. 19, 1926, p. 349; no. 23, 1930, p. 262.

#### FIXED CHARGES

Modern civilization is so complicated that a change in the commodity-price level has far-reaching results beyond the power of human imagination to foresee.

Communities, like individuals, provide many necessities in advance of payment. The common method of paying for a building or a road is to borrow money for the construction and pay for the building or the road while it is being used. This is a perfectly normal procedure. If prices decline, the debt is difficult to pay.

Wages of public employees do not rise quickly when prices rise, and do not fall quickly when prices fall. Since public debts are contracted in anticipation of a stable price level, taxes remain high when prices fall.

Postage, freight, express rates, and street-car fares do not respond quickly to falling prices. Freight rates were advanced 25 to 40 per cent in August, 1920, at a time when prices were falling rapidly. They were again advanced in October, 1931.

Doctors', lawyers', and dentists' fees, and hospital charges, change very slowly.

A large proportion of the population eat in public places, where prices of food respond very slowly to changing prices.

WAGES<sup>10</sup>

*Long-time trend in wages*

If the index numbers of wages, as reported by the United States Bureau of Labor Statistics, are divided by index numbers of wholesale prices, the result is the purchasing power of wages at wholesale prices (figure 15). From 1840 to 1914, the purchasing power of wages increased at a compound rate of 1.71 per cent per year.

When prices were falling or rising, the purchasing power of wages exceeded or fell below the normal rate of increase.

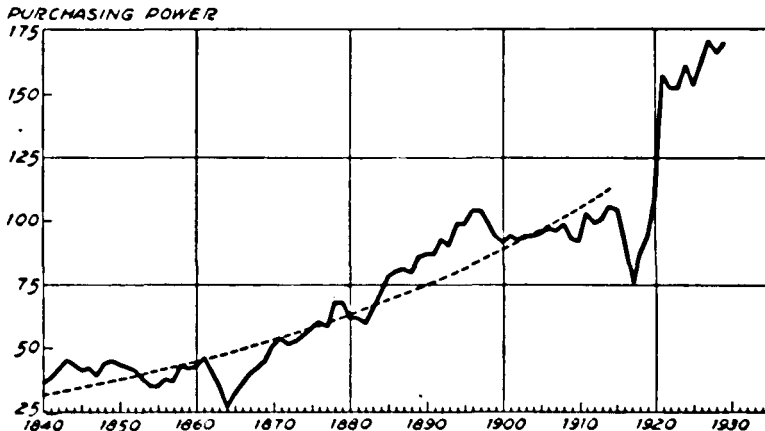


FIGURE 15. PURCHASING POWER OF HOURLY WAGES, EXCLUSIVE OF AGRICULTURE, IN THE UNITED STATES, 1840 TO 1929\* (1910-14 = 100)

From 1840 to 1914, the purchasing power of wages, at wholesale commodity prices, increased at a compound rate of 1.71 per cent per year. The purchasing power of wages was low in the periods of rapidly rising prices during the World War and the Civil War. It was very high in the two periods when prices were declining rapidly.

\* Warren, G. F., and Pearson, F. A. Wages. Farm economics, no. 74, p. 1671, February, 1932.

Warren, G. F., and Pearson, F. A. Physical volume of production. Farm economics, no. 74, p. 1680, February, 1932.

<sup>10</sup> Index numbers of wages per hour, 1840 to 1929 (Monthly labor review, U. S. Bur. Labor Statistics, vol. 32, no. 2, p. 143, February, 1931); Warren, G. F., and Pearson, F. A. Wages (Farm economics, no. 74, p. 1671, February, 1932).



The physical volume of production per capita from 1839 to 1914 increased at a compound rate of 1.73 per cent per year. It is not surprising that the purchasing power of wages must keep pace with the production per capita. Farmers and laborers are the great consumers of the Nation because there are so many of them. If production is to increase at the normal rate, wages must rise enough faster than prices to enable the laborers steadily to buy larger and larger quantities of goods.

If the laborer produces more per capita, he must consume more per capita. If he is to consume more per capita, the purchasing power of wages must rise. Over the centuries, wages have been steadily rising when compared with commodity prices. At the present time, many persons are wholly misled on the wage question by assuming that, if prices go back to pre-war, wages must go back to pre-war. The only way to bring this about would be to have production per capita return to the pre-war basis. Fortunately no such calamity is possible.

A steadily increasing percentage of the laborer's income is expended for education, entertainment, and the like. Also, a steadily increasing proportion of the population are engaged in these occupations. The physical volume of production per capita for those engaged in producing physical things is therefore higher than the rate of increase per capita for the Nation. In order to consume all the physical things and also consume the more rapidly increasing non-physical things, the buying power of labor should rise more rapidly than the national output of physical things per capita.

#### *Wages from the point of view of the employer and of the employee*

If the pre-war trend in wages had continued until 1929, and if prices had remained at 100, wages would normally have been 132 when the average for the five years before the war is taken as 100. This would have given them a purchasing power of 32 per cent above the pre-war figure, which would have been the normal growth in purchasing power in the 16.5 years. But wholesale prices in 1929 were 139 when the pre-war average is taken as 100. In order to have their normal buying power, wages should have been 183.

Owing to declining prices, wholesale prices were out of line with retail prices. In 1929 the laborer could not buy at a price level of 139. The cost of food at retail was 174, and the cost of living was 172. At an index of 172, laborers would have had to have wages of 227 to have a buying power of 32 per cent above the pre-war figure.

Other evidence of the fact that a wage level of more than double the pre-war average was a reasonable wage level in 1929, is indicated by the fact that industry was able to pay this wage level and be decidedly

prosperous. Some wages were much more than double the pre-war average, but farm wages and some other wages were not double the pre-war figure.

A collapse in the price structure throws consumers' prices out of line with producers' prices. The laborer is not concerned with wholesale prices when they are out of line with retail prices. If the price level would remain stable, wholesale prices would keep in line with retail prices. In 1931, wholesale prices of all commodities averaged 107 when the 1910-14 average is called 100. The cost-of-living index averaged 151. If the buying power of wages had continued at the pre-war rate of increase, it would have been 137 in 1931. With wholesale prices at an index of 107, the manufacturers might have anticipated wages of 147. If they could hire labor at this level and sell the product at 107, industry would be prosperous and production would be at a high level. But in order that the laborers might consume the output which the manufacturers would then produce, they would need a buying power of 137 at a price level of 151 at which they buy. This would require wages of 207 to buy the products of industry. This shows the impossible situation that inevitably develops when the price structure collapses. The manufacturer cannot proceed with a wage level of 207 and a price level of 107. But the laborer cannot consume the product unless he receives these wages. The result is that both production and consumption stop. A visionary reply is sometimes made that all other prices should come down. To reduce quickly all freight rates, all telephone charges, all taxes, all wages, all rents, all commissions, all debts, and all doctors', lawyers', and dentists' fees, could occur only in "Alice in Wonderland." It is about as practical as it is to say that, if a toad could fly, he could spend the winter in Florida. Long years of unemployment, bankruptcies, and distress are the only means of bringing a collapsed price structure into balance. It could, of course, be brought into balance quickly if the old price level were restored. When unemployment has continued long enough, the great shortage of goods causes industry to start for a time. But a period of declining prices is, as a whole, a period of unemployment.

Such a situation also causes innumerable misunderstandings and violent controversies. The manufacturer who sells his product at an index of 107 feels that wages 50 per cent above the pre-war figure should be a delight to the laborer. He cannot understand the situation. The laborer who should have wages of twice the pre-war figure to consume the product at a price level of 151, is unable to understand why the manufacturer is so unreasonable. The standstill is due to a collapse in the price structure, for which neither party is to blame. Here is a definite illustration of the old conundrum. What would happen if an irresistible force should meet an immovable body?

The situation is much worse for both parties than the above picture presents. The employer has many fixed charges, such as debts, taxes, and the like. He also sees the value of his property melting away because a new property could be built at less cost.

The cost of living includes rents, but many laborers have followed the highly commended practice of buying their own homes. Declining rents are an injury to these persons. They mean that the home is shrinking in value. This shrinkage is often sufficient to wipe out the lifetime savings of the thrifty worker.

Laborers, like other persons, have investments which have melted away. When the wage level is rising as rapidly as the national output per capita is increasing, the efficient receive promotions whereas the inefficient may be kept at the old wage. With declining prices, both the efficient and the inefficient workers continue at the same level or receive a horizontal cut. Such a situation often results in a greater loss through failure to win promotion, than by any cut in wages that is contemplated.

Carpenters may become janitors. School-teachers who might have been principals remain in minor positions or cannot get a place at all. Those who would leave teaching for better positions in business continue to hold their places and prevent new teachers from getting a place. The wages for a given position may be little changed, but the person who holds the position may have lost by failure to have advanced to a better position.

With rising prices, public employees with the lowest salaries almost invariably receive the first increase in pay. With falling prices, the general public policy is to cut the highest salaries first and most vigorously, so that the efficient suffer most from unstable prices.

The efficient business man who proceeds with energy is also penalized. The hoarder is rewarded. Most of the stories about misers which fill the literature at certain periods in history were written in periods when prices were declining, so that being a miser was profitable.

Public debts and other fixed charges represent such a large part of taxes that wage and salary reductions do not produce the results which the taxpayer anticipated. If the Federal Government cut all salaries and wages 10 per cent, it would reduce the total expenses only 3 per cent. In twenty-four typical townships in New York, all salaries and wages amounted to only 35 per cent of the expenditures. A 10-per-cent cut would reduce taxes only 3.5 per cent.

If no salaries nor wages were paid, the tax problem would be much more serious than it was before prices dropped, because New York farm prices have been cut in half.

Relatively few persons who draw wages or salaries profit by falling prices. Falling prices are an advantage to the man who has no hope of promotion and is able to hold his position, and who has no debts and

no savings or has hoarded his savings. They are a calamity to the man who would have been promoted.

### Unemployment

The relationship of rising and falling prices to unemployment in Great Britain is shown in figure 16. Many persons discussed the unemployment in England in terms of a decadent nation. England is an industrial country and is therefore more affected by a wreck of the

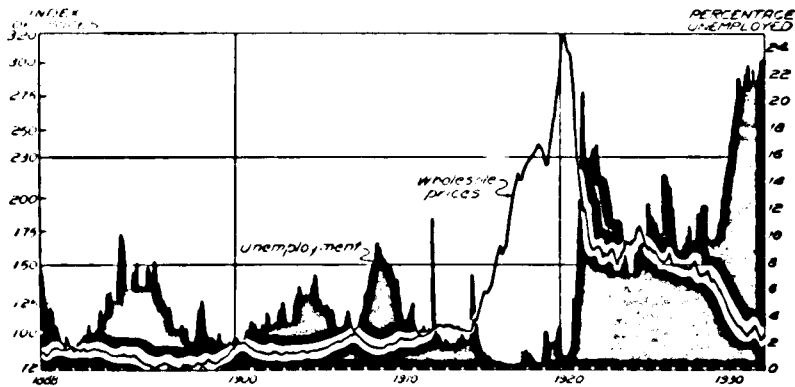


FIGURE 16. WHOLESALE PRICES, AND PERCENTAGE OF UNEMPLOYED AMONG TRADE UNIONS AND INSURED WORKPEOPLE, GREAT BRITAIN, 1888 TO 1932\*

When prices are rising, unemployment declines. Conversely, falling prices result in an increase in the percentage of unemployed

price structure than is any other country. Unemployment in England was a perfectly natural consequence of the amount of deflation which England attempted at a time when world trade was in a chaotic condition.

A period of declining prices may have periods of several years of rising or stable prices, and in such periods there may be industrial prosperity. A period of declining prices may also have a number of periods when prices fall and do not recover. Losses on inventories and other unavoidable losses therefore cause many business failures and

\*From 1888 to 1926 inclusive, the percentage of unemployed is based on percentage unemployed at the end of each month among members of trade unions making returns, *Nineteenth Abstract of Labour Statistics of the United Kingdom*, p. 79, 1928. From 1926 to 1932 inclusive, the percentage of unemployed is based on percentage unemployed at or near the end of the month among insured workpeople. The *Ministry of Labour Gazette*, vol. 35, no. 1, p. 2, January, 1927, gives both series for each month of the year 1926. There is very little difference in the two series. The new series was taken from various numbers of the *Labour Gazette*.

The wholesale prices are the Sauerbeck Statist index (Warren, G. F., and Pearson, F. A., *The Agricultural Situation*, p. 263, August, 1924). The index numbers were converted from the 11-year base 1867-77 to the 5-year base 1910-14 by multiplying by 1.2107.

also cause unemployment. In a period of declining prices there is certain to be a considerable number of times when unemployment will be serious.

When prices rise, wages rise less rapidly. When prices fall, wages fall less rapidly or may not fall at all. This changes the ratio of wages to commodity prices and has innumerable economic consequences.

#### *Wages in other periods of declining prices*

The declines in prices and wages in England following the Napoleonic War period are shown in figure 17. From 1810 to 1831, prices declined nearly one-half and wages declined 15 per cent. After a few more years

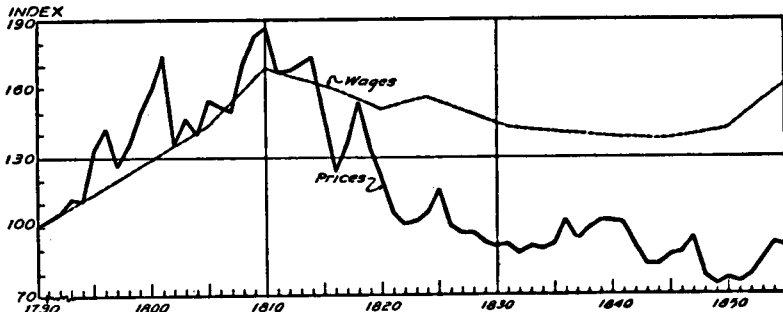


FIGURE 17. WHOLESALE PRICES AND WAGES IN ENGLAND FOLLOWING THE NAPOLEONIC WAR PERIOD, 1790 TO 1855\*

(1790 = 100)

From 1810 to 1831, prices declined nearly one-half but wages declined only 15 per cent of moderate decline, wages began to rise. Since, over a series of years, wages rise relative to prices, the decline in wages has never been equal to the decline in prices.

Prices and wages in the United States in the Civil War period are shown in figure 18. From 1864 to 1879, prices declined one-half and wages declined 15 per cent. Thereafter, wages continued to rise although the general trend of prices was downward.

In ordinary times there is a steady increase in the output per worker, and therefore the buying power of wages steadily rises. Whenever one price is steadily being adjusted to another, it is likely to be always a little behind. If commodity prices remained stationary at any given moment, wages might be somewhat less than the recent increases in efficiency might justify.

\*Wood, G. H., The course of wages between 1790 and 1860 (Econ. Journ., vol. 9, p. 591, December, 1899); Warren, G. F., and Pearson, F. A., The purchasing power of wages (Farm economics, no. 68, p. 1438, November, 1930).

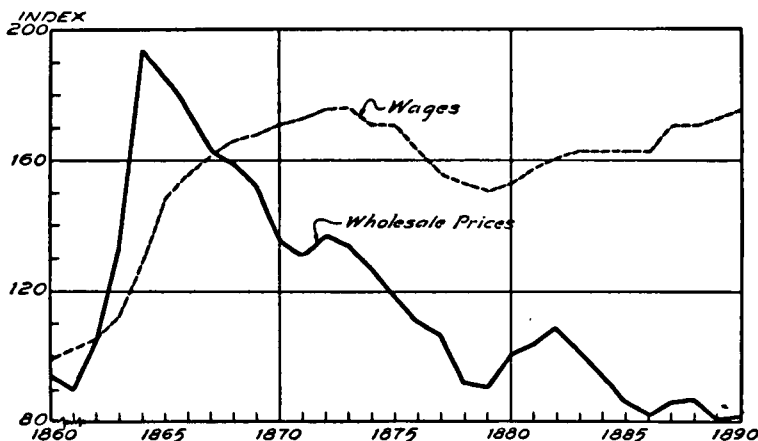


FIGURE 18. WHOLESALE PRICES AND WAGES, EXCLUSIVE OF AGRICULTURE, IN THE UNITED STATES DURING THE CIVIL WAR PERIOD, 1860 TO 1890\*  
(1856-60 = 100)

Prices reached a peak in 1864, but wages continued to rise for nine years. By 1879, prices were cut in half but wages had declined only 15 per cent

When commodity prices decline, unemployment may occur, but wages decline but little unless the drop in price is very great. If wages do not decline, a rapid increase in efficiency may in time make it unnecessary to reduce wages. That is, high wages tend to make high wages possible.

#### FARM WAGES<sup>11</sup>

Farm wages for various States are shown in tables 14, 15, and 16. Farm wages are a compromise between city wages and farm prices. In States distant from industrial centers, farm wages follow farm prices fairly closely. In States that are near industrial centers, farm wages are influenced more by city wages than by farm prices. For example, in 1919 union wage rates were 58 per cent above the pre-war figure. Prices paid to farmers were more than double pre-war, and wages in North Dakota were 86 per cent above pre-war but in New York they were only 76 per cent above. In 1931, union wages were much more than double pre-war, but farm wages in North Dakota were below pre-war and in New York were 42 per cent above pre-war.

<sup>11</sup> Warren, G. F., and Pearson, F. A. Farm wages. *Farm economics*, no. 74, p. 1676. February, 1932.

\* Index numbers of wages per hour, 1840 to 1929 (*Monthly labor review*, U. S. Bur. Labor Statistics, vol. 32, no. 2, p. 143, February, 1931); Warren G. F., and Pearson, F. A. Wages (*Farm economics*, no. 74, p. 1671, February, 1932).

TABLE 14. FARM WAGES BY THE MONTH WITH BOARD, 1910 TO 1932\*

Year	New York	Pennsylvania	Alabama	Texas	Iowa	North Dakota	Oregon	United States
1910-14..	\$24.56	\$19.75	\$13.56	\$18.74	\$29.34	\$30.08	\$31.40	\$20.41
1910.....	23.50	18.75	13.00	18.00	28.00	29.00	32.00	19.58
1911.....	24.00	19.20	13.70	18.40	28.30	28.90	31.00	19.85
1912.....	24.40	19.80	13.70	19.00	29.60	30.30	31.00	20.46
1913.....	25.50	20.60	14.40	19.20	30.70	31.00	31.00	21.27
1914.....	25.40	20.40	13.00	19.10	30.10	31.20	32.00	20.90
1915.....	25.40	21.00	12.50	18.70	31.10	32.00	31.30	21.08
1916.....	29.40	24.00	12.50	20.40	34.10	33.20	34.50	23.04
1917.....	35.00	30.00	16.00	25.00	41.00	41.00	44.00	28.64
1918.....	40.00	34.00	21.20	31.00	50.00	52.00	58.00	35.12
1919.....	43.30	37.80	25.50	38.80	55.00	56.00	64.00	40.14
1920.....	54.40	47.00	29.30	42.00	66.35	70.00	68.00	47.24
1921.....	40.09	35.00	17.00	26.00	39.60	40.00	44.50	30.25
1922.....	39.70	33.00	17.60	24.20	36.80	38.70	43.50	29.31
1923.....	45.50	38.00	19.90	28.30	43.30	40.30	52.50	33.09
1924*.....	47.30	39.24	21.67	29.33	43.82	41.92	45.93	33.34
1925*.....	48.40	39.42	23.46	27.75	44.58	43.17	45.79	33.89
1926*.....	49.60	40.63	22.00	28.67	45.79	44.17	49.25	34.85
1927*.....	49.42	40.21	21.08	26.83	46.92	44.58	49.96	34.93
1928*.....	48.53	38.83	21.50	29.54	47.37	45.12	48.17	34.96
1929*.....	49.25	40.08	21.17	29.13	47.42	43.96	50.46	35.16
1930*.....	44.58	36.83	17.83	25.88	45.00	35.63	46.29	31.57
1931*.....	34.96	29.46	11.83	19.08	32.96	25.25	33.04	23.84
1932*.....	25.63	21.88	8.58	14.54	21.79	18.88	24.25	17.42

\* The quarterly wages published by the United States Department of Agriculture were weighted in the following manner to obtain the average yearly wage rate: April 1; July 2; October 2; and the following January 1.

TABLE 15. INDEX NUMBERS OF WAGES, 1910 TO 1932  
(1910-14 = 100)

Year	Farm wages by the month with board								Union wage rates*	Earnings of New York factory workers
	New York	Pennsylvania	Alabama	Texas	Iowa	North Dakota	Oregon	United States		
1910...	96	95	96	96	95	96	102	96	99	.....
1911...	98	97	101	98	96	96	99	97	99	.....
1912...	99	100	101	101	101	101	99	100	100	.....
1913...	104	104	106	102	105	103	99	104	102	.....
1914...	103	103	96	102	103	104	102	102	104	101
1915...	103	106	92	100	106	106	100	103	105	104
1916...	120	122	92	109	116	110	110	113	109	116
1917...	143	152	118	133	140	136	140	140	117	132
1918...	163	172	156	165	170	173	185	172	135	164
1919...	176	191	188	207	187	186	204	197	158	190
1920...	221	238	216	224	226	233	217	231	203	227
1921...	163	177	125	139	135	133	142	148	210	207
1922...	162	167	130	129	125	129	139	144	197	202
1923...	185	192	147	151	148	134	167	162	215	220
1924...	193	199	160	157	149	139	146	163	233	223
1925...	197	200	173	148	152	144	146	166	243	228
1926...	202	206	162	153	156	147	157	171	255	234
1927...	201	204	155	143	160	148	159	171	265	236
1928...	198	197	159	158	161	150	153	171	266	237
1929...	201	203	156	155	162	146	161	172	269	242
1930...	182	186	131	138	153	118	147	155	278	232
1931...	142	149	87	102	112	84	105	117	279	213
1932...	104	111	63	78	74	63	77	85	247	183

\* Union scales of wages and hours of labor in 1932. Monthly labor review, United States Department of Labor, vol. 35, no. 6, p. 1153, November, 1932.

TABLE 16. FARM WAGES BY THE MONTH WITH BOARD

State	Farm wages per month with board			Per cent decrease Jan. 1, 1929, to Jan. 1, 1932	Supply			Demand			Supply in per cent of demand		
	Jan. 1, 1929	Jan. 1, 1931	Jan. 1, 1932		Dec. 1, 1928	Jan. 1, 1931	Jan. 1, 1932	Dec. 1, 1928	Jan. 1, 1931	Jan. 1, 1932	Dec. 1, 1928	Jan. 1, 1931	Jan. 1, 1932
New York	\$44.75	\$36.50	\$28.75	36	90	106	118	84	73	68	107	145	174
Pennsylvania	37.25	32.00	25.75	31	95	106	119	89	76	71	107	143	168
Michigan	39.25	25.00	18.50	53	90	130	139	84	61	53	107	213	262
Alabama	22.00	15.00	10.00	55	95	112	123	86	58	58	110	193	212
Texas	28.75	22.25	17.00	41	94	115	121	86	57	53	109	202	238
Arkansas	25.00	17.00	14.00	44	93	120	118	82	45	51	113	207	227
Iowa	44.00	33.00	23.00	48	98	114	120	96	75	63	102	150	190
Kansas	37.00	30.25	23.00	38	94	122	128	99	63	59	95	194	217
North Dakota	27.75	16.75	17.50	37	98	112	117	85	64	50	113	175	234
South Dakota	35.00	27.25	19.75	44	93	114	127	83	71	43	112	161	295
Montana	46.25	33.75	26.75	42	99	122	132	91	61	43	109	200	307
Oregon	46.00	36.00	28.50	38	101	138	145	90	66	61	112	209	238
Nevada	63.00	45.00	42.00	33	100	120	136	97	87	60	103	138	227
Washington	45.00	33.50	26.00	42	101	130	146	91	58	46	111	224	317
California	62.00	53.00	39.00	37	101	117	123	92	77	69	110	152	178
United States	33.04	26.08	19.77	40	94	114	121	88	67	61	107	171	200

EFFECT OF DECLINING COMMODITY PRICES ON EFFICIENCY IN THE USE OF LABOR

A declining price level is one of the most serious things that can happen to agriculture and is injurious to business, but a few good things result. Since wages decline slowly, if at all, when prices fall, unusual effort is expended to use labor efficiently. This is one of the beneficial effects of a declining price level. In such a period, innumerable new machines and new processes come into use. Old methods are discarded. Business organizations that are not exceptionally efficient go out of business. Farm land that cannot use labor efficiently is gradually abandoned.

EFFECT OF DECLINING COMMODITY PRICES ON THE AMOUNT OF FARM PRODUCTS REQUIRED TO PAY FOR A MONTH'S LABOR

The amount of farm products required to pay a hired man for one month is shown in table 17. In New York, in the five years 1925 to 1929, it required, on the average, 55 bushels of wheat to hire a man for one month. Before the World War, only 38 bushels were required. Forty-five years ago only 23 bushels were required. The farmer who is to make money on wheat today must produce more wheat per man than he did before the war. This can be done by obtaining higher yields per acre, by using machinery, and by throwing the poorer land into pasture.



TABLE 17. AMOUNT OF FARM PRODUCTS REQUIRED TO PAY FOR FARM LABOR\*

Period	Farm wages per month with board, New York	Value of farm wages if board is equivalent to one-half the cash wages	New York State, December 1 farm prices of			Amount required to pay cash wages and board for one month		
			Wheat (cents per bushel)	Milk (dollars per hundred pounds)	Eggs (cents per dozen)	Bushels of wheat	Hundreds of pounds of milk	Dozens of eggs
1890-89†	\$15.73	\$23.50	102.2	.....	30.1	23.1	.....	.....
1890-99†	17.64 †	26.46	76.3	.....	25.1	34.7	.....	.....
1902-09†	22.60	33.90	90.7	\$1.76	36.5	37.4	19.3	.....
1910-14.....	\$24.56	\$36.84	95.2	\$1.91	49.3	37.5	19.3	74.7
1918-20.....	45.90	68.85	201.7	3.89	92.0	34.1	17.7	74.8
1921-24.....	43.13	164.69	120.0	2.69	67.3	53.9	24.1	96.1
1925-29.....	49.04	73.56	124.0	2.89	57.0	54.9	25.5	129.1

\* Wages of hired labor by the month with board, and the farm price of wheat, were taken from Gillett, K. L., and Huey, R. (Agricultural statistics for New York State, 1928, p. 238 and 241. Department of Agriculture and Markets of the State of New York, Mar. 1929). The prices of milk and eggs are those reported by Warren, G. F., and Pearson, F. A. (Prices of feed. Farm economics, no. 35, p. 490-492, June, 1926).

† The period 1880-89 includes the five years 1880, 1881, 1884, 1887, and 1889. The period 1890-99 includes the six years 1891, 1893, 1894, 1895, 1898, and 1899. The period 1902-09 includes the three years 1902, 1906, and 1909. All later data include every year. The farm-price data include all years.

Much is said of the importance of milk per cow, and it is fully as important as the emphasis put upon it indicates. But milk per man is just as important. In the period 1925-29 it required 600 more pounds of milk to hire a man for a month than was the case before the war. The man must milk more cows, the cows must give more milk, and other costs must be reduced, if dairying is to be as profitable as formerly. This means that some of the poorer farms must be thrown out of use, and more discrimination must be used in breeding and feeding cattle.

There is no possibility that we will ever go back to the pre-war relationships.

Fortunately for the farmer who does his own work, he receives the higher pay for the time that he spends, provided the farm can be made to pay farm wages.

#### EFFECT OF DECLINING COMMODITY PRICES ON FARM MANAGEMENT

Declining prices make it necessary to reduce costs of production. The chief means of doing this is by saving labor, because the value of time remains high even though prices fall. The chief means of saving labor is by obtaining high yields per acre, per cow, and so forth, and by having a high acreage and a high number of cows per man.

Results for about 500 farms in northern Livingston County in 1903 and 1928 indicate the striking change brought about by changing price

relationships.<sup>12</sup> In 1908, farms that obtained crop yields 30 per cent or more above the average made labor incomes averaging \$1044 (table 18). Those that had crop yields of less than 70 averaged \$77, a difference of \$967.

TABLE 18. CROP INDEX AND LABOR INCOME, NORTHERN LIVINGSTON COUNTY, NEW YORK, 1908 AND 1928

Crop index	Labor income	
	1908	1928
Less than 70.....	\$ 77	\$ -618
70-79.....	103	-230
80-89.....	453	-6
90-99.....	492	338
100-109.....	607	723
110-119.....	802	962
120-129.....	933	973
130 or more.....	1,044	1,244

Twenty years later, farmers who obtained crop yields 30 per cent or more above the average made labor incomes of \$1244. Those with crop yields of less than 70 made minus labor incomes, \$-618, a difference of \$1862.

Similar differences were shown in the relation of returns per cow to labor income. In 1908 the difference between the best fifth and the poorest fifth was about \$1100. By 1928 this difference had increased to about \$1900.

The importance of the amount of work accomplished per man is much greater than formerly. In 1908 the difference between the lowest and the highest efficiency group was \$814 (table 19). By 1928 this difference had increased to \$1776.

TABLE 19. WORK UNITS PER MAN AND LABOR INCOME, NORTHERN LIVINGSTON COUNTY, NEW YORK, 1908 AND 1928

Work units per man	Labor income	
	1908	1928
Less than 145.....	\$ 97	\$ -395
145-194.....	471	45
195-244.....	735	440
245-294.....	979	505
295 or more.....	911	1,381

One of the best ways to increase crop yields and milk per cow is, not to operate fields that do not give high yields and not to milk cows that are incapable of giving high yields. This means the abandonment

<sup>12</sup> Warren, S. W. Factors for success on dairy and general farms in northern Livingston County. Farm economics, no. 69, p. 1488. February, 1931.

of some farms. It means throwing into pasture the poorer parts of many operated farms. It is better to throw land into pasture, even though it yields little return, than to farm it at a loss.

The area operated per man is generally too small to operate at greatest efficiency, but it is generally possible to rent land so that the poor land need not be farmed.

It sometimes pays to rent all of an adjoining farm and cultivate only the best land on both of them.

#### EFFECT OF DECLINING COMMODITY PRICES ON DISTRIBUTING CHARGES

The most serious effect of declining prices, so far as the farmer is concerned, is due to changes in the relationship of farm and retail prices. The quantity of farm products which the ultimate consumer will take depends on the price which he has to pay. Since wages and

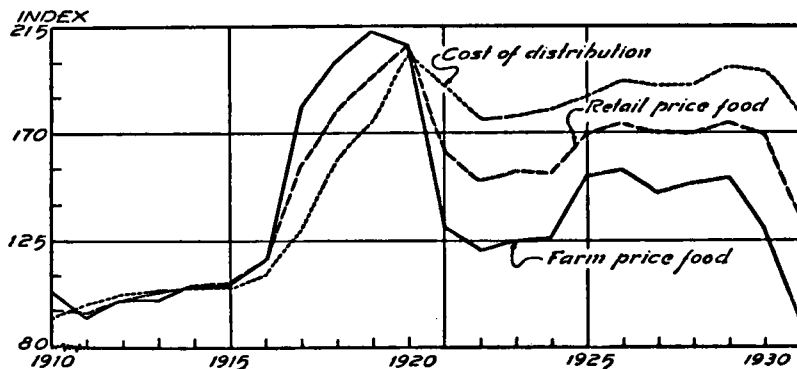


FIGURE 19. INDEX NUMBERS OF FARM AND RETAIL PRICES OF FOOD AND COSTS OF DISTRIBUTING FOOD IN THE UNITED STATES, 1910 TO 1931

(1910-14 = 100)

From 1916 to 1919, prices were rising rapidly. Distributing charges rose less rapidly, and therefore farmers received more than their usual share of retail prices. In 1920, prices and distribution costs were in approximate adjustment. Since 1920, prices have declined, distributing charges have remained high, and farmers have received an unusually small share of the retail price.

fixed charges remain high, freight rates and all other distributing charges remain high and the farmer receives an abnormally small proportion of the retail price. For example, in 1929 food sold at retail at 74 per cent above pre-war retail prices, but distributing charges were 98 per cent above pre-war and the farmers received only 51 per cent above pre-war (tables 20, 21, and 22). Had farmers received 74 per cent above their pre-war prices, there would have been no agricultural depression at that time.

TABLE 20. INDEX NUMBERS OF PRICES PAID TO FARMERS FOR FOOD IN THE UNITED STATES, 1910 TO 1932\*

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1910....	104	105	107	108	105	103	101	101	102	100	99	98	103
1911....	99	94	91	88	87	87	90	93	92	92	94	95	92
1912....	96	99	99	102	105	104	102	101	98	98	97	97	100
1913....	95	97	99	100	99	101	102	100	100	103	104	105	100
1914....	105	105	105	103	103	105	105	105	108	106	105	105	105
1915....	107	111	109	107	112	112	106	104	101	101	103	102	106
1916....	106	111	111	112	116	117	116	117	124	128	138	143	117
1917....	142	152	165	173	200	202	191	192	187	191	191	190	181
1918....	193	195	199	195	202	195	198	204	204	206	206	209	200
1919....	211	205	201	211	230	230	229	227	209	199	203	206	213
1920....	215	217	216	210	233	241	234	218	208	198	183	160	207
1921....	155	146	139	130	124	120	121	128	124	122	120	119	130
1922....	116	117	123	121	126	128	125	119	115	118	123	126	121
1923....	125	123	124	124	128	128	124	120	124	123	122	121	124
1924....	119	120	117	118	120	121	125	131	130	135	137	140	126
1925....	148	146	150	148	151	154	157	158	150	149	159	159	152
1926....	157	156	154	158	161	161	156	147	148	148	151	150	154
1927....	145	145	142	143	146	149	148	145	146	147	147	145	145
1928....	143	142	143	147	157	159	156	151	154	148	146	143	149
1929....	141	148	150	140	152	154	158	159	156	153	151	147	151
1930....	145	143	137	139	137	136	124	121	126	120	117	108	129
1931....	104	97	99	100	96	91	89	88	84	80	83	74	86
1932....	70	67	68	66	64	61	67	67	65	61	61	57	64

\* Warren, G. F., and Pearson, F. A. Farm, wholesale, and retail prices of food in the United States. Farm economics, no. 42, p. 618. February, 1927.  
 The commodities were weighted in the following manner: corn, 5; wheat, 16; rye, 1; oats, 1; potatoes, 4; hens, 4; eggs, 9; milk, 10; butter, 11; veal calves, 2; beef cattle, 17; sheep, 1; lambs, 1; hogs, 18. The prices paid to producers are those reported by the United States Department of Agriculture, except for milk, which is the net pool price of 3.7-per-cent milk at Utica, New York.

If prices remain stationary for ten to twenty years, increased efficiency in the handling of food, reduced production, and other adjustments, may bring the farm prices into a normal relationship with other prices. If prices continue to decline, farm prices will remain out of adjustment, although adjustments are constantly being made.

In 1917, retail prices of food were practically the same as they were in 1924, a little over 50 per cent above pre-war. But in 1917 farmers received 81 per cent above pre-war prices, whereas in 1924 they received only 26 per cent above pre-war.

From October, 1929, to June, 1932, retail prices of food in the United States declined from an index of 175 to 109, but the costs of distribution remained high and farm prices of food declined from 153 to 61.

It is often said that supply and demand govern prices. If farm prices are low, it is therefore concluded that there is over-production, or low demand. The price which the ultimate consumer pays determines how much he will take. Since the supply of farm products is produced in advance of sale, the consumers' price must be at such a level that all of the product will be taken, unless prices go so low that a part of the product is allowed to rot. The price that the farmer gets is this

TABLE 21. INDEX NUMBERS OF RETAIL PRICES PAID BY CONSUMERS FOR FOOD IN THE UNITED STATES, 1910 TO 1932\*

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1910....	97	97	97	96	96	96	95	96	95	96	96	97	96
1911....	96	95	94	93	93	94	96	95	94	94	95	96	94
1912....	100	101	99	102	103	101	99	99	99	100	99	98	100
1913....	100	101	104	104	103	103	103	103	104	104	104	103	103
1914....	106	106	106	105	106	106	107	108	108	108	108	105	106
1915....	108	108	107	108	109	108	106	105	104	106	105	106	107
1916....	109	111	114	115	115	116	114	115	120	123	127	126	117
1917....	132	142	144	157	165	165	158	160	164	165	162	163	156
1918....	171	176	170	171	176	178	181	182	186	188	188	190	180
1919....	192	184	190	197	200	196	200	199	193	191	193	196	194
1920....	204	206	209	217	219	220	218	207	207	204	196	182	207
1921....	182	171	171	167	159	156	159	165	161	158	154	152	163
1922....	147	151	152	151	152	152	152	148	148	150	150	151	150
1923....	153	152	153	153	152	151	153	152	155	155	153	151	154
1924....	153	155	153	151	150	151	150	151	153	156	154	155	153
1925....	163	164	168	168	168	168	172	172	170	171	173	171	169
1926....	174	175	177	180	179	177	172	169	171	171	170	169	174
1927....	171	171	172	172	172	172	167	165	166	168	166	165	169
1928....	168	168	168	170	172	170	170	171	174	171	168	166	170
1929....	169	173	175	175	177	176	178	178	177	175	171	169	174
1930....	172	172	172	173	170	166	160	159	160	158	152	147	169
1931....	146	143	145	144	140	135	135	134	133	131	124	119	135
1932....	115	113	114	113	111	109	111	110	109	107	104	101	109

\*Warren, G. F., and Pearson, F. A. Farm, wholesale, and retail prices of food in the United States. Farm economics, no. 42, p. 616. February, 1927.

The commodities were weighted in the following manner: cornmeal, 5; wheat flour, 5; bread, 13 (the farm prices include oats and rye; since retail prices for these are not included, the weight for oatmeal was added to that for flour and the weight for rye flour was added to that for bread); potatoes, 4; hens, 4; eggs, strictly fresh, 9; milk, fresh, New York City, 10; butter, 11; sirloin steak, 5; round steak, 4; rib roast, 4; chuck roast, 3; plate beef, 3; leg of lamb, 2; pork chops, 5; bacon, 4; ham, 5; lard, 4. The retail prices, reported by the United States Bureau of Labor Statistics, are an average of prices prevailing in 51 cities in the United States, except for the retail prices of milk, which are for New York City.

price less handling charges. If prices are declining, the farm price may become very low even though consumers are taking the usual amount at only a small drop in price. If the product is not perishable, some of it may be held over for another year, but this is not a permanent escape. If the product is perishable, some of it may never be marketed. This means that some farmers get no price at all.

Most manufacturing concerns buy at wholesale prices which are low when general prices are falling, and sell at wholesale prices which also are low; but farmers normally buy at retail prices which remain high, and sell at farm prices which are depressed. Here, again, agriculture suffers more than do other industries from a declining price level. It is no accident that farmers oppose declining prices most bitterly and for the longest periods.

#### EFFECT OF DECLINING COMMODITY PRICES ON THE IMPORTANCE OF MARKETING

With falling prices, if the farmer is to receive his pre-war share of the retail price, striking changes must take place in the way food is

TABLE 22. COST OF DISTRIBUTING FOOD IN THE UNITED STATES, 1910 TO 1932\*

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1910....	91	92	83	83	84	88	91	94	90	97	99	111	92
1911....	98	99	102	104	99	100	96	95	95	95	95	95	98
1912....	102	104	103	101	102	102	105	100	100	104	100	94	102
1913....	103	101	104	106	107	104	104	104	106	103	102	97	104
1914....	107	105	108	107	105	105	105	108	100	101	101	107	105
1915....	105	107	106	108	103	101	107	103	108	111	105	105	105
1916....	110	105	108	110	109	110	108	110	116	115	113	109	110
1917....	115	124	115	135	125	123	129	132	133	137	138	144	129
1918....	148	156	156	149	152	158	161	160	162	170	167	178	159
1919....	188	165	170	184	175	169	175	167	172	173	174	188	174
1920....	192	191	198	214	199	197	202	205	208	207	210	206	202
1921....	206	198	201	207	193	182	186	192	191	187	182	183	190
1922....	183	181	179	179	170	168	174	175	176	178	170	172	175
1923....	180	177	179	180	174	176	178	175	186	185	177	174	177
1924....	183	187	190	191	174	173	178	175	186	182	169	180	180
1925....	186	180	185	191	182	180	182	182	188	193	186	190	185
1926....	195	193	197	200	190	188	190	191	197	196	183	185	192
1927....	194	191	193	200	192	182	186	186	191	194	183	188	190
1928....	193	193	192	196	186	183	189	189	196	196	191	198	190
1929....	202	199	201	202	199	196	195	194	201	196	196	208	198
1930....	210	211	206	209	199	191	191	193	196	197	190	201	196
1931....	197	192	192	192	178	172	175	175	173	180	165	168	178
1932....	167	161	161	161	154	152	148	151	154	154	143	147	153

\*Warren, G. F., and Pearson, F. A. Cost of distributing food. Farm economics, no. 50, p. 830-836. January, 1928.

The index was based on the cost of distributing the products from ten major farm foods. The cost of distribution for each product was the difference between the amount which the consumer paid for the product and the amount which the farmer received. The commodities were weighted in the following manner: beef, 21; pork, 18; milk, 10; butter, 11; hens, 4; eggs, 9; wheat, 5; wheat bread, 13; cornmeal, 5; potatoes, 4.

handled on its way to the consumer. A declining price level makes the problem of marketing supremely important. This is one reason why farmers are so much interested in cooperation at this time. It is also a reason why agricultural colleges should give more attention to marketing.

Cooperative efforts are tried, but these efforts do not have a fair show because, while declining prices produce the organizations, they make it extremely difficult for them to operate.

EFFECT OF DECLINING COMMODITY PRICES ON LEGISLATION

Since so many thousands of farmers lose all their property in a period of declining prices, and since all farmers are affected, declining prices result in agricultural legislation. In such a period, legislation that should, in any event, have been passed, should be put into effect, but much effort is expended on panaceas. A decline in prices is usually attributed to a surplus. Therefore efforts are likely to center on attempts to hold the home market by tariffs, to limit output, and the like. Declining prices were the cause of the establishment of the Federal Farm Board.

## DEFLATION A BENEFIT TO NONE

Declining prices are not merely a transfer of wealth from one group to another; they check the production of wealth, and very few persons escape injury. The general injury arrays man against man and class against class. Each thinks that, because he has lost, some one else has gained at his expense—but practically all have lost, through no fault of the neighbor.

All action, public or private, which is based on the idea that some person or group of persons is to blame for the present situation, is unsound. All action which assumes that the losses which one is sustaining are due to gains being made by some one else, is equally unsound. The losses are unequal, but practically every one loses. The trouble is that civilization has not yet progressed far enough to invent a stable measure of value. Not long ago, an outbreak of bubonic plague was blamed on individuals. It is now known that the trouble was due to the lack of development of science or education, or both. Economic diseases are due to a lack of development of economic science and education. Vast sums of money have been spent on chemical and medical research. Very little has been spent on economic research. The little science that has been developed in economics has not become common knowledge, as has, for example, the knowledge about bacteria.

Economic troubles are not acts of Providence any more than polluting a stream with typhoid is an act of Providence. Both are acts of man, and can be remedied when there is sufficient knowledge.

## CHANGES IN PRICES OF BASIC COMMODITIES WHEN PRICES ARE RISING AND WHEN PRICES ARE FALLING

An index number of thirty basic commodities is given in table 29 (page 73). Basic commodities fluctuate more violently than does the

TABLE 23. CHANGES IN PRICES OF BASIC COMMODITIES WHEN PRICES ARE RISING

Period	Price index (table 29)	Months rise	Months fall	Points rise	Points fall
1843, lowest 3 months	75				
1847, highest 3 months	95	49		20	
1848, lowest 3 months	79		16		16
1857, highest 3 months	129	106		59	
1861, lowest 3 months	95		50		34
1897, lowest 3 months	61				
1900, highest 3 months	92	34		31	
1901, lowest 3 months	80		13		12
1903, highest 3 months	93	22		13	
1904, lowest 3 months	81		17		12
1907, highest 3 months	101	35		20	
1908, lowest 3 months	89		10		12
1909, highest 3 months	105	20		16	
1911, lowest 3 months	94		19		11
1912, highest 3 months	104	13		10	
1914, lowest 3 months	96		23		8

average for all commodities, and are therefore a more sensitive indicator of business conditions.

The fluctuations when prices are rising are shown in table 23. In nearly all such periods, the length of the period of rising prices was much greater than that of the period of falling prices, and of course the rises were greater than the declines.

The price movements when prices are declining are shown in table 24. The declines usually lasted much longer than the advances, and were much greater.

TABLE 24. CHANGES IN PRICES OF BASIC COMMODITIES WHEN PRICES ARE DECLINING

Period	Price index (table 23)	Months rise	Months fall	Points rise	Points fall
1814, highest 3 months	238				
1824, lowest 3 months	105		111		133
1825, highest 3 months	131	15		26	
1830, lowest 3 months	97		58		34
1832, highest 3 months	106	22		9	
1834, lowest 3 months	98		27		8
1837, highest 3 months	139	32		41	
1843, lowest 3 months	75		74		64
1864, highest 3 months	298				
1871, lowest 3 months	131		82		167
1873, highest 3 months	147	21		16	
1879, lowest 3 months	87		70		60
1882, highest 3 months	114	43		27	
1886, lowest 3 months	79		47		35
1889, highest 3 months	89	18		10	
1897, lowest 3 months	61		112		28
1920, highest 3 months	250				
1921, lowest 3 months	116		14		140
1923, highest 3 months	170	20		54	
1924, lowest 3 months	144		14		26
1924-1929		Relative stability			
1929, highest 3 months	145				
1931, August	80		30		59

The greatest decline that ever occurred in a short period of time since 1797 was from 1920 to 1921. A very violent decline began in 1929. Prices of basic commodities fell from 145 in 1929 to 69 in June, 1932.

#### MONEY AND PRICES<sup>13</sup>

##### WORLD GOLD PRODUCTION

World gold production was strikingly decreased during the war period. This was due in part to the decreasing value of gold, and in part to the exhaustion of mines. In 1922 gold production was less than three-fourths of the pre-war amount. Production then increased, but the estimated production for 1930 was less than that of twenty-two years previous (table 25).

<sup>13</sup> Warren, G. F., and Pearson, F. A. The future of the general price level. *Journ. farm econ.*, vol. 14, no. 1, p. 23-46. January, 1932.

Warren, G. F., and Pearson, F. A. Money and prices. *Farm economics*, no. 74, p. 1685. February, 1932.



TABLE 25. RELATION BETWEEN MONETARY STOCKS OF GOLD AND THE PHYSICAL VOLUME OF PRODUCTION AND WHOLESALE PRICES IN ENGLAND, 1839 TO 1931\*

Period or year	World's production of gold (thousands of fine ounces)†	Estimated world's stock of monetary gold at the end of year (millions of fine ounces)‡	Index numbers of world's stock of monetary gold (1880-1914 = 100)‡	Index numbers of world's physical volume of production (1880-1914 = 100)§	Ratio (gold divided by production)	Index numbers of wholesale prices in gold in England (1880-1914 = 100)¶	Five-year moving average	
							Ratio of gold to production	Wholesale prices in England
1880-1914.....	12,293	231	100	100	100	100	.....	.....
1840-44.....	.....	47	20	17	118	125	.....	.....
1845-49.....	1,780	49	21	20	105	115	.....	.....
1850-54.....	5,570	63	27	24	115	116	.....	.....
1855-59.....	6,502	89	38	28	138	134	.....	.....
1860-64.....	5,885	107	46	32	144	137	.....	.....
1865-69.....	6,309	122	53	36	147	136	.....	.....
1870-74.....	5,640	136	59	44	134	141	.....	.....
1875-79.....	5,285	146	63	52	121	124	.....	.....
1880-84.....	4,921	154	67	63	106	112	.....	.....
1885-89.....	5,361	162	70	71	99	96	.....	.....
1890-94.....	7,109	178	77	79	97	93	.....	.....
1895-99.....	11,907	209	90	96	94	87	.....	.....
1900-04.....	14,391	249	108	111	97	97	.....	.....
1905-09.....	20,246	304	131	131	100	102	.....	.....
1910-14.....	22,116	362	157	148	106	112	.....	.....
1915-19.....	20,285	433	187	143	131	214	.....	.....
1920-24.....	16,876	481	208	159	121	186	.....	.....
1925-29.....	19,401	525	227	194	117	169	.....	.....
1839.....	.....	46	20	16	125	140	.....	.....
1840.....	.....	46	20	16	125	140	.....	.....
1841.....	.....	47	20	17	118	137	116	131
1842.....	.....	47	20	17	118	124	117	126
1843.....	.....	47	20	18	111	112	114	121
1844.....	.....	47	20	18	111	114	111	118
1845.....	1,177	48	21	19	111	118	109	119
1846.....	1,342	48	21	20	106	120	108	117
1847.....	1,412	49	21	20	106	129	104	115
1848.....	1,813	49	21	21	100	106	103	112
1849.....	3,154	52	22	22	100	100	104	108
1850.....	3,555	54	23	22	106	106	108	104
1851.....	4,049	57	25	23	109	102	110	106
1852.....	6,709	63	27	24	112	106	112	116
1853.....	7,227	69	30	24	125	129	122	122

\* The figures in italics are estimates.

† The data for world gold production were taken from the following sources: 1845 to 1875, Joseph Kitchin, Union Corporation Limited, London; 1876 to 1930, Annual report of the Director of the Mint for the fiscal year ended June 30, 1931, p. 241.

‡ Warren, G. F., and Pearson, F. A. Relation of gold to prices. Farm economics, no. 69, p. 1461-1462. February, 1931. Kitchin, J. The supply of gold compared with the prices of commodities. Interim report of the Gold Delegation of the Financial Committee of the League of Nations, Document C.375.M.161, Annex XI, p. 79-85. September, 1930. The index numbers of the world's stock of monetary gold were converted to the 35-year base, 1880-1914, by multiplying by 0.43247. The fine ounces of gold may be converted to dollars by multiplying by 20.67.

§ The index numbers of the world's physical volume of production were converted from Carl Snyder's estimated values at the 1923-25 average price to the 35-year base, 1880-1914, by multiplying by 0.004416. The index on the 1910-14 base was projected backward from 1864 to 1839 on the basis of the curve  $y = 23.830 (1.0315)^x$ , and then converted to dollars by multiplying by the 1910-14 base, 33,583.

¶ Warren, G. F., and Pearson, F. A. The agricultural situation, p. 263. August, 1924. These index numbers were converted to the 35-year base, 1880-1914, from the 1910-14 base, by multiplying by 1.1254. They may also be converted to the 35-year base from the 11-year base, 1867-77, by multiplying by 1.3625.

TABLE 25 (continued)\*

Year	World's production of gold (thousands of fine ounces) †	Estimated world's stock of monetary gold at the end of year (millions of fine ounces) ‡	Index numbers of world's stock of monetary gold (1880-1914 = 100) ‡	Index numbers of world's physical volume of production (1880-1914 = 100) ‡	Ratio (gold divided by production)	Index numbers of wholesale prices in gold in England (1880-1914 = 100) ‡	Five-year moving average	
							Ratio of gold to production	Wholesale prices in England
1854.....	6,309	74	32	25	128	138	128	129
1855.....	6,839	80	35	26	135	137	133	137
1856.....	6,827	85	37	27	137	137	137	136
1857.....	6,662	90	39	28	139	143	140	134
1858.....	6,309	94	41	28	146	124	143	133
1859.....	6,074	98	42	29	145	128	144	133
1860.....	5,932	102	44	30	147	135	146	131
1861.....	5,885	105	45	31	145	133	146	135
1862.....	5,815	108	47	32	147	137	145	138
1863.....	5,932	110	48	33	145	140	145	138
1864.....	5,862	112	48	34	141	143	145	139
1865.....	6,390	115	50	34	147	137	145	139
1866.....	6,450	119	51	35	146	138	145	138
1867.....	6,202	122	53	36	147	136	146	136
1868.....	6,238	125	54	38	142	135	144	135
1869.....	6,215	128	55	37	149	133	142	134
1870.....	6,050	131	57	42	136	131	139	137
1871.....	6,238	134	58	42	138	136	137	140
1872.....	5,650	136	59	45	131	149	135	141
1873.....	5,297	138	60	45	133	151	132	141
1874.....	4,987	140	61	45	136	138	130	140
1875.....	4,873	141	61	49	124	131	128	135
1876.....	5,016	144	62	49	127	129	125	129
1877.....	5,512	146	63	52	121	128	122	124
1878.....	5,761	149	64	54	119	118	119	122
1879.....	5,262	150	65	55	118	114	117	119
1880.....	5,149	151	65	60	108	120	113	116
1881.....	4,984	153	66	56	118	116	111	115
1882.....	4,934	154	67	65	103	114	107	113
1883.....	4,615	155	67	63	106	111	105	109
1884.....	4,921	156	67	68	99	104	102	104
1885.....	5,246	158	68	68	100	98	102	100
1886.....	5,136	160	69	68	101	95	100	97
1887.....	5,117	162	70	68	103	92	99	96
1888.....	5,331	165	71	75	95	96	98	96
1889.....	5,974	167	72	77	94	98	96	96

\* The figures in italics are estimates.

† The data for world gold production were taken from the following sources: 1845 to 1875, Joseph Kitchin, Union Corporation Limited, London; 1876 to 1930, Annual report of the Director of the Mint for the fiscal year ended June 30, 1931, p. 241.

‡ Warren, G. F., and Pearson, F. A., Relation of gold to prices, Farm economics, no. 69, p. 1461-1462, February, 1931. Kitchin, J., The supply of gold compared with the prices of commodities, Interim report of the Gold Delegation of the Financial Committee of the League of Nations, Document C.375.M.161, Annex XI, p. 79-85, September, 1930. The index numbers of the world's stock of monetary gold were converted to the 35-year base, 1880-1914, by multiplying by 0.43247. The fine ounces of gold may be converted to dollars by multiplying by 20.67.

§ The index numbers of the world's physical volume of production were converted from Carl Snyder's estimated values at the 1923-25 average price to the 35-year base, 1880-1914, by multiplying by 0.004416. The index on the 1910-14 base was projected backward from 1864 to 1839 on the basis of the curve  $y=23.850(1.0315)^x$ , and then converted to dollars by multiplying by the 1910-14 base, 33,583.

¶ Warren, G. F., and Pearson, F. A., The agricultural situation, p. 263, August, 1924. These index numbers were converted to the 35-year base, 1880-1914, from the 1910-14 base, by multiplying by 1.1254. They may also be converted to the 35-year base from the 11-year base, 1867-77, by multiplying by 1.3625.

TABLE 25 (concluded)\*

Year	World's production of gold (thousands of fine ounces)†	Estimated world's stock of monetary gold at the end of year (millions of fine ounces)‡	Index numbers of world's stock of monetary gold (1880-1914 = 100)‡	Index numbers of world's physical volume of production (1880-1914 = 100)‡	Ratio (gold divided by production)	Index numbers of wholesale prices in gold in England (1880-1914 = 100)‡	Five-year moving average	
							Ratio of gold to production	Wholesale prices in England
1890.....	5,749	169	73	74	99	98	95	96
1891.....	6,320	173	75	83	90	98	96	96
1892.....	7,094	177	77	78	99	92	98	93
1893.....	7,619	182	79	80	99	92	97	90
1894.....	8,764	189	82	80	103	86	97	87
1895.....	9,615	195	84	90	93	84	97	86
1896.....	9,784	201	87	94	93	83	95	85
1897.....	11,420	208	90	94	96	84	94	86
1898.....	13,878	217	94	102	92	88	95	90
1899.....	14,838	226	98	101	97	92	95	92
1900.....	12,315	233	101	106	95	102	95	95
1901.....	12,626	241	104	107	97	96	96	96
1902.....	14,355	249	108	114	95	95	97	97
1903.....	15,853	257	111	115	97	95	97	96
1904.....	16,804	266	115	115	100	96	96	98
1905.....	18,396	280	121	125	97	98	98	101
1906.....	19,471	290	125	134	93	105	99	101
1907.....	19,977	301	130	129	101	109	100	102
1908.....	21,422	317	137	129	106	99	102	104
1909.....	21,965	330	143	138	104	101	104	105
1910.....	22,022	340	147	140	105	106	104	106
1911.....	22,397	351	152	143	106	109	104	110
1912.....	22,605	360	156	156	100	116	106	113
1913.....	22,255	372	161	157	103	116	.....	.....
1914.....	21,302	388	168	146	115	117	.....	.....
1915.....	22,738	407	176	148	119	144	.....	.....
1916.....	22,031	423	183	142	129	181	.....	.....
1917.....	20,346	434	188	144	131	233	.....	.....
1918.....	18,614	449	194	142	137	255	.....	.....
1919.....	17,698	452	195	138	141	255	.....	.....
1920.....	16,130	463	200	156	128	258	.....	.....
1921.....	15,975	476	206	138	149	168	.....	.....
1922.....	15,452	481	208	159	131	163	.....	.....
1923.....	17,791	490	212	169	125	165	.....	.....
1924.....	19,031	493	213	171	125	172	.....	.....
1925.....	19,026	501	217	187	116	185	.....	.....
1926.....	19,349	513	222	183	121	172	.....	.....
1927.....	19,431	525	227	192	118	167	.....	.....
1928.....	19,700	537	232	202	115	163	.....	.....
1929.....	19,500	530	238	208	114	156	.....	.....
1930.....	20,160	563	245	198	123	132	.....	.....
1931.....	21,336	577	260	184	156	106	.....	.....
1932.....	22,300	.....	.....	.....	.....	80	.....	.....

\* The figures in italics are estimates.

† The data for world gold production were taken from the following sources: 1845 to 1875, Joseph Kitchin, Union Corporation Limited, London; 1876 to 1930, Annual report of the Director of the Mint for the fiscal year ended June 30, 1931, p. 241.

‡ Warren, G. F., and Pearson, F. A. Relation of gold to prices. Farm economics, no. 69, p. 1461-1462, February, 1931. Kitchin, J. The supply of gold compared with the prices of commodities. Interim report of the Gold Delegation of the Financial Committee of the League of Nations, Document C.375.M.161, Annex XI, p. 79-85, September, 1930. The index numbers of the world's stock of monetary gold were converted to the 35-year base, 1880-1914, by multiplying by 0.43247. The fine ounces of gold may be converted to dollars by multiplying by 20.67.

§ The index numbers of the world's physical volume of production were converted from Carl Snyder's estimated values at the 1923-25 average price to the 35-year base, 1880-1914, by multiplying by 0.004416. The index on the 1910-14 base was projected backward from 1864 to 1839 on the basis of the curve  $y=23.830(1.0315)^x$ , and then converted to dollars by multiplying by the 1910-14 base, 33,563.

¶ Warren, G. F., and Pearson, F. A. The agricultural situation, p. 263, August, 1924. These index numbers were converted to the 35-year base, 1880-1914, from the 1910-14 base, by multiplying by 1.1254. They may also be converted to the 35-year base from the 11-year base, 1867-77, by multiplying by 1.3625.

## WORLD MONETARY STOCKS OF GOLD

In spite of the low production, world monetary stocks rose steadily. This led to the erroneous belief that the stocks must be ample, for were they not larger than ever before? With business at a normal level, there was not enough gold to maintain pre-war prices.<sup>14</sup>

The true measure of the adequacy of a money supply is whether there is enough of it to sustain the price level to which society is most nearly adjusted. Public and private debts, taxes, hospital charges, freight rates, passenger fares, doctors', dentists', and lawyers' fees, and all other economic relationships in England and the United States, were becoming fairly well adjusted to a wholesale commodity price level of 150.

## WORLD MONETARY STOCKS OF GOLD AND WORLD PHYSICAL VOLUME OF PRODUCTION RELATED TO PRICES IN ENGLAND

World monetary stocks of gold are given in table 25. From 1850 to 1910, monetary stocks of gold increased from 54 to 340 million ounces. The index number of gold stocks increased from 23 to 147 when the stocks of 1880-1914 are called 100.

In the same period, the physical volume of world production increased from 22 to 140.

If the gold stock of 23 is divided by a production of 22, the result expressed as a percentage is 105. If the gold stock of 147 is divided by 140, the same ratio, 105, is obtained.

Prices in England in 1850 were 105 and in 1910 were 106. The ratio of the stock of gold to the production of other things remained the same, and prices were stable.

From 1850 to 1870, gold increased faster than did the production of other things, so that the ratio of gold to other production increased from 105 to 136 and prices rose from 105 to 131.

From 1870 to 1890, gold increased from an index of 131 to 169, or 29 per cent. The production of other things increased 76 per cent. The gold stocks did not keep pace with other things. The ratio of gold to other things fell from 136 to 99, and prices fell from 131 to 98.

These relationships for the entire period are given in table 25 and figure 20. While there are considerable variations in short periods of time, prices for seventy-five years before the war were generally very close to the quantity of monetary gold divided by the quantity of other things.

The five-year averages show how closely the relationship holds in each period. The widest divergence is shown for the five years 1865-69, when gold divided by production averaged 147, while prices in England were 136, or a 7-per-cent difference in the relationship. About the same

<sup>14</sup> Warren, G. F., and Pearson, F. A. Relation of gold to prices. *Farm economics*, no. 69, p. 1460-1463. February, 1931.

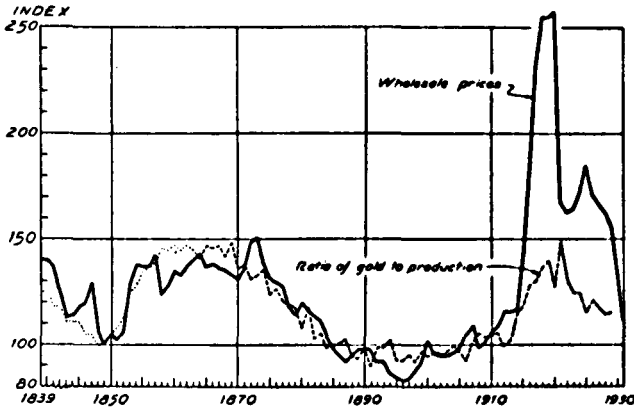


FIGURE 20. RATIO OF WORLD MONETARY GOLD STOCKS TO WORLD PHYSICAL VOLUME OF PRODUCTION AND WHOLESALE PRICES IN ENGLAND, 1839 TO 1931  
(1880-1914 = 100)

For the 75 years before the World War, prices rose if the world monetary stocks of gold increased faster than did the production of other things, and fell if gold increased less rapidly. The situation changed during and following the World War, when most of the countries of the world discontinued the gold standard, but the relationship was restored in 1931

percentage difference occurred for the two five-year periods 1895-99 and 1910-14. For a number of years in the nineties, prices were low. This was a period of severe depression, and it is likely that considerable gold was hoarded. During most of this period the Bank of England paid a premium for gold.<sup>15</sup>

Short-time fluctuations are affected by other factors. The final fluctuations in the price level from the gold relationships are the algebraic sum of short-time variations in crops due to weather, to live-stock cycles, to business cycles, and to some other causes. In the seventy-five years before the war these variations were always temporary.

This 75-year relationship may be expressed as follows:

$$\text{Gold} = \text{Prices} \times \text{Physical volume of production}$$

or

$$\text{Prices} = \frac{\text{Gold}}{\text{Physical volume of production}}$$

For seventy-five years before the World War, world monetary stocks of gold had to increase at the same rate as did the world physical volume of production in order to maintain stable commodity prices in England. If gold stocks increased more rapidly than did other things, prices rose; if they increased less rapidly, prices fell.

<sup>15</sup> Report of the Director of the Mint, 1900, page 206.

In order to eliminate short-time variations, five-year moving averages of the ratio of gold to production and wholesale prices in England were calculated (table 25 and figure 21). Each figure given in the last two columns of table 25 is an average for that year and the two preceding and two following years.

Discrepancies still exist, but the general trend of the two curves is the same, showing that, although physical volume of production increased nine times, prices fell only a small amount in seventy-five years, because monetary stocks of gold increased more than eight times.

The abnormally high prices from 1915 to 1929 were explained in part by the reduced demand for gold (page 62) and in part by the low production of other things. The world physical volume of production was low from 1914 to 1925, and in 1930 and 1931. The abnormally low production raised the ratio of gold stocks to production in those periods, and accounts for the rise in the gold-to-production-ratio line. World production of goods began to rise from 1923 to 1929, but was at no time equal to the normal increase. The low production in 1930 raised the ratio line. These fluctuations do not change the long-time relationships.

Apparently, wars like the Civil War and the World War check the increase in production or actually lower it. After recovery occurs, the increase again proceeds at a normal rate. If this is the case, the world's gold supply would need to have increased a little less than 3.15 per cent per year since 1914 to sustain pre-war prices, with what would now be normal production of other things.

#### WORLD MONETARY STOCKS OF GOLD AND WORLD PHYSICAL VOLUME OF PRODUCTION RELATED TO PRICES IN THE UNITED STATES

In the five-year period 1885 to 1889, the world monetary stocks of gold were 70 when the average for 1880-1914 is taken as 100 (table 26). The world physical volume of production was 71. The ratio of gold to production was 99 and wholesale prices in the United States were 96. Fifteen years later, the world gold stocks had increased 54 per cent and the world physical volume of production 56. The ratio of gold to production was 97 and prices were 97.

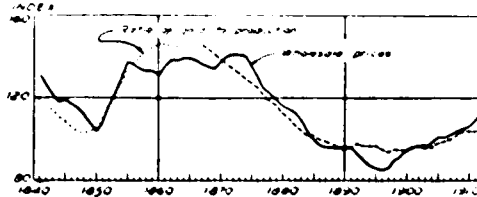


FIGURE 21. FIVE-YEAR MOVING AVERAGES OF THE RATIO OF WORLD MONETARY STOCKS OF GOLD TO WORLD PHYSICAL VOLUME OF PRODUCTION AND WHOLESALE PRICES IN ENGLAND, 1840 TO 1912 (1880-1914 = 100)

Comparisons of five-year averages of the ratio and five-year averages of prices fit more closely than do the data for single years (figure 20)

TABLE 26. RELATION BETWEEN MONETARY STOCKS OF GOLD AND THE PHYSICAL VOLUME OF PRODUCTION AND WHOLESALE PRICES IN THE UNITED STATES, 1839 TO 1932\*

Period or year	Estimated world's stock of monetary gold at the end of year (millions of fine ounces)†	Index numbers of world's stock of monetary gold (1880-1914 = 100)†	Index numbers of world's physical volume of production (1880-1914 = 100)‡	Ratio (gold divided by production)	Index numbers of United States wholesale prices in gold (1880-1914 = 100)‡	United States gold stocks (millions of dollars)†	Index numbers of United States gold stocks (1880-1914 = 100)‡	Index of United States physical volume of production (1880-1914 = 100)‡	Ratio (United States gold divided by United States production)	Per cent of world's stock of gold held in United States
1880-1914.	231	100	100	100	100	1,003	100	100	100	20
1840-44...	47	20	17	118	96	.....	.....	.....	.....	.....
1845-49...	49	21	20	105	96	.....	.....	.....	.....	.....
1850-54...	63	27	24	115	105	.....	.....	.....	.....	.....
1855-59...	89	38	28	159	118	.....	.....	.....	.....	.....
1860-64...	107	46	32	144	105	246	25	.....	.....	11
1865-69...	122	53	36	147	135	175	17	.....	.....	7
1870-74...	136	59	44	134	134	157	16	81	53	6
1875-79...	146	63	52	121	111	176	18	43	42	6
1880-84...	154	67	63	106	116	485	48	54	89	15
1885-89...	162	70	71	99	96	644	64	64	100	19
1890-94...	178	77	79	97	89	646	64	74	96	18
1895-99...	209	90	96	94	81	751	75	95	79	17
1900-04...	249	108	111	97	97	1,186	118	114	104	23
1905-09...	304	131	131	100	107	1,512	151	140	105	24
1910-14...	362	157	148	106	115	1,794	179	159	113	24
1915-19...	433	187	143	131	181	2,785	278	182	153	31
1920-24...	481	208	159	131	183	3,693	369	193	191	37
1925-29...	525	227	194	117	165	4,366	436	224	194	40
1839.....	46	20	16	125	128	.....	.....	.....	.....	.....
1840.....	46	20	16	125	109	.....	.....	.....	.....	.....
1841.....	47	20	17	118	105	.....	.....	.....	.....	.....
1842.....	47	20	17	118	94	.....	.....	.....	.....	.....
1843.....	47	20	18	111	56	.....	.....	.....	.....	.....
1844.....	47	20	18	111	88	.....	.....	.....	.....	.....
1845.....	48	21	19	111	95	.....	.....	.....	.....	.....
1846.....	48	21	20	105	95	.....	.....	.....	.....	.....
1847.....	49	21	20	105	103	.....	.....	.....	.....	.....
1848.....	49	21	21	100	94	.....	.....	.....	.....	.....
1849.....	52	22	22	100	94	.....	.....	.....	.....	.....

\* The figures in italics are estimates.

† Warren, G. F., and Pearson, F. A. Relation of gold to prices. *Farm economics*, no. 69, p. 1461-1462, February, 1931. Kitchin, J. The supply of gold compared with the prices of commodities. Interim report of the Gold Delegation of the Financial Committee of the League of Nations, Document C.375.M.161, Annex XI, p. 79-85, September, 1930. The index numbers of the world's stock of monetary gold were converted to the 35-year base, 1880-1914, by multiplying by 0.43247. The fine ounces of gold may be converted to dollars by multiplying by 20.67.

‡ The index numbers of the world's physical volume of production were converted from Carl Snyder's estimated values at the 1923-25 average price to the 35-year base, 1880-1914, by multiplying by 0.004416. The index on the 1910-14 base was projected backward from 1864 to 1839 on the basis of the curve  $y=23.830(1.0315)^x$ , and then converted to dollars by multiplying by the 1910-14 base, 33,563.

§ Warren, G. F., and Pearson, F. A. Index numbers of wholesale prices of all commodities. *Farm economics*, no. 72, p. 1580-1587, September, 1931, and no. 74, p. 1634, February, 1932. The index numbers were converted to the 35-year base, 1880-1914, by multiplying by 1.14604.

|| Statistical abstract of the United States. United States Department of Commerce, 1922. Forty-fifth number, p. 512, 1923, and Fifty-second number, p. 246-247, 1930. The index numbers were converted to the 35-year base, 1880-1914, by multiplying by 0.09973.

¶ Table 1, page 1680. *Farm economics*, no. 74, 1932. The index numbers were converted from the 5-year base, 1926-30, to the 35-year base, 1880-1914, by multiplying by 2.2411.

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932

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TABLE 26 (continued)\*

Period or year	Estimated world's stock of monetary gold at the end of year (millions of fine ounces)†	Index numbers of world's stock of monetary gold (1880-1914 = 100)†	Index numbers of world's physical volume of production (1880-1914 = 100)‡	Ratio (gold divided by production)	Index numbers of United States wholesale prices in gold (1880-1914 = 100)§	United States gold stocks (millions of dollars)¶	Index numbers of United States gold stocks (1880-1914 = 100)¶	Index of United States physical volume of production (1880-1914 = 100)¶	Ratio (United States gold divided by United States production)	Per cent of world's stock of gold held in United States
1850.....	54	23	<i>22</i>	<i>106</i>	<i>96</i>	.....	.....	.....	.....	.....
1851.....	57	25	<i>23</i>	<i>109</i>	<i>95</i>	.....	.....	.....	.....	.....
1852.....	63	27	<i>24</i>	<i>113</i>	<i>102</i>	.....	.....	.....	.....	.....
1853.....	69	30	<i>24</i>	<i>125</i>	<i>111</i>	.....	.....	.....	.....	.....
1854.....	74	32	<i>25</i>	<i>128</i>	<i>124</i>	.....	.....	.....	.....	.....
1855.....	80	35	<i>29</i>	<i>135</i>	<i>126</i>	.....	.....	.....	.....	.....
1856.....	85	37	<i>27</i>	<i>137</i>	<i>120</i>	.....	.....	.....	.....	.....
1857.....	90	39	<i>28</i>	<i>139</i>	<i>127</i>	.....	.....	.....	.....	.....
1858.....	94	41	<i>28</i>	<i>146</i>	<i>107</i>	.....	.....	.....	.....	.....
1859.....	98	42	<i>29</i>	<i>146</i>	<i>109</i>	.....	.....	.....	.....	.....
1860.....	102	44	<i>30</i>	<i>147</i>	<i>107</i>	214	21	.....	.....	10
1861.....	105	45	<i>31</i>	<i>145</i>	<i>102</i>	270	27	.....	.....	12
1862.....	108	47	<i>32</i>	<i>147</i>	<i>105</i>	283	28	.....	.....	13
1863.....	110	48	<i>35</i>	<i>145</i>	<i>103</i>	260	26	.....	.....	11
1864.....	112	48	<i>34</i>	<i>141</i>	<i>110</i>	203	20	.....	.....	9
1865.....	115	50	<i>34</i>	<i>147</i>	<i>136</i>	189	19	.....	.....	8
1866.....	119	51	<i>35</i>	<i>146</i>	<i>141</i>	167	17	24	71	7
1867.....	122	53	<i>30</i>	<i>147</i>	<i>135</i>	196	19	26	73	7
1868.....	125	54	<i>38</i>	<i>142</i>	<i>130</i>	160	16	27	59	6
1869.....	128	55	<i>37</i>	<i>149</i>	<i>131</i>	173	17	28	61	7
1870.....	131	57	<i>42</i>	<i>136</i>	<i>134</i>	190	19	30	65	7
1871.....	134	58	<i>42</i>	<i>138</i>	<i>134</i>	164	16	29	53	6
1872.....	136	59	<i>45</i>	<i>131</i>	<i>139</i>	148	15	33	45	5
1873.....	138	60	<i>45</i>	<i>133</i>	<i>134</i>	135	13	32	41	5
1874.....	140	61	<i>45</i>	<i>136</i>	<i>130</i>	147	15	31	48	5
1875.....	141	61	<i>49</i>	<i>124</i>	<i>118</i>	121	12	36	32	4
1876.....	144	62	<i>49</i>	<i>127</i>	<i>113</i>	130	13	38	34	4
1877.....	146	63	<i>52</i>	<i>121</i>	<i>117</i>	168	17	41	41	6
1878.....	149	64	<i>54</i>	<i>119</i>	<i>103</i>	213	21	44	48	7
1879.....	150	65	<i>55</i>	<i>118</i>	<i>103</i>	246	25	52	48	8

\* The figures in italics are estimates.  
 † Warren, G. F., and Pearson, F. A. Relation of gold to prices. Farm economics, no. 60, p. 1461-1462, February, 1931. Kitchin, J. The supply of gold compared with the prices of commodities. Interim report of the Gold Delegation of the Financial Committee of the League of Nations, Document C.375.M.161, Annex XI, p. 79-85, September, 1930. The index numbers of the world's stock of monetary gold were converted to the 35-year base, 1880-1914, by multiplying by 0.43247. The fine ounces of gold may be converted to dollars by multiplying by 20.67.  
 ‡ The index numbers of the world's physical volume of production were converted from Carl Snyder's estimated values at the 1923-25 average price to the 35-year base, 1880-1914, by multiplying by 0.004416. The index on the 1910-14 base was projected backward from 1864 to 1839 on the basis of the curve  $y=23.830(1.0315)^x$ , and then converted to dollars by multiplying by the 1910-14 base, 35,563.  
 § Warren, G. F., and Pearson, F. A. Index numbers of wholesale prices of all commodities. Farm economics, no. 72, p. 1580-1587, September, 1931, and no. 74, p. 1634, February, 1932. The index numbers were converted to the 35-year base, 1880-1914, by multiplying by 1.14804.  
 ¶ Statistical abstract of the United States. United States Department of Commerce, 1922. Forty-fifth number, p. 512, 1923, and Fifty-second number, p. 246-247, 1930. The index numbers were converted to the 35-year base, 1880-1914, by multiplying by 0.09973.  
 ¶ Table 1, page 1680, Farm economics, no. 74, 1932. The index numbers were converted from the 5-year base, 1926-30, to the 35-year base, 1880-1914, by multiplying by 2.2411.



TABLE 26 (continued)\*

Period or year	Estimated world's stock of monetary gold at the end of year (millions of fine ounces)†	Index numbers of world's stock of monetary gold (1880-1914 = 100)†	Index numbers of world's physical volume of production (1880-1914 = 100)‡	Ratio (gold divided by production)	Index numbers of United States wholesale prices in gold (1880-1914 = 100)§	United States gold stocks (millions of dollars)¶	Index numbers of United States gold stocks (1880-1914 = 100)¶	Index of United States physical volume of production (1880-1914 = 100)¶	Ratio (United States gold divided by United States production)	Per cent of world's stock of gold held in United States
1880.....	151	65	60	108	115	352	35	51	49	11
1881.....	153	66	56	118	118	478	48	45	107	18
1882.....	154	67	65	103	124	507	51	56	91	16
1883.....	155	67	63	106	116	543	54	56	96	17
1884.....	156	67	68	99	107	546	54	61	89	17
1885.....	158	68	68	100	97	580	59	61	97	18
1886.....	160	69	68	101	94	591	59	60	98	18
1887.....	162	70	68	103	97	653	65	61	107	20
1888.....	165	71	75	95	99	708	70	69	101	21
1889.....	167	72	77	94	93	680	68	71	96	20
1890.....	169	73	74	99	94	696	69	67	103	20
1891.....	173	75	83	90	94	647	65	81	80	18
1892.....	177	77	78	99	87	664	66	74	89	18
1893.....	182	79	80	99	89	598	60	74	81	16
1894.....	189	82	80	103	80	627	63	74	85	16
1895.....	195	84	90	93	81	636	63	87	72	16
1896.....	201	87	94	93	78	600	60	91	66	14
1897.....	206	90	94	96	78	696	69	92	75	16
1898.....	217	94	102	92	81	862	86	99	87	19
1899.....	226	98	101	97	88	963	96	104	92	21
1900.....	233	101	106	95	94	1,034	103	108	98	21
1901.....	241	104	107	97	93	1,125	112	100	112	23
1902.....	249	108	114	95	99	1,193	119	118	101	23
1903.....	257	111	115	97	100	1,249	125	119	105	24
1904.....	266	115	115	100	100	1,328	132	128	103	24
1905.....	280	121	125	97	101	1,358	135	136	99	23
1906.....	290	125	134	93	103	1,476	147	143	103	25
1907.....	301	130	129	101	109	1,466	146	139	105	24
1908.....	317	137	129	106	105	1,618	161	137	116	23
1909.....	330	143	138	104	113	1,642	164	146	111	24

\* The figures in italics are estimates.

† Warren, G. F., and Pearson, F. A. Relation of gold to prices. *Farm economics*, no. 69, p. 1461-1462. February, 1931. Kitchin, J. The supply of gold compared with the prices of commodities. Interim report of the Gold Delegation of the Financial Committee of the League of Nations, Document C.375.M.161, Annex XI, p. 79-85. September, 1930. The index numbers of the world's stock of monetary gold were converted to the 35-year base, 1880-1914, by multiplying by 0.43247. The fine ounces of gold may be converted to dollars by multiplying by 20.67.

‡ The index numbers of the world's physical volume of production were converted from Carl Snyder's estimated values at the 1923-25 average price to the 35-year base, 1880-1914, by multiplying by 0.004416. The index on the 1910-14 base was projected backward from 1864 to 1839 on the basis of the curve  $y=23,630(1.0315)^x$ , and then converted to dollars by multiplying by the 1910-14 base, 33,563.

§ Warren, G. F., and Pearson, F. A. Index numbers of wholesale prices of all commodities. *Farm economics*, no. 72, p. 1580-1587, September, 1931, and no. 74, p. 1634, February, 1932. The index numbers were converted to the 35-year base, 1880-1914, by multiplying by 1.14604.

¶ Statistical abstract of the United States. United States Department of Commerce, 1922. Forty-fifth number, p. 512, 1923, and Fifty-second number, p. 246-247, 1930. The index numbers were converted to the 35-year base, 1880-1914, by multiplying by 0.00973.

¶ Table 1, page 1680. *Farm economics*, no. 74, 1932. The index numbers were converted from the 8-year base, 1926-30, to the 35-year base, 1880-1914, by multiplying by 2.2411.

TABLE 26 (concluded)\*

Period or year	Estimated world's stock of monetary gold at the end of year (millions of fine ounces)†	Index numbers of world's stock of monetary gold (1880-1914 = 100)†	Index numbers of world's physical volume of production (1880-1914 = 100)‡	Ratio (gold divided by production)	Index numbers of United States wholesale prices in gold (1880-1914 = 100)§	United States gold stocks (millions of dollars)	Index numbers of United States gold stocks (1880-1914 = 100)	Index of United States physical volume of production (1880-1914 = 100)¶	Ratio (United States gold divided by United States production)	Per cent of world's stock of gold held in United States
1910.....	840	147	140	105	118	1,636	163	151	108	23
1911.....	351	152	143	106	109	1,753	175	146	120	24
1912.....	360	156	156	100	116	1,818	181	170	106	24
1913.....	372	161	157	103	117	1,871	187	160	117	24
1914.....	388	168	146	115	113	1,891	189	167	113	24
1915.....	407	176	148	119	116	1,986	198	178	111	24
1916.....	423	183	142	129	143	2,445	244	177	138	28
1917.....	434	188	144	131	197	3,220	321	187	172	36
1918.....	449	194	142	137	219	3,163	315	186	169	34
1919.....	462	195	138	141	231	3,113	310	181	171	33
1920.....	463	200	156	128	259	2,865	286	199	144	30
1921.....	476	206	138	149	184	3,275	327	164	199	33
1922.....	481	208	169	131	182	3,785	377	186	203	38
1923.....	490	212	169	125	168	4,050	404	209	193	40
1924.....	493	213	171	125	164	4,488	448	205	219	44
1925.....	501	217	187	116	173	4,365	435	213	204	42
1926.....	513	222	183	121	167	4,447	444	223	199	42
1927.....	525	227	192	118	169	4,587	457	223	205	42
1928.....	537	232	202	115	162	4,109	410	231	177	37
1929.....	560	238	208	114	169	4,324	431	232	186	38
1930.....	<i>569</i>	<i>243</i>	198	<i>123</i>	144	4,535	452	209	216	<i>39</i>
1931.....	<i>577</i>	<i>250</i>	<i>184</i>	<i>136</i>	123	4,956	494	191	<i>259</i>	<i>48</i>
1932.....	.....	.....	.....	.....	109	3,919	391	165	237	31

\* The figures in italics are estimates.

† Warren, G. F., and Pearson, F. A. Relation of gold to prices. Farm economics, no. 60, p. 1461-1462. February, 1931. Kitchin, J. The supply of gold compared with the prices of commodities. Interim report of the Gold Delegation of the Financial Committee of the League of Nations, Document C.375.M.161, Annex XI, p. 79-85. September, 1930. The index numbers of the world's stock of monetary gold were converted to the 35-year base, 1880-1914, by multiplying by 0.43247. The fine ounces of gold may be converted to dollars by multiplying by 20.67.

‡ The index numbers of the world's physical volume of production were converted from Carl Snyder's estimated values at the 1924-25 average price to the 35-year base, 1880-1914, by multiplying by 0.004416. The index on the 1910-14 base was projected backward from 1864 to 1839 on the basis of the curve  $y = 23.830 (1.0315)^x$ , and then converted to dollars by multiplying by the 1910-14 base, 83,563.

§ Warren, G. F., and Pearson, F. A. Index numbers of wholesale prices of all commodities. Farm economics, no. 72, p. 1580-1587. September, 1931, and no. 74, p. 1634, February, 1932. The index numbers were converted to the 35-year base, 1880-1914, by multiplying by 1.14604.

|| Statistical abstract of the United States. United States Department of Commerce, 1922. Forty-fifth number, p. 512, 1923, and Fifty-second number, p. 248-247, 1930. The index numbers were converted to the 35-year base, 1880-1914, by multiplying by 0.09973.

¶ Table 1, page 1680, Farm economics, no. 74, 1932. The index numbers were converted from the 5-year base, 1926-30, to the 35-year base, 1880-1914, by multiplying by 2.2411.

Many persons now contend that the world's gold stocks are higher than ever before and therefore they must be ample. They are 49 per cent above the 1914 amount. In the previous period given, the 54-per cent increase in gold was only sufficient to maintain prices when

production increased at the same rate as did gold stocks. Is there any reason for assuming that the 49-per-cent increase in gold is more than sufficient to maintain pre-war prices with normal production at the present time?

The relationships of the gold-to-production ratio to prices since 1880 are shown in figure 22 and table 26. Prices in the United States were

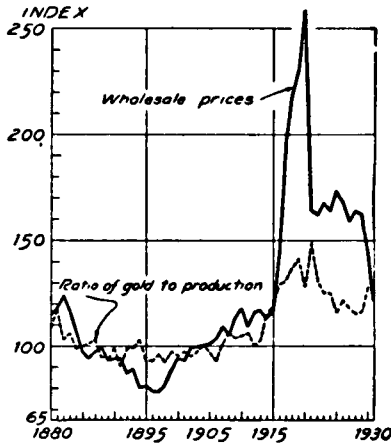


FIGURE 22. RATIO OF WORLD MONETARY GOLD STOCKS TO WORLD PHYSICAL VOLUME OF PRODUCTION IN RELATION TO WHOLESALE PRICES IN THE UNITED STATES, 1880 TO 1931

(1880-1914 = 100)

For the 35 years before the World War, prices rose if the world monetary stocks of gold increased faster than the production of other things, and fell if gold increased less rapidly. The situation changed when most of the countries of the world discontinued the gold standard, but the relationship was restored in 1931

more erratic than those in England, primarily because of financial difficulties during the twenty years following the return to the gold basis in 1879.

In general, prices rose when gold stocks increased more rapidly than did production, and fell when gold stocks increased less rapidly.

From 1839 to 1880, wholesale prices in the United States were lower than the gold supply would suggest. This difference, compared with the situation in England, is due to the fact that agricultural prices in the United States were low during this period and that agriculture has a heavy weight in the United States index numbers, and to the further fact that the United States gold supply was small relative to production.

The discrepancy was very great from 1858 to 1865. This was owing to the panic of 1857 and the inflation during the war. When inflation occurs, the value of the money declines faster than prices rise, so that a theoretical price in gold is low.

#### UNITED STATES MONETARY STOCKS OF GOLD AND UNITED STATES PHYSICAL VOLUME OF PRODUCTION RELATED TO WHOLESALE PRICES IN THE UNITED STATES

In 1885 the United States had \$589,000,000 of monetary gold, and in 1897 it had \$696,000,000. Probably in 1897 some persons contended that there must be enough gold, as the supply had increased 18 per

cent. In the same period the United States physical volume of production increased at the normal rate, or 52 per cent.

In 1885 the ratio of gold to production was 97 and wholesale prices were 97, when the average for the thirty-five years 1880-1914 is taken as 100.

In 1897 the ratio of gold to production was 75 and wholesale prices were 78.

All the data since 1880 are shown in figure 23 and table 26. During the period when the country was off the gold standard, wholesale prices were higher than the small amount of gold would be expected to support. Specie payment was resumed in 1879 and prices continued high relative to gold for the following six years.

From 1885 to 1914, the highest discrepancy between prices and the gold-to-production ratio was for the period 1900-04, when the ratio was 104 but prices averaged only 97. The discrepancy was 7 per cent. No other five-year period showed a discrepancy of more than 4 per cent.

For the thirty-year period 1885 to 1914, monetary stocks of gold in the United States had to increase at the same rate as did the physical volume of production in the United States in order to maintain stable commodity prices. If gold stocks increased more rapidly than did the production of other things, prices rose; if gold increased less rapidly, prices fell.

From 1892 to 1899, prices in the United States were below the normal relationships to world stocks of gold but were not below their normal relationships to stocks of gold in the United States. In 1895 and 1896, prices were much below their relationship to world gold but were much above their relationship to United States stocks of gold. The United States returned to the gold standard in 1879, but the resulting bankruptcy, unemployment, and political controversies were such that

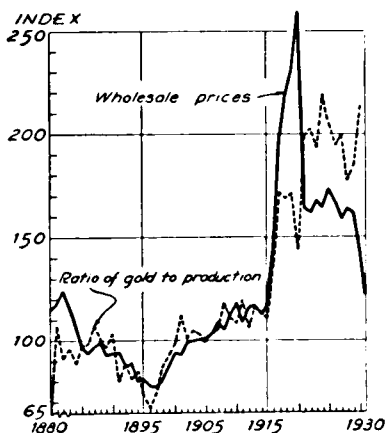


FIGURE 23. RATIO OF THE UNITED STATES MONETARY GOLD STOCKS TO THE UNITED STATES PHYSICAL VOLUME OF PRODUCTION IN RELATION TO WHOLESALE PRICES IN THE UNITED STATES, 1880 TO 1931

(1880-1914 = 100)

From 1880 to 1914, the United States gold divided by the United States production of other commodities equaled prices

it shook the faith of Europe in the ability of the United States to maintain the gold standard. Securities were returned and sold on the New York market, and other means were taken to withdraw gold from the United States. This resulted in a price level far lower than the world stocks would call for. Low as prices were, they were high as compared with the United States gold stocks.

A similar situation existed in England in 1931. Gold payments were resumed in 1925, but six years of effort resulted in so much unemployment and political agitation that the world doubted the ability of England to maintain the gold standard. The same devices were used to withdraw gold and it became impossible for England to maintain the gold standard. Index numbers of wholesale prices in England were low relative to world stocks of gold, but were high relative to English gold stocks. For two years, prices in England declined in advance of the decline of prices in the United States. The major factor controlling prices is world gold supply, but the location of the supply has some influence.

#### WHY PRICES WERE HIGH FROM 1915 TO 1929

The real problem that requires explanation is not why prices fell when the world went back to a gold basis, but why prices in the gold-using countries were so high from 1915 to 1929. With the outbreak of the war, most of the countries of the world discontinued the use of gold and gave little attention to gold supplies. They shipped gold to neutral countries to pay for war materials. The reduced demand for gold made it cheap, so that prices in countries that did not use gold were high.

The same thing happened a few years ago in China. India began to sell silver, which reduced the value of silver and made prices rise in China (figure 5, page 12). The same thing might occur again if other countries would stop bidding for gold. If this occurred, the gold would move to the gold-using countries. The small world demand would make it cheap and prices would rise.

From 1916 to 1920, prices in the United States were even higher than the gold supply would suggest. This was particularly true from 1919 to 1920. In that period the Government held down interest rates in order to sell the Victory Loan at a low rate of interest.<sup>18</sup> This resulted in a great expansion of credit so that the large gold supply was more than fully used (table 27).

<sup>18</sup> Report of the Joint Commission on Agricultural Inquiry, House of Representatives, 67th Congress, 1st Session. Report 408, part 2, p. 12. 1922.

TABLE 27. MONETARY GOLD, MONEY IN CIRCULATION, AND BANK DEPOSITS, IN THE UNITED STATES ON JUNE 30, 1880 TO 1932

Period or year	Total money* (000,000 omitted)	Monetary gold coin and bullion* (000,000 omitted)	Total monetary circulation† (000,000 omitted)	Total individual deposits‡ (000,000 omitted)	Percentage of gold to total money*	Monetary circulation per dollar of gold	Deposits per dollar of gold	Monetary circulation and deposits per dollar of gold
1880-80‡	\$1,488	\$ 563	\$1,222	\$ 2,988	37.8	\$2.17	\$ 5.31	\$ 7.48
1880-90‡	1,845	699	1,628	4,992	37.9	2.33	7.10	9.43
1900-09	2,906	1,349	2,506	10,792	46.4	1.92	8.00	9.92
1910-19	4,722	2,290	3,792	21,210	48.5	1.62	9.26	10.88
1920-29	8,422	4,029	4,861	44,510	47.8	1.21	11.05	12.26
1880	1,186	852	973	2,134	29.7	2.76	6.06	8.82
1881	1,350	479	1,114	2,539	35.5	2.33	5.31	7.64
1882	1,409	507	1,174	2,759	36.0	2.32	5.44	7.76
1883	1,472	543	1,230	.....	36.9	2.27	.....	.....
1884	1,487	546	1,244	.....	36.7	2.28	.....	.....
1885	1,537	589	1,293	.....	38.2	2.20	.....	.....
1886	1,561	591	1,253	.....	37.8	2.12	.....	.....
1887	1,633	655	1,318	3,305	40.1	2.01	5.05	7.06
1888	1,691	706	1,372	3,419	41.7	1.94	4.84	6.78
1889	1,659	680	1,380	3,776	41.0	2.03	5.55	7.58
1890	1,685	696	1,429	4,061	41.3	2.05	5.83	7.88
1891	1,678	647	1,407	4,197	38.5	2.31	6.49	8.80
1892	1,752	664	1,601	4,665	37.9	2.41	7.03	9.44
1893	1,739	598	1,597	4,627	34.4	2.67	7.74	10.41
1894	1,805	627	1,661	4,651	34.8	2.65	7.42	10.07
1895	1,819	636	1,602	4,921	35.0	2.52	7.74	10.26
1896	1,800	600	1,598	4,945	33.3	2.51	8.24	10.75
1897	1,907	690	1,641	5,095	36.5	2.36	7.32	9.68
1898	2,074	802	1,838	5,688	41.6	2.13	6.60	8.73
1899	2,190	963	1,904	6,769	44.0	1.98	7.03	9.01
1900	2,336	1,034	2,081	7,239	43.7	2.01	7.00	9.01
1901	2,511	1,125	2,203	8,461	44.8	1.96	7.52	9.48
1902	2,594	1,103	2,279	9,105	46.0	1.91	7.63	9.54
1903	2,718	1,249	2,400	9,554	46.0	1.92	7.65	9.57
1904	2,838	1,328	2,553	10,001	46.8	1.92	7.53	9.45
1905	2,919	1,358	2,623	11,351	46.5	1.93	8.36	10.29
1906	3,109	1,476	2,775	12,216	47.5	1.88	8.28	10.16
1907	3,158	1,466	2,814	13,100	46.4	1.92	8.94	10.86
1908	3,423	1,618	3,079	12,785	47.3	1.90	7.90	9.80
1909	3,452	1,642	3,149	14,108	47.6	1.92	8.59	10.51
1910	3,467	1,636	3,149	15,283	47.2	1.92	9.34	11.26
1911	3,607	1,753	3,263	15,906	48.6	1.86	9.07	10.93
1912	3,702	1,818	3,335	17,024	49.1	1.83	9.36	11.19
1913	3,777	1,871	3,419	17,478	49.5	1.83	9.34	11.17
1914	3,798	1,891	3,459	18,518	49.8	1.83	9.70	11.62
1915	4,051	1,986	3,320	18,966	49.0	1.67	9.55	11.22
1916	4,542	2,445	3,649	22,526	53.8	1.49	9.21	10.70
1917	5,679	3,220	4,069	26,058	56.7	1.26	8.09	9.35
1918	6,906	3,163	4,482	27,716	45.8	1.42	8.76	10.18
1919	7,688	3,113	4,877	32,629	40.5	1.57	10.48	12.05
1920	8,158	2,865	5,468	37,268	35.1	1.91	13.01	14.92
1921	8,175	3,274	4,911	34,791	40.1	1.50	10.62	12.12
1922	8,276	3,785	4,463	37,144	45.7	1.18	9.81	11.09
1923	8,703	4,050	4,823	39,984	46.5	1.19	9.87	11.06
1924	8,847	4,488	4,849	42,904	50.7	1.08	9.56	10.64
1925	8,304	4,365	4,815	46,715	52.6	1.10	10.70	11.80
1926	8,429	4,447	4,885	48,827	52.8	1.10	10.98	12.08
1927	8,667	4,587	4,851	51,062	52.9	1.06	11.13	12.19
1928	8,118	4,109	4,797	53,245	50.6	1.17	12.98	14.13
1929	8,539	4,324	4,746	53,158	50.6	1.10	12.29	13.39
1930	8,307	4,535	4,522	53,584	54.6	1.00	11.81	12.81
1931	9,080	4,936	4,822	50,485	54.6	0.97	10.19	11.16
1932	9,004	3,919	5,695	41,180	43.5	1.45	10.51	11.96

\* Statistical abstract of the United States, 1930, United States Department of Commerce, no. 52, p. 246-247, 1930.

† From 1880 to 1899 inclusive, Statistical abstract of the United States, 1923, no. 46, p. 605, 1924; from 1900 to 1929, Statistical abstract of the United States, 1930, no. 52, p. 247, 1930.

‡ From 1880 to 1914, Statistical abstract of the United States, 1923, no. 46, p. 798, 1924; from 1915 to 1929, Statistical abstract of the United States, 1930, no. 52, p. 262, 1930.

§ Six-year average, excluding 1883-1886, for which data are lacking.

|| Annual report of the Comptroller of the Currency, December 1, 1930, p. 57 and 138, 1931; and text of the annual report of the Comptroller of the Currency, p. 128 and 146, December, 1931.

Shortage of goods, and government and private hoarding of goods, also contributed to high prices. England did not sell the last of her war supplies of pork until 1921. Italy was rationing her hoard of sugar in 1921, not to hold prices down (world prices were very low) but to get rid of the sugar at a high price.

Before the other countries began to desire to have the gold back again, wholesale prices in the United States were about 50 per cent above pre-war.

England and other countries made the mistake of thinking they could go back on the gold basis by deflating to the level of prices in the United States. The Government did not realize that this increased demand for gold would lower prices in both countries.

One after another of the various countries began to move toward the reestablishment of the gold standard. Sweden returned to the gold basis on April 1, 1924; Germany, in the fall of 1924; England and the Netherlands, on April 28, 1925; Belgium, on October 25, 1926; Italy, on December 22, 1927; and France, on June 25, 1928. These countries did not return to a free gold coinage, but to a gold exchange basis, so that one could get gold bars if he had money enough. In France it required about \$8000 to buy a gold bar in 1931. The only way that most Europeans could get gold was to buy American coins. Our \$20 gold pieces sold for \$21.50 in France in 1931.

The vigorous bidding for gold made it very valuable regardless of its location. The United States held large stocks of gold, but the world demand determined its value. The demand for gold gradually grew until there was a world-wide panic to get it. This panic grew worse and worse until the fall of 1931, when England and a large number of other countries discontinued the gold standard.

#### EFFICIENCY IN THE USE OF GOLD

Much has been said about the increased efficiency in the use of gold. The monetary circulation of the United States has steadily declined in proportion to gold (table 27). Bank deposits (or credit) have steadily risen in proportion to gold.

For the ten years 1888 to 1897, the total monetary circulation plus bank deposits in the United States for each dollar of monetary gold averaged \$9.17. In the ten years preceding the establishment of the Federal Reserve system it was \$10.78, or an increase of \$1.61 in seventeen years. The average for the ten years 1922 to 1931 was \$12.03. The increase in the ten years under the Federal Reserve system was therefore \$1.25.

The small increase in the efficiency in the use of gold is easily offset by other factors. Some of these may be that the number of transactions

required to handle a given volume of physical production has increased. When bread was made in the home, fewer transactions were involved than when bread is purchased. Increased fabrication may have occurred. There is a steadily increasing number of non-commodity transactions. Newspaper, radio, and moving-picture employees and laborers are relatively more numerous than formerly. When commodity prices are stable, wages rise and require more money. All of these things have been occurring gradually throughout the 75-year period. The increasing efficiency in the use of gold also has been occurring gradually. Whatever the explanation, the simple fact that the general course of prices was determined by the ratio of gold stocks to production of other things is established.

It is often said that the United States has more gold than it needs and that the gold is sterilized. The total credit outstanding in 1929 was high in proportion to the total gold supply, indicating that the gold was fully used (table 27). It was so fully used as to cause a reaction.

#### FUTURE RELATIONSHIPS OF GOLD TO PRICES

The physical volume of production from 1923 to 1929 increased at about the normal rate for the fifty years before the war, 3.15 per cent per year. It will be impossible to know definitely just what the rate of increase will be after such a period of world chaos. Apparently, a production of about 211 would be normal for 1930, and 218 for 1931. The index number of world gold stocks in 1931 was 250. The ratio of gold stocks to this estimate of production was 115. If there were no other factors to consider, a commodity price level of about 115, when 1880-1914 is called 100, would be normal. On a 1910-14 basis, this would equal prices of 102 in England and 100 in the United States.<sup>17</sup> In August, 1931, before the gold basis was abandoned, prices in England fell to 96. In December, 1931, prices in the United States were 100. Prices returned to their normal relationship to the gold supply.

If a free gold basis were established and all the countries that formerly used gold returned to it, a price level materially below the normal level would be expected for some years.

Confidence in money was repeatedly shaken for almost a generation. After such a period, there are many factors which tend to make prices low in proportion to gold stocks.

Whenever the countries again establish a free gold basis, the tendency to hoard gold will be greater than before the war.

<sup>17</sup> Estimates of a normal price level of about 90 were obtained by assuming that production proceeded at a normal rate after the war began. (Farm economics, no. 69, p. 1460-1462. February, 1931.)



Banks in the United States and in other countries will, for some years, wish to maintain a liquid position so that they will not again be called on to sell securities at a loss in order to get cash. This means that high cash reserves will be held.

In some regions, there is a shortage of banks so that a much larger amount of money will be kept in homes than formerly was the case. For some time, fear of banks will increase the tendency to keep cash rather than bank accounts.

Because of low profits, many banks are introducing a charge for checks. This will tend to reduce the number of small accounts and reduce payments by check.

In case all the countries that formerly used gold return to the gold standard, large bank reserves will be necessary in order to establish confidence in the country. It is not enough that the bank have the confidence of the citizens of that country. If the citizens of other countries do not have confidence in the bank, gold withdrawals from that country are easily made.

The situation during the nineties was somewhat similar but much less serious. During that period, prices in England as well as in the United States were low relative to the world monetary stocks of gold. In the United States they were often 10 to 15 per cent below the normal ratio. In England the discrepancy for several years was more than 10 per cent.

Regardless of what temporary price level may occur, if all of the countries that formerly used gold return to a gold basis there does not seem to be any probability of maintaining pre-war wholesale commodity prices except in those countries that reduced the weight of gold in the monetary unit.

If there should be a material increase in the efficiency with which gold is used in the Federal Reserve system, this conclusion would still hold because there is almost no chance of a general increase in efficiency throughout the world. It is world supply and world demand that determine the value of gold. There is no indication that the Federal Reserve system has increased the efficiency of gold more than the slow and gradual normal increase would call for (table 27). Decreased world efficiency is to be expected.

Of course, a sudden discovery of some phenomenal supply of gold might change the situation, but such discoveries are largely accidental and usually require some years to strikingly increase the gold supply.

There are four important possibilities that will affect the situation:

1. Countries now off the gold basis may cease to bid for gold and reduce its value.

2. Whether or not number 1 occurs, they may not return to the gold standard.

3. Whether or not number 1 occurs, they may return to the gold standard. This can occur with or without revaluing the currency.

4. With any one of the above combinations, it is possible that the United States may follow a monetary policy that will tend to correct the present deflation.

It is possible that the countries which formerly were on the gold basis will discontinue to bid for gold, and, by reducing demand, reduce its value. If this or any other cause should raise prices in the countries that continue on the gold basis, the world would again probably be misled into believing that all countries could go back to the gold standard by deflating to that price level, not realizing that the increased demand for gold would lower the price level. If the various countries should reduce the weight of gold in their currencies so as to restore their prices to a level to which their internal debts and other economic relations are adjusted, they would escape the further catastrophes that accompany deflation. But by that act they would increase their ability to withdraw gold from other countries. Such a normal price relationship causes normal business within the country and costs of production below those in the country that is deflating. Deflation always leaves costs high relative to prices.

There is, of course, a possibility that the United States will adopt a monetary policy that will tend to restore prices. In any event, a striking temporary recovery will sometime occur from the extremely low prices which now prevail for basic commodities. Any price level that is out of adjustment with the monetary situation should not be expected to be maintained permanently.

A summary of the major forces affecting the general price level is given below.

Forces tending to raise commodity prices above the pre-war level	Forces tending to lower prices below the pre-war level
<ol style="list-style-type: none"> <li>1. England and other countries might cease to bid for gold.</li> <li>2. Phenomenal discoveries of gold might occur.</li> <li>3. Financial policy may raise prices for a time or a permanent monetary change might be made.</li> <li>4. A temporary rebound from phenomenally low prices for some basic commodities is likely to carry them above pre-war for a time.</li> </ol>	<ol style="list-style-type: none"> <li>1. If the normal relationship held, world monetary stocks of gold would only support pre-war prices.</li> <li>2. World monetary gold stocks are not increasing so rapidly as is the physical volume of production.</li> <li>3. All central banks desire high reserves.</li> <li>4. All private banks desire high cash reserves.</li> <li>5. Some individuals cannot use banks because their banks have closed.</li> <li>6. Banks are discouraging small checking accounts.</li> <li>A tax has been placed on checks.</li> <li>7. Throughout the world, confidence is such as to favor hoarding.</li> </ol>

INDEX NUMBERS OF WHOLESALE PRICES OF ALL COMMODITIES WITH  
CONSTANT GROUP WEIGHTS

An index number of wholesale prices of all commodities with variable group weights is given on pages 6 to 10. As there stated, it is believed that metals, fuel and lighting, drugs and chemicals, and textiles, which were very high in price, should have a reduced weight in the earlier years. This does not affect the index numbers after 1850. An index number with constant group weights throughout was calculated, and is presented in table 28. A comparison of the two index numbers is shown in figure 24. For some purposes, this index may be preferable.

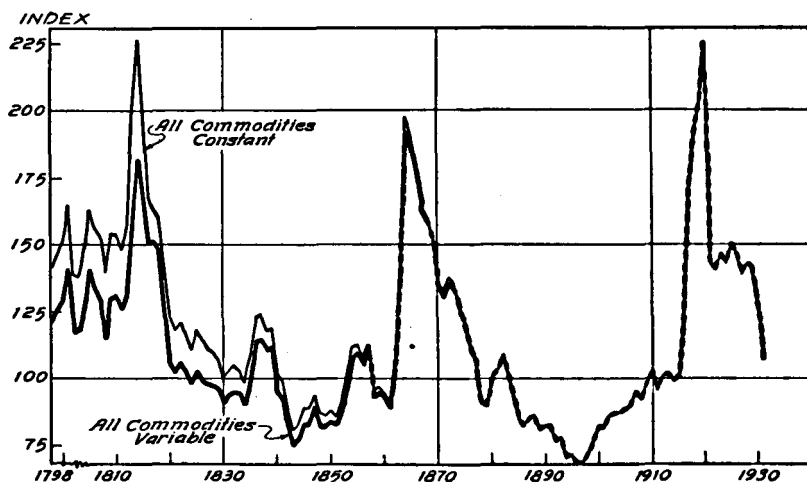


FIGURE 24. WHOLESALE PRICES OF ALL COMMODITIES WITH CONSTANT AND VARIABLE  
GROUP WEIGHTS, 1798 TO 1931 (TABLES I AND 28)

(1910-14 = 100)

The index numbers based on variable group weights give higher weight to the products that were low in price, and a lower weight to textiles, metals, chemicals, and fuel. The index number is therefore lower in the earlier years than the index with constant group weights

THIRTY-BASIC-COMMODITY INDEX

As products pass through the channels of trade and manufacture, the prices become less variable. Prices of basic commodities are therefore

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932 69

TABLE 28. INDEX NUMBERS OF WHOLESALE PRICES OF ALL COMMODITIES WITH CONSTANT GROUP WEIGHTS, 1797 TO 1932\*

(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1797.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1798.....	145	143	142	143	141	140	141	141	141	142	143	143	142
1799.....	145	144	144	144	146	148	149	148	149	150	151	151	147
1800.....	149	147	147	146	147	148	150	153	155	155	156	157	151
1801.....	163	163	165	167	168	170	172	169	166	160	158	153	165
1802.....	150	145	142	139	137	138	138	137	136	135	133	132	139
1803.....	134	134	134	134	135	137	139	143	143	144	140	144	138
1804.....	145	146	147	145	143	144	146	147	151	152	156	163	149
1805.....	163	164	167	166	164	165	163	160	160	161	162	161	163
1806.....	160	159	157	155	156	154	158	157	157	155	151	152	156
1807.....	153	156	154	153	154	153	152	151	153	152	150	150	153
1808.....	146	141	139	136	136	136	137	138	138	138	142	148	140
1809.....	151	153	161	159	157	155	153	152	153	151	152	152	154
1810.....	153	154	153	152	154	153	156	154	155	154	154	152	154
1811.....	153	149	148	148	150	146	146	149	148	148	147	148	148
1812.....	152	153	152	151	145	148	154	161	163	164	170	172	157
1813.....	178	179	180	187	190	191	195	199	203	212	222	232	197
1814.....	233	228	227	226	223	222	222	221	221	228	235	242	227
1815.....	242	228	214	203	194	193	185	185	186	186	190	185	199
1816.....	181	180	178	171	169	167	166	165	164	159	160	163	169
1817.....	165	168	168	169	168	166	161	164	159	157	157	158	163
1818.....	160	163	161	157	155	157	155	161	160	164	164	160	160
1819.....	156	152	150	146	141	141	138	135	135	135	134	131	141
1820.....	131	129	128	123	124	122	121	123	123	119	116	116	123
1821.....	116	118	114	115	116	115	116	119	121	122	123	124	118
1822.....	124	123	123	122	122	121	121	119	119	119	120	119	121
1823.....	118	118	117	117	116	117	118	118	117	116	113	113	117
1824.....	111	111	110	110	110	112	111	111	111	113	114	113	111
1825.....	111	111	112	116	119	122	122	121	121	120	120	119	118
1826.....	119	117	115	114	113	114	115	112	112	112	112	112	114
1827.....	112	113	113	112	111	110	109	109	109	109	109	112	111
1828.....	111	110	109	108	107	107	108	108	109	111	112	114	110
1829.....	114	112	112	111	109	108	105	103	104	104	104	103	107
1830.....	102	102	102	100	101	101	101	102	103	102	100	100	101
1831.....	100	101	102	104	104	103	102	102	104	105	108	107	103
1832.....	112	110	109	104	104	102	101	101	103	104	105	105	105
1833.....	106	103	102	102	102	101	102	103	104	104	105	105	103
1834.....	101	101	98	97	96	97	96	98	98	98	98	99	98
1835.....	99	101	102	105	107	109	111	112	110	110	111	115	108
1836.....	115	116	120	125	124	120	119	120	124	129	132	133	123
1837.....	133	138	136	130	120	119	121	119	115	116	119	122	124
1838.....	121	118	116	116	117	115	115	115	117	121	121	123	118
1839.....	124	126	125	126	124	121	118	116	116	114	112	110	119
1840.....	107	106	105	104	102	100	99	100	101	101	101	101	102
1841.....	101	101	99	98	98	98	97	99	102	100	100	99	99
1842.....	97	95	93	91	89	89	87	85	84	83	82	83	88
1843.....	82	80	79	80	81	81	82	81	82	81	83	84	81

\* On the 1926 base, the average for the all-commodity index of the Bureau of Labor Statistics (Bulletins 521 and 453) for the five years 1910-14 is 68.46. The index numbers for 1890 and later years may be converted to the 1910-14 base by multiplying by 1.460707. The all-commodity index with constant group weights before 1890 is computed from the eleven groups by using the following weights: farm products, 25; food products, 25; metals and metal products, 10; lumber and building materials, 10; fuel and lighting, 10; textiles, 10; hides and leather, 4; spirits, 3; drugs and chemicals, 1; house furnishings, 1 for 1840 to 1889; and miscellaneous, 1 from 1840 to 1889 and 2 before 1840.

TABLE 23 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1844	82	82	82	84	84	82	82	82	82	82	84	82	82
1845	85	85	87	86	86	83	83	83	81	81	84	84	86
1846	84	85	82	82	81	80	80	84	84	87	86	86	86
1847	86	84	86	86	87	87	85	84	82	82	84	84	84
1848	81	80	80	86	86	85	84	84	86	86	84	84	84
1849	87	87	87	86	85	84	85	85	87	86	85	84	86
1850	87	88	88	87	87	88	87	87	87	88	88	88	88
1851	90	90	88	85	87	85	84	84	84	84	84	84	84
1852	86	88	90	80	88	88	90	92	92	94	97	94	91
1853	98	100	101	99	97	95	96	99	101	103	108	107	101
1854	108	116	112	112	112	112	110	112	114	109	111	110	112
1855	110	109	112	112	115	114	112	112	112	112	112	112	112
1856	111	110	109	108	105	102	105	107	108	108	110	110	109
1857	112	116	117	116	117	114	115	117	114	109	104	100	112
1858	98	95	97	97	98	94	95	98	97	97	94	94	94
1859	97	101	101	100	99	99	97	95	94	93	94	94	97
1860	97	97	97	95	95	93	94	94	95	95	94	95	95
1861	94	92	92	91	90	87	85	87	89	92	93	94	91
1862	101	101	100	100	97	94	100	107	109	114	124	126	108
1863	129	146	144	140	132	129	120	120	127	126	144	147	127
1864	157	166	165	172	179	194	225	220	221	212	221	227	194
1865	227	222	210	142	174	144	165	172	142	194	194	196	195
1866	145	146	174	149	173	173	174	176	176	141	176	172	177
1867	171	149	148	149	170	161	168	160	161	162	154	157	144
1868	154	156	145	144	164	160	159	160	159	156	154	154	146
1869	156	156	156	153	151	169	150	156	154	151	151	149	153
1870	145	146	137	136	138	137	136	136	135	135	137	130	137
1871	143	137	139	134	131	129	129	128	129	122	122	122	122
1872	145	145	137	140	140	139	137	139	140	137	141	139	134
1873	158	141	141	141	128	125	125	125	125	121	127	120	126
1874	132	125	121	120	124	124	124	124	124	123	122	122	127
1875	122	122	122	122	120	118	118	119	118	118	117	116	120
1876	115	115	114	114	112	107	107	104	109	111	112	114	111
1877	116	112	104	110	112	107	104	103	103	103	100	100	107
1878	98	97	94	93	91	89	89	91	91	89	89	87	91
1879	88	86	87	86	86	86	87	87	89	85	100	103	98
1880	105	108	107	102	109	94	97	94	98	99	99	100	101
1881	100	101	101	102	101	100	101	102	107	106	107	104	102
1882	107	108	108	109	110	111	111	111	108	108	107	105	109
1883	105	108	105	105	103	100	98	94	97	97	97	97	101
1884	97	97	97	95	93	93	92	92	91	90	88	87	93
1885	87	86	87	87	85	84	84	84	82	82	82	82	82
1886	84	84	84	82	81	80	80	81	81	81	81	82	82
1887	84	85	85	85	85	84	85	85	85	84	84	85	85
1888	86	87	87	87	85	85	84	85	85	86	87	87	86
1889	84	85	82	82	80	80	80	80	81	81	81	82	81
1890	80	80	80	80	81	81	81	84	85	85	83	83	82
1891	82	82	84	84	84	82	82	81	81	80	79	79	82
1892	77	77	75	74	74	74	76	77	77	77	77	74	74
1893	83	84	82	81	81	78	78	78	78	77	75	74	78
1894	73	71	69	69	69	69	69	71	72	70	70	69	70
1895	69	69	69	72	72	74	73	72	72	72	71	71	71
1896	70	69	69	64	67	64	66	66	66	64	64	64	64
1897	68	68	68	67	67	66	66	66	66	66	66	66	66
1898	70	71	71	71	76	71	70	70	70	70	70	71	71
1899	71	72	72	71	74	74	74	77	77	80	81	82	77
1900	82	84	84	84	82	81	82	82	82	81	81	80	82
1901	81	80	80	79	79	79	80	81	81	82	82	84	81
1902	82	82	82	84	85	86	86	85	86	86	86	86	86

TABLE 28 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1893	91	91	88	88	86	86	86	86	87	86	85	85	87
1894	87	89	84	87	85	85	85	86	87	87	89	89	87
1895	89	89	88	88	87	87	87	88	87	87	88	89	88
1896	89	89	89	89	90	90	87	89	90	92	93	94	90
1897	93	95	94	94	94	97	97	97	97	94	94	92	95
1898	91	90	90	91	91	91	92	92	92	93	94	95	92
1899	94	95	95	97	98	99	99	100	101	103	104	105	99
1910	104	104	106	107	105	104	104	103	102	99	97	97	103
1911	97	94	95	92	92	92	93	96	97	97	96	95	95
1912	96	97	99	102	102	101	101	102	103	103	103	102	101
1913	103	102	102	102	101	101	102	102	103	103	102	101	102
1914	100	100	99	99	98	98	99	101	103	99	99	98	99
1915	99	100	100	100	101	100	101	100	100	103	105	108	101
1916	112	115	117	119	121	121	122	124	127	133	142	145	125
1917	149	153	157	167	176	178	180	182	180	178	179	180	172
1918	183	179	185	187	187	188	183	196	201	199	199	199	191
1919	196	190	192	194	198	198	206	211	206	207	211	220	202
1920	230	229	232	242	244	243	242	236	227	211	195	174	226
1921	167	153	150	144	141	136	136	137	136	137	138	136	143
1922	134	136	136	136	140	141	145	144	145	145	147	147	141
1923	149	151	153	152	149	147	144	143	146	145	144	143	147
1924	145	146	144	142	140	139	140	142	142	143	145	148	143
1925	150	152	152	149	148	150	152	152	151	151	153	151	151
1926	151	149	147	147	147	147	145	145	146	145	144	143	146
1927	141	140	138	137	138	137	138	139	141	141	141	141	139
1928	141	140	139	141	142	141	142	143	144	141	140	140	141
1929	140	138	140	139	138	139	141	141	140	139	137	136	139
1930	135	134	132	131	130	127	123	123	123	121	119	116	124
1931	114	112	111	109	107	105	105	104	103	103	100	107	107
1932	98	97	96	96	94	93	94	95	95	94	93	91	95

a better indication of variation in business conditions than are prices of all commodities. To prepare such an index, prices of thirty basic commodities were used (page 73). Nearly the same commodities and weights were used for the entire period.

It is interesting to note that for 135 years an index of thirty basic commodities made independently of the all-commodity index shows such a close agreement with it. When a violent change in price occurs, the basic-commodity index fluctuates more violently, but the average for any considerable period is in substantial agreement. The agreement would be much less close if the weightings were strikingly different—for example, if minerals had a much higher weight in one index than in the other. The small disagreement in the earlier years is due to extremely high prices for a number of commodities such as drugs, tea, salt, and the like.

Not infrequently an index number is now used as a means of standardizing payments, and there is some discussion of varying the weight of metal in the monetary unit as prices vary. A comprehensive

index number for all commodities at wholesale prices would be best for this purpose. But if it should be desirable to prescribe by law the method of making an index number for use for this purpose, it could be done by specifying a limited number of commodities with prescribed weights.

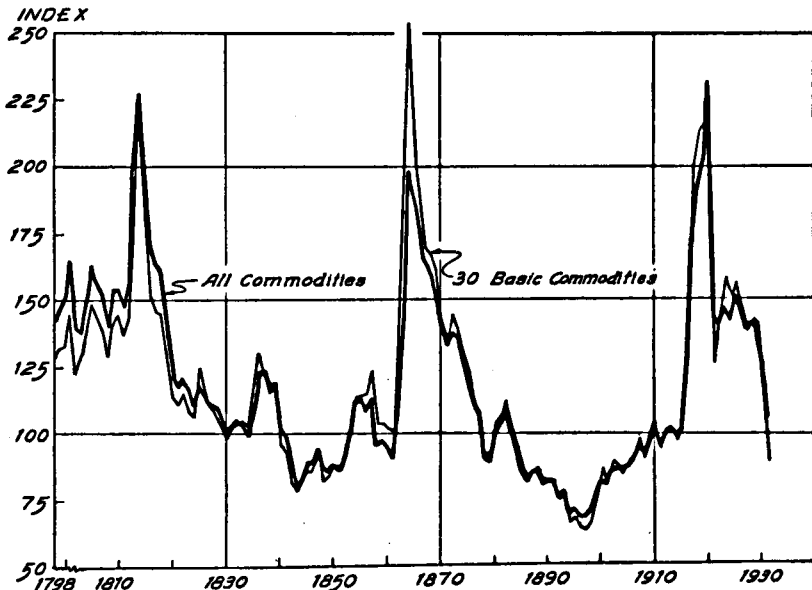


FIGURE 25. INDEX NUMBERS OF WHOLESALE PRICES OF THIRTY BASIC COMMODITIES AND OF ALL COMMODITIES WITH CONSTANT GROUP WEIGHTS, 1798 TO 1931 (TABLES 29 AND 28)  
(1910-14 = 100)

For more than a century the movement of basic-commodity prices has been the same as the movement of all-commodity prices. When prices are stable, the two index numbers move together. When prices change violently, the basic-commodity index moves more violently than does the all-commodity index.

Monetary settlements are based on one commodity. Two commodities are more stable than one. Ten commodities properly selected would be many times more stable, and thirty commodities properly selected and properly weighted would make a fairly stable index.

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932 73

TABLE 29. INDEX NUMBERS OF WHOLESALE PRICES OF BASIC COMMODITIES,  
1797 TO 1932\*  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1797.....										130	132	130	.....
1798.....	129	125	126	129	128	126	127	127	128	129	129	130	128
1799.....	130	129	130	130	131	132	131	130	131	134	135	135	132
1800.....	131	128	129	127	127	128	130	132	136	139	141	142	133
1801.....	144	146	147	149	151	152	155	150	146	140	141	131	146
1802.....	132	125	121	121	121	122	123	122	123	122	122	121	123
1803.....	123	123	125	127	129	129	129	133	133	133	130	135	129
1804.....	136	137	138	135	134	135	136	139	141	143	146	150	139
1805.....	150	150	153	153	151	153	148	146	146	147	148	147	149
1806.....	147	146	144	143	143	135	147	146	145	142	140	140	143
1807.....	140	142	141	140	139	138	137	137	137	137	137	137	139
1808.....	134	131	128	125	127	127	127	128	128	129	132	140	130
1809.....	141	142	148	146	145	141	138	139	141	141	142	143	142
1810.....	144	145	144	146	147	145	146	147	147	143	146	142	145
1811.....	142	137	137	138	140	136	135	136	136	137	136	134	137
1812.....	137	140	136	137	135	138	142	147	148	149	155	156	143
1813.....	160	161	164	170	174	176	178	181	184	190	206	214	180
1814.....	223	221	225	222	212	214	215	214	214	223	231	241	221
1815.....	241	209	194	187	183	186	177	177	179	182	177	172	189
1816.....	166	165	163	157	153	152	148	146	146	143	145	148	153
1817.....	149	151	149	152	149	148	143	145	143	141	140	143	146
1818.....	143	146	144	142	141	144	141	147	145	150	149	144	145
1819.....	144	140	140	138	133	131	128	125	126	126	126	123	132
1820.....	124	121	116	114	115	113	112	114	115	112	108	108	114
1821.....	109	108	106	107	109	108	109	112	115	116	117	117	111
1822.....	116	114	117	118	118	116	115	113	112	112	113	112	115
1823.....	111	110	109	109	109	110	110	110	110	110	108	107	109
1824.....	108	106	105	105	106	107	107	107	107	108	108	107	107
1825.....	116	116	117	125	129	133	131	128	128	125	125	123	125
1826.....	121	119	116	117	115	113	115	111	110	112	112	111	114
1827.....	110	109	111	111	110	108	108	108	109	108	108	110	109
1828.....	109	107	105	106	105	106	106	105	107	110	110	111	107
1829.....	111	106	106	105	105	104	99	98	98	98	99	98	102
1830.....	97	98	97	97	98	98	97	99	101	101	99	99	98
1831.....	98	99	100	102	103	103	102	102	104	104	104	104	102
1832.....	107	106	105	104	104	101	100	101	102	104	105	106	104
1833.....	106	101	101	101	103	103	104	108	111	111	109	108	106

\* Prices previous to 1890 are the same as those used in the all-commodity index numbers. Prices from 1890 inclusive are wholesale prices published by the United States Bureau of Labor Statistics.

From 1797 to 1890, the following commodities and weights were used: wheat and cotton, 8 each; mess pork and mess beef, 6 each; corn, tobacco, butter, sugar, hides and leather, cotton sheeting, wool, coal, pig iron, and bar iron, 4 each; coffee, codfish, lard, tallow, molasses, copper, lead, tin, linseed oil, white lead, turpentine, indigo, and whale oil, 2 each; salt and tar, 1 each.

Hogs and cattle are more basic than meat, and would have been used but for the fact that prices are not available for the entire period.

Sole leather was substituted for hides for the first four years. Before 1825, hemp was substituted for wool.

After 1890 the following products and weights were used: wheat and cotton, 8 each; mess pork and mess beef, 6 each; corn, butter, sugar, hides and leather, cotton sheeting, wool, coal, pig iron, coke, and scrap iron, 4 each; coffee, codfish, lard, tallow, molasses, copper, lead, tin, linseed oil, turpentine, petroleum, cottonseed oil, and raw silk, 2 each; sine and cottonseed meal, 1 each.

Since 1889 the index numbers were calculated on a 1910-14 base. Before 1890, the index was calculated on a sixteen-year base, 1876-91. Calculations were made for a four-year overlapping period, 1890-93. On the 1910-14 base these four years averaged 80.327. On the 1876-91 base they averaged 85.171. The earlier index numbers were therefore multiplied by 0.9431 to convert them to the 1910-14 base.



TABLE 29 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1834.....	103	102	100	99	98	98	99	101	101	102	103	104	101
1835.....	105	105	107	111	115	116	118	119	119	117	115	120	114
1836.....	119	120	125	132	132	128	128	129	132	136	136	138	128
1837.....	130	140	137	129	118	114	115	116	113	114	120	121	122
1838.....	118	116	113	113	114	112	113	113	117	121	122	124	117
1839.....	124	128	124	125	124	119	117	115	115	113	109	107	112
1840.....	102	100	99	96	94	93	92	94	97	96	95	94	97
1841.....	96	95	94	93	94	92	94	94	96	96	95	93	94
1842.....	92	88	85	82	79	79	79	78	79	80	78	79	82
1843.....	77	75	74	75	73	78	78	80	82	80	83	83	77
1844.....	83	83	82	83	82	83	82	83	81	81	81	80	82
1845.....	78	78	81	86	88	85	84	85	89	88	93	94	89
1846.....	92	91	91	89	87	84	81	81	81	85	86	84	89
1847.....	87	83	85	85	85	93	92	90	92	90	90	88	91
1848.....	86	85	84	83	81	79	78	79	81	84	81	81	82
1849.....	84	84	85	83	82	81	83	84	85	86	84	86	82
1850.....	86	88	88	87	87	88	88	87	88	88	91	91	82
1851.....	93	92	91	90	89	86	85	83	83	84	82	83	85
1852.....	83	84	86	87	89	90	91	93	93	95	95	99	92
1853.....	102	104	105	101	100	97	96	101	104	106	108	110	102
1854.....	111	117	115	115	114	112	112	113	113	109	110	110	111
1855.....	109	109	111	110	115	118	112	115	112	118	119	118	111
1856.....	116	116	114	114	111	108	110	114	114	118	119	120	111
1857.....	124	126	129	129	130	127	126	130	128	118	109	105	122
1858.....	99	100	103	105	104	102	102	106	106	106	103	105	102
1859.....	107	110	108	108	107	106	102	108	100	99	101	101	104
1860.....	104	104	104	101	102	101	101	101	102	103	102	97	102
1861.....	97	96	95	96	96	94	92	100	104	110	116	119	101
1862.....	125	124	121	120	121	120	124	139	143	151	163	166	133
1863.....	172	185	201	189	177	174	173	163	164	182	192	198	148
1864.....	203	207	216	221	228	232	297	265	292	258	279	279	255
1865.....	273	260	242	199	196	179	182	196	199	209	207	202	211
1866.....	196	186	184	176	173	183	185	187	187	194	187	177	182
1867.....	175	171	171	171	173	168	169	170	171	169	163	158	164
1868.....	160	162	169	174	171	169	168	171	168	166	163	160	167
1869.....	163	167	164	159	160	162	165	167	165	159	160	157	165
1870.....	151	148	142	141	144	145	144	145	141	139	138	133	142
1871.....	136	138	139	134	130	131	132	121	134	126	137	139	132
1872.....	138	141	142	147	149	149	145	146	145	144	145	143	147
1873.....	145	148	147	147	143	141	139	140	139	133	129	131	144
1874.....	133	133	132	131	130	131	131	133	133	130	128	127	131
1875.....	127	126	126	128	125	122	123	123	121	123	122	120	124
1876.....	119	118	118	116	111	108	107	107	107	108	113	114	111
1877.....	116	113	109	110	114	109	110	104	105	105	103	103	108
1878.....	102	99	97	95	91	89	90	91	92	89	88	85	97
1879.....	87	88	87	87	88	89	89	89	82	99	106	111	83
1880.....	113	113	113	106	101	96	96	99	101	101	102	103	104
1881.....	102	102	103	102	102	102	106	107	111	111	111	111	106
1882.....	111	111	111	112	111	112	113	116	113	113	111	106	112
1883.....	107	108	107	106	104	101	99	96	97	97	97	99	103
1884.....	99	100	100	98	97	94	93	93	92	91	88	87	94
1885.....	90	89	88	88	86	85	84	84	84	84	84	86	86
1886.....	85	85	85	83	82	81	79	82	81	80	80	82	82
1887.....	84	85	86	86	86	85	84	83	84	84	86	86	85
1888.....	90	88	87	86	84	83	82	84	86	88	89	89	87
1889.....	87	85	85	85	83	83	83	83	83	82	81	82	82
1890.....	82	82	82	81	83	82	82	84	85	85	84	83	83
1891.....	83	84	86	85	85	82	81	81	81	81	80	77	82
1892.....	77	76	75	73	73	73	74	75	75	76	78	79	75
1893.....	81	84	84	81	79	77	78	78	74	75	76	77	77

TABLE 29 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1894....	69	69	67	66	67	67	67	70	69	67	66	64	67
1895....	64	63	64	67	69	71	71	71	72	73	71	68	69
1896....	69	68	67	66	65	63	62	61	62	64	66	65	65
1897....	63	63	63	62	61	61	62	65	67	66	66	66	64
1898....	67	68	68	68	72	69	68	66	66	65	66	66	67
1899....	68	70	71	71	72	73	75	77	81	83	85	88	78
1900....	89	90	93	92	89	85	83	81	82	80	82	81	86
1901....	80	81	80	80	80	80	82	83	83	84	84	85	82
1902....	85	85	86	86	89	89	90	89	91	93	92	93	89
1903....	93	93	94	93	90	90	88	87	86	83	82	82	88
1904....	84	87	88	86	83	81	81	82	84	84	87	87	85
1905....	89	89	88	88	86	88	88	88	89	89	92	92	89
1906....	92	90	90	91	92	91	90	91	92	94	96	99	92
1907....	99	101	101	99	101	101	101	100	101	99	95	92	99
1908....	91	90	89	89	89	90	93	93	92	91	91	92	91
1909....	92	92	92	93	95	96	97	98	99	103	105	105	97
1910....	106	104	106	104	102	100	102	103	101	100	99	99	102
1911....	99	98	97	96	95	94	94	94	95	95	94	93	95
1912....	95	94	95	99	102	101	101	100	101	102	104	104	100
1913....	105	103	102	102	100	99	100	101	103	102	104	102	102
1914....	98	99	95	98	98	97	97	104	102	98	95	96	98
1915....	100	104	102	103	103	102	104	102	100	102	106	112	103
1916....	118	118	122	125	124	123	124	127	132	143	159	164	131
1917....	169	171	180	192	205	220	224	216	215	202	207	209	201
1918....	211	211	212	212	210	211	216	218	220	215	215	215	214
1919....	204	194	196	201	207	219	231	230	220	224	244	240	217
1920....	248	240	241	255	260	253	245	242	233	213	183	159	231
1921....	150	139	132	123	124	118	116	115	124	123	123	121	129
1922....	120	124	127	130	140	145	156	160	161	164	161	159	146
1923....	165	166	172	171	161	154	146	145	152	153	173	154	158
1924....	153	156	151	147	144	142	147	150	147	151	155	162	151
1925....	166	164	161	154	151	153	153	154	155	158	160	155	157
1926....	162	160	147	144	143	143	144	142	142	140	140	139	146
1927....	138	137	137	136	135	137	138	140	141	141	141	142	139
1928....	141	140	142	145	146	142	143	140	142	142	143	144	143
1929....	145	145	144	142	138	137	142	142	143	140	136	134	141
1930....	131	129	126	126	122	118	114	115	112	109	106	102	118
1931....	99	97	97	95	91	89	89	86	84	83	84	81	90
1932....	79	78	77	74	71	69	71	74	77	74	72	.....	.....

PRICES IN GOLD DURING THE PANIC OF 1837 AND THE CIVIL WAR PERIOD

The currency value of gold and the gold value of currency during the period when gold was at a premium are given in tables 30 and 31.

The index numbers of wholesale prices with variable group weights on a gold basis are shown in table 32; those with constant weights in table 33; and those for basic commodities in table 34. For most uses the prices in currency are the important ones, because these were the prices at which the business of the country was conducted. When inflation occurs, it is the actual price level and not the cause of the price level that is important. Inflation that is due to paper money has the same influence as inflation that is due to more gold.

TABLE 30. CURRENCY VALUE OF GOLD IN THE UNITED STATES, 1814 TO 1817, 1837 TO 1843, AND 1862 TO 1878\*  
(In cents)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1814.....									111.1	111.1	112.4	112.4	.....
1815.....	117.6	102.0	105.3	105.8	105.3	113.0	116.3	114.3	114.9	119.0	114.3	114.3	111.6
1816.....	114.3	109.9	114.3	111.1	114.3	114.3	106.4	105.3	103.1	102.0	101.8	102.3	108.0
1817.....	102.6	102.6											.....
1837.....	100.0	100.0	100.0	100.0	105.2	109.8	109.1	108.7	107.7	105.4	105.7	104.5	104.7
1838.....	104.1	103.3	101.7	101.1	100.5	100.1	100.1	100.1	100.1	100.1	100.2	100.3	101.0
1839.....	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3
1840.....	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3
1841.....	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.2	100.0	100.0	100.0	100.0	100.2
1842.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.3	100.1	100.0
1843.....	100.1	100.0	100.0	100.1	100.1	100.1	100.1	100.1	100.1	100.2	100.2	100.0	100.1
1862.....	102.5	103.5	101.8	101.5	103.3	106.5	115.5	114.5	118.5	128.5	131.1	132.3	113.3
1863.....	145.1	160.5	154.5	151.5	148.9	144.5	130.6	125.8	124.2	147.7	148.0	151.1	145.2
1864.....	155.5	158.6	162.9	172.7	176.3	210.7	258.1	254.1	222.5	207.2	232.5	227.5	203.3
1865.....	216.2	205.5	173.8	148.5	135.6	140.1	142.1	143.5	143.9	145.5	147.0	146.2	157.3
1866.....	140.1	138.4	130.5	127.3	131.8	148.7	151.6	148.7	145.5	148.3	143.8	136.7	140.9
1867.....	134.6	137.4	135.0	135.6	137.0	137.5	139.4	140.8	143.4	143.5	139.6	134.8	138.2
1868.....	138.5	141.4	139.5	138.7	139.6	140.1	142.7	145.5	143.6	137.1	134.4	135.2	139.7
1869.....	135.6	134.4	131.3	132.9	139.2	138.1	136.1	134.2	136.8	130.2	126.2	121.5	133.0
1870.....	121.3	119.5	112.6	113.1	114.7	112.9	116.8	117.9	114.8	112.8	111.4	110.7	114.9
1871.....	110.7	111.5	111.0	110.6	111.5	112.4	112.4	112.4	114.5	113.2	111.2	109.3	111.7
1872.....	109.1	110.3	110.1	111.1	113.7	113.9	114.3	114.4	113.5	113.2	112.9	112.2	112.4
1873.....	112.7	114.1	115.5	117.8	117.7	116.5	115.7	115.4	112.7	108.9	108.6	110.0	113.8
1874.....	111.4	112.3	112.1	113.4	112.4	111.3	110.0	109.7	109.7	110.0	110.9	111.7	111.2
1875.....	112.5	114.5	115.5	114.8	115.8	117.0	114.8	113.5	115.5	116.4	114.7	113.9	114.9
1876.....	112.8	113.4	114.3	113.0	112.6	112.5	111.9	111.2	110.0	109.7	109.1	107.9	111.5
1877.....	106.3	105.4	104.8	106.2	106.9	105.4	105.4	105.0	103.3	102.5	102.8	102.8	104.8
1878.....	102.1	102.0	101.2	100.6	100.7	100.8	100.5	100.5	100.4	100.5	100.2	100.1	100.8

\* The prices from 1837 to 1843 were tabulated from the commercial and shipping lists of the New York City Public Library by Miss Marian Skilling, of the Dairymen's League Co-operative Association, Inc.; those from 1862 to 1878 are from *Gold, Prices, and Wages under the Greenback Standard*, by W. C. Mitchell (Univ. California publications in economics, vol. 1, p. 5-13, March 27, 1908).

TABLE 31. GOLD VALUE OF CURRENCY IN THE UNITED STATES, 1862 TO 1878\*  
(In cents)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1862.....	97.6	96.6	98.2	98.5	96.8	93.9	86.6	87.3	84.4	77.8	76.3	75.6	88.3
1863.....	68.9	62.3	64.7	66.0	67.2	69.2	76.6	79.5	74.5	67.7	67.6	66.2	69.9
1864.....	64.3	63.1	61.4	57.9	56.7	47.5	28.7	30.4	44.9	48.3	42.8	44.0	49.3
1865.....	46.3	48.7	57.5	67.3	73.7	71.4	70.4	69.7	69.5	68.7	68.0	68.4	63.6
1866.....	71.4	72.3	76.6	78.6	75.9	67.2	66.0	67.2	68.7	67.4	69.5	73.2	71.0
1867.....	74.3	72.8	74.1	73.7	73.0	72.7	71.7	71.0	69.7	69.7	71.0	74.2	72.4
1868.....	72.2	70.7	71.7	72.1	71.6	71.4	70.1	68.7	69.6	72.9	74.4	74.0	71.6
1869.....	73.7	74.4	76.2	75.2	71.8	72.4	73.5	74.5	73.1	76.8	79.2	82.3	75.2
1870.....	82.4	83.7	88.8	88.4	87.2	88.6	85.6	84.8	87.1	88.7	89.8	90.3	87.0
1871.....	90.3	89.7	90.1	90.4	89.7	89.0	89.0	89.0	87.3	88.3	89.9	91.5	89.5
1872.....	91.7	90.7	90.8	90.0	88.0	87.8	87.5	87.4	88.1	88.3	88.6	89.1	89.0
1873.....	88.7	87.6	86.6	84.9	85.0	85.8	86.4	86.7	88.7	91.8	92.1	90.9	87.9
1874.....	89.7	89.1	89.2	88.2	89.0	90.0	91.0	91.2	91.2	91.0	90.2	89.6	89.9
1875.....	88.9	87.3	86.6	87.1	86.3	85.4	87.2	88.1	86.4	85.9	87.2	87.8	87.0
1876.....	88.6	88.2	87.5	88.5	88.8	88.9	89.4	89.9	90.9	91.2	91.7	92.6	89.8
1877.....	94.0	94.8	95.4	94.2	93.5	94.9	94.9	95.2	96.8	97.3	97.3	97.3	95.4
1878.....	97.9	98.0	98.8	99.4	99.3	99.2	99.5	99.5	99.6	99.5	99.8	99.9	99.2

\* Mitchell, W. C. *Gold, prices, and wages under the greenback standard*. Univ. California publications in economics, vol. 1, p. 5-13. March 27, 1908.

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TABLE 32. INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES IN GOLD, VARIABLE GROUP WEIGHTS, 1862 TO 1878\* (1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1862....	96	96	96	97	92	88	85	92	90	86	92	93	92
1863....	87	85	91	90	87	87	97	101	92	91	96	98	92
1864....	98	98	99	97	99	90	85	89	101	100	92	98	96
1865....	103	106	118	120	125	114	113	117	124	131	129	126	119
1866....	129	127	133	130	130	116	115	118	120	121	122	124	124
1867....	125	122	123	123	123	116	113	119	110	111	112	115	118
1868....	113	112	117	119	117	113	110	109	109	112	114	113	113
1869....	114	117	117	114	107	106	109	114	111	114	118	121	114
1870....	117	116	120	118	119	120	116	114	117	118	118	116	117
1871....	118	121	123	119	116	113	113	111	112	115	117	122	117
1872....	122	121	123	124	121	120	118	119	121	118	122	121	121
1873....	121	122	120	118	116	113	114	114	117	118	115	116	117
1874....	117	116	116	113	113	112	114	113	113	111	109	108	113
1875....	108	106	105	106	103	100	102	104	101	101	101	101	103
1876....	101	101	100	100	97	94	95	96	98	100	102	105	99
1877....	108	106	102	104	105	101	102	98	99	99	97	97	102
1878....	95	94	93	92	89	87	89	90	90	89	88	86	90

\*Tables 1 and 30.

TABLE 33. INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES IN GOLD, CONSTANT GROUP WEIGHTS, 1862 TO 1878\* (1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1862....	99	98	98	99	94	90	87	93	92	89	94	95	94
1863....	89	87	93	92	89	89	100	103	95	93	99	101	94
1864....	101	101	101	100	101	92	87	91	104	102	95	100	98
1865....	105	108	121	123	128	117	116	120	127	133	132	129	122
1866....	132	130	135	133	131	118	117	120	121	122	124	126	126
1867....	127	123	124	125	124	117	115	114	112	113	113	116	119
1868....	114	112	118	120	117	114	111	110	111	114	115	115	114
1869....	116	118	119	115	108	108	110	116	113	116	120	123	115
1870....	119	117	122	120	120	121	117	115	118	120	119	117	119
1871....	120	123	125	121	118	115	115	114	113	117	120	124	119
1872....	124	122	124	126	123	122	120	121	123	121	125	124	123
1873....	122	124	122	120	117	116	117	117	120	120	117	118	119
1874....	118	118	117	115	114	113	115	115	115	112	110	109	114
1875....	108	107	107	104	101	103	105	102	101	102	102	104	104
1876....	102	101	100	101	98	95	96	97	99	101	103	106	100
1877....	109	106	103	104	105	102	102	98	100	100	97	97	102
1878....	96	95	93	92	90	88	89	91	90	89	89	87	91

\*Tables 29 and 30.

TABLE 34. INDEX NUMBERS OF WHOLESALE PRICES OF BASIC COMMODITIES IN THE UNITED STATES IN GOLD, 1862 TO 1878\*  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1862....	122	120	119	118	117	113	107	121	121	117	124	125	119
1863....	119	121	130	125	119	120	133	131	122	123	130	131	125
1864....	130	131	133	128	129	120	115	120	131	125	119	123	125
1865....	126	127	139	134	144	128	125	130	138	144	141	138	135
1866....	140	134	141	138	135	123	122	126	128	119	130	130	131
1867....	130	124	127	126	126	122	121	121	119	118	117	117	122
1868....	116	115	121	125	122	121	118	117	117	121	121	118	119
1869....	120	124	125	120	115	117	121	124	121	122	127	129	122
1870....	124	124	126	125	126	128	123	123	123	123	124	120	124
1871....	123	124	125	121	117	117	117	117	117	120	123	127	121
1872....	127	128	129	132	131	131	127	128	128	127	128	127	129
1873....	129	130	127	125	122	121	120	121	123	122	119	119	123
1874....	119	119	118	116	116	118	119	121	121	118	118	114	118
1875....	113	110	109	111	108	104	107	108	105	106	106	105	108
1876....	105	104	103	103	99	96	96	96	97	98	104	106	101
1877....	109	107	104	104	107	103	104	99	102	102	100	100	103
1878....	100	97	96	94	90	88	90	91	92	89	88	85	92

\* Tables 29 and 30.

#### GROUP INDEX NUMBERS

Over a century of time, cotton and wool have declined in price and food and farm products have risen relative to other commodities. Since the farm-products group includes more foods than textiles, the entire farm-products group has risen as compared with all commodities (figure 26 and table 35, page 84).

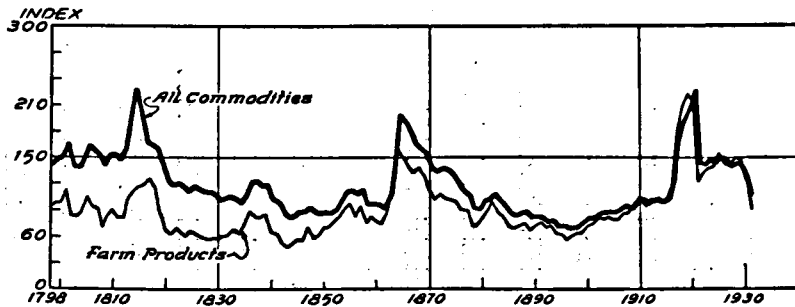


FIGURE 26. INDEX NUMBERS OF THE WHOLESALE PRICES OF FARM PRODUCTS AND ALL COMMODITIES, 1798 TO 1931 (TABLES 35 AND 28)  
(1910-14 = 100)

During the past century, prices of farm products have risen as compared with prices of all commodities

Imported food products have in general declined in price. Home-grown foods have generally risen to some extent. The average of the food group follows closely the average for all groups when constant weighting is used (figure 27 and table 36, page 86).

Hides and leather have risen in price as compared with the average for all commodities (figure 28 and table 37, page 89).

Textiles have declined in price as compared with all commodities (figure 29 and table 38, page 92).

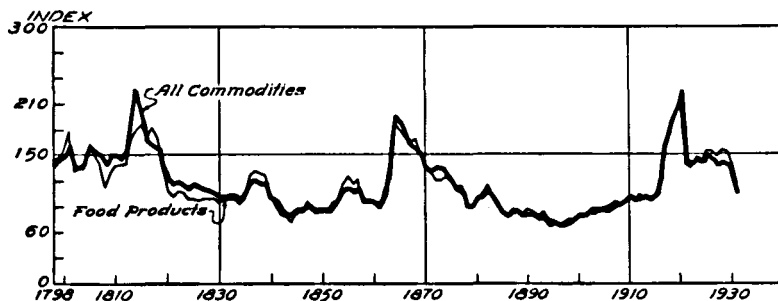


FIGURE 27. INDEX NUMBERS OF THE WHOLESALE PRICES OF FOOD PRODUCTS AND ALL COMMODITIES, 1798 TO 1931 (TABLES 36 AND 28)  
(1910-14=100)

Food products have changed in price approximately the same as has the average for all commodities

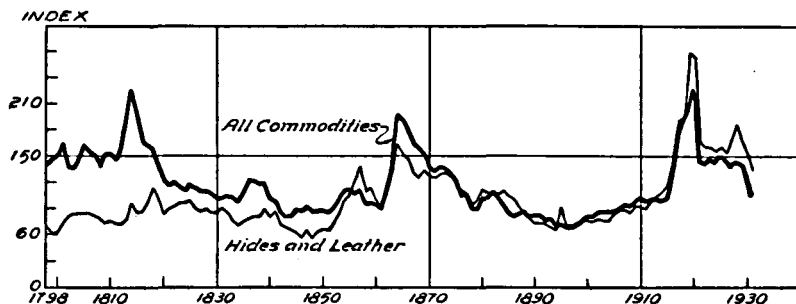


FIGURE 28. INDEX NUMBERS OF THE WHOLESALE PRICES OF HIDES AND LEATHER AND ALL COMMODITIES, 1798 TO 1931 (TABLES 37 AND 28)  
(1910-14=100)

Hides and leather have risen in price as compared with all commodities

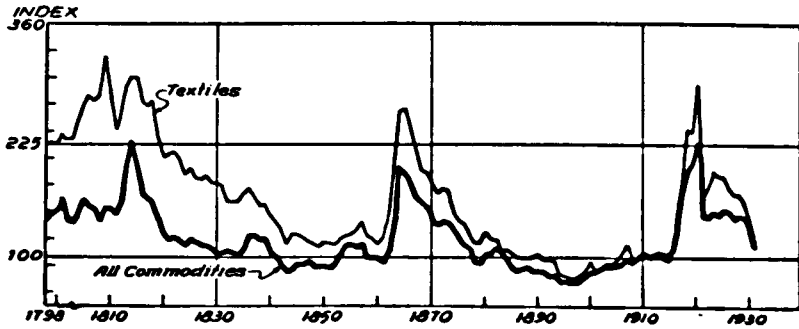


FIGURE 29. INDEX NUMBERS OF THE WHOLESALE PRICES OF TEXTILES AND ALL COMMODITIES, 1798 TO 1931 (TABLES 38 AND 28)

(1910-14 = 100)

Textiles have declined in price as compared with all commodities

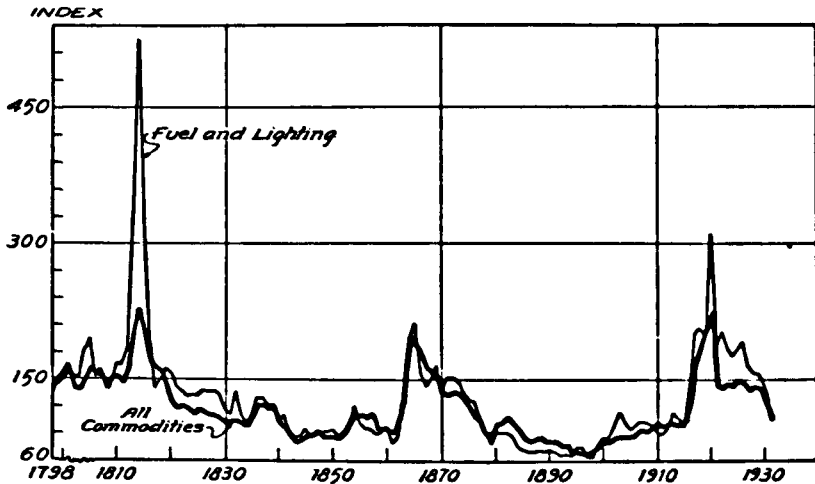


FIGURE 30. INDEX NUMBERS OF THE WHOLESALE PRICES OF FUEL AND LIGHTING AND ALL COMMODITIES, 1798 TO 1931 (TABLES 39 AND 28)

(1910-14 = 100)

Fuel and lighting have declined in price as compared with all commodities

Considerable wood is used for fuel. This was an important fuel material a century ago. It is not included in the fuel-and-lighting group because no prices were available. The other materials included in the fuel index have declined during the century (figure 30 and table 39, page 94). Coal was very high in price in the earlier part of the period. Much coal was brought from England. This index number rose very high during the war of 1812, when shipping was stopped.

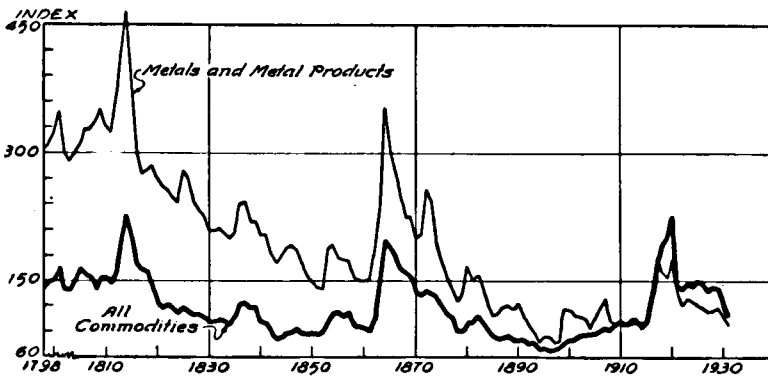


FIGURE 31. INDEX NUMBERS OF THE WHOLESALE PRICES OF METALS AND METAL PRODUCTS AND ALL COMMODITIES, 1798 TO 1931 (TABLES 40 AND 28) (1910-14=100)

Metals have declined in price as compared with all commodities

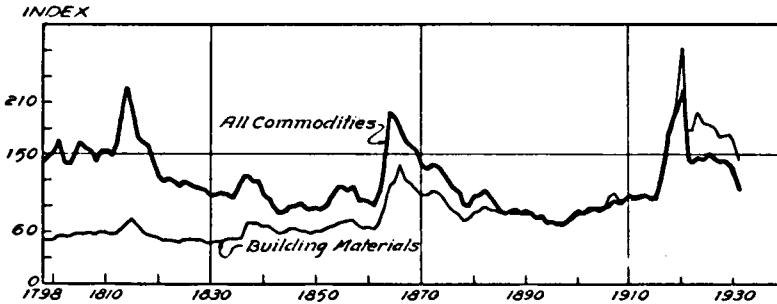


FIGURE 32. INDEX NUMBERS OF THE WHOLESALE PRICES OF BUILDING MATERIALS AND ALL COMMODITIES, 1798 TO 1931 (TABLES 41 AND 28) (1910-14=100)

Building materials have risen in price as compared with all commodities



Prices of metals and metal products have declined materially in the past century (figure 31 and table 40, page 97).

The building-materials index includes nails, glass, and the like, which have declined in price, and lumber, which has risen. The resulting index shows a material and constant rise over the whole period (figure 32 and table 41, page 99).

The drugs-and-chemicals group includes only a limited number of commodities in the earlier years, but the striking decline in price is probably representative of this group of commodities (figure 33 and table 42, page 102).

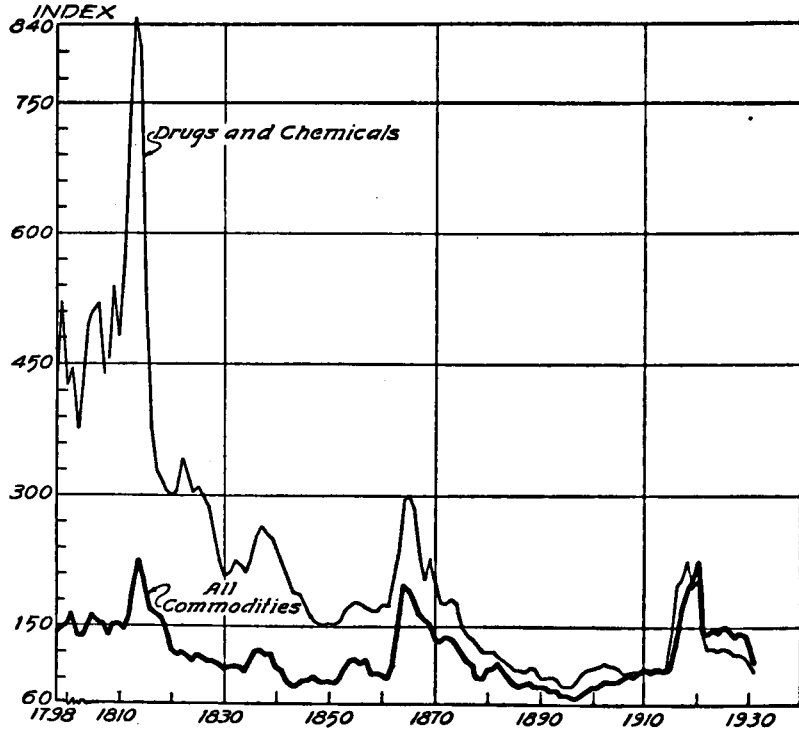


FIGURE 33. INDEX NUMBERS OF THE WHOLESALE PRICES OF DRUGS AND CHEMICALS AND ALL COMMODITIES, 1798 TO 1931 (TABLES 42 AND 28)

(1910-14 = 100)

Drugs and chemicals have declined strikingly as compared with all commodities

The house-furnishings group was calculated from 1840 to 1889. Prices were not available prior to that time (table 43, page 105).

Spirits (alcoholic drinks) were comparatively cheap until high taxes were placed on them in the Civil War period. The taxes and prices remained high so long as the sale of such drinks was legalized (figure 34 and table 44, page 106).

The miscellaneous-group index is about the same as the average of all commodities (figure 35 and table 45, page 109).

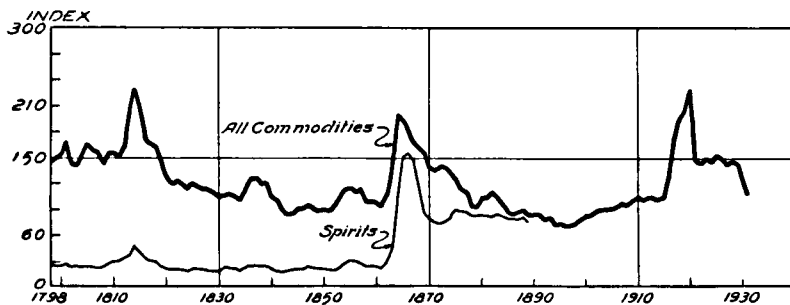


FIGURE 34. INDEX NUMBERS OF WHOLESALE PRICES OF SPIRITS AND ALL COMMODITIES, 1798 TO 1931 (TABLES 44 AND 28)  
(1910-14 = 100)

Spirits were comparatively cheap until heavy taxes were placed on them during the Civil War period. High taxes and high prices continued until the sale of alcoholic beverages was prohibited

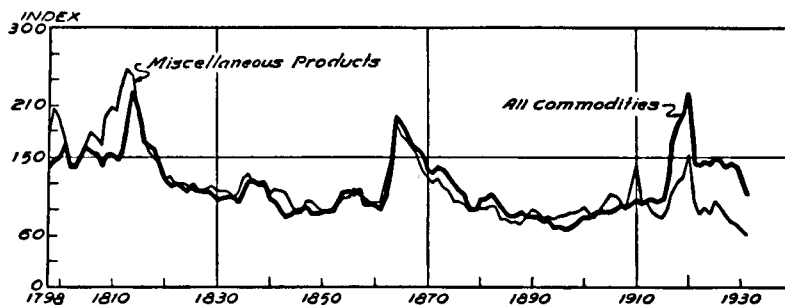


FIGURE 35. INDEX NUMBERS OF WHOLESALE PRICES OF MISCELLANEOUS PRODUCTS AND ALL COMMODITIES, 1798 TO 1931 (TABLES 45 AND 28)  
(1910-14 = 100)

Prices of miscellaneous products followed the all-commodity index rather closely

TABLE 35. INDEX NUMBERS OF THE WHOLESALE PRICES OF FARM PRODUCTS,  
1785 TO 1932\*  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1785....	.....	.....	.....	.....	.....	.....	.....	.....	79	77	75	76	.....
1786....	73	73	73	69	70	70	71	74	79	83	84	84	.....
1787....	84	83	84	84	84	84	74	74	73	69	70	69	.....
1788....	.....	.....	59	.....	.....	.....	.....	.....	.....	.....	.....	63	.....
1789....	63	63	65	68	68	73	71	69	68	72	69	66	.....
1790....	62	66	72	75	72	71	68	68	70	66	68	63	.....
1791....	62	58	58	59	58	58	51	57	57	58	57	57	.....
1792....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1793....	.....	.....	.....	76	76	76	75	74	74	74	74	74	.....
1794....	74	74	74	66	69	72	75	77	79	80	80	85	.....
1795....	92	88	90	95	106	119	114	119	99	101	101	102	.....
1796....	111	106	125	124	126	122	119	109	110	125	110	108	1
1797....	104	113	101	91	91	85	93	94	95	101	102	102	.....
1798....	102	97	95	94	92	91	91	91	91	92	92	93	.....
1799....	94	94	94	93	94	97	97	99	100	102	104	103	.....
1800....	95	91	91	89	93	98	99	100	104	107	111	107	.....
1801....	112	116	116	116	117	118	119	117	116	109	105	95	1
1802....	94	87	84	82	81	83	83	83	85	82	82	80	.....
1803....	78	79	80	79	80	79	83	89	89	90	83	84	.....
1804....	84	84	86	82	81	81	83	88	93	99	102	106	.....
1805....	106	107	112	113	109	108	103	103	104	104	105	103	1
1806....	101	101	94	93	91	93	97	97	97	94	92	93	.....
1807....	94	94	93	90	92	93	92	92	91	91	90	89	.....
1808....	84	76	71	68	68	68	67	68	68	69	71	70	.....
1809....	71	74	85	82	87	86	86	87	85	83	87	86	.....
1810....	88	91	86	88	88	88	92	93	95	82	93	91	.....
1811....	90	83	85	86	85	81	80	81	78	81	80	78	.....
1812....	82	85	81	78	73	79	74	77	80	84	88	91	.....
1813....	98	99	99	103	108	100	100	99	100	108	112	116	1
1814....	114	114	111	113	109	108	109	109	109	111	114	117	1
1815....	115	113	108	101	107	112	118	123	123	129	131	126	1
1816....	122	123	119	114	112	117	120	118	119	117	119	125	1
1817....	128	130	130	133	133	132	124	128	120	118	115	117	1
1818....	119	121	119	113	115	116	113	118	116	122	120	112	1
1819....	105	101	100	93	87	82	81	82	82	84	78	74	.....
1820....	76	74	68	65	68	68	68	70	70	65	60	61	.....
1821....	61	58	56	57	61	61	62	66	67	69	71	74	.....
1822....	74	73	74	72	72	71	69	65	66	66	67	65	.....
1823....	65	64	64	63	61	64	66	65	65	63	62	63	.....
1824....	62	61	60	60	61	63	63	62	61	62	61	60	.....
1825....	59	63	63	71	74	73	71	68	68	68	65	66	.....
1826....	64	64	68	62	59	62	64	60	60	61	61	60	.....
1827....	61	62	60	60	58	60	58	58	58	56	56	60	.....
1828....	58	57	54	54	55	56	56	56	58	61	62	63	.....
1829....	64	62	61	61	61	61	56	56	56	55	56	55	.....
1830....	55	55	55	55	56	58	58	60	61	62	59	59	.....
1831....	60	62	62	63	63	62	61	60	61	61	61	61	.....
1832....	64	63	63	61	61	62	62	63	64	64	66	66	.....
1833....	67	67	67	67	69	69	69	71	71	71	70	67	.....
1834....	64	64	62	62	62	62	62	64	65	65	66	65	.....

\* On the 1926 base, the average of the farm-products index of the Bureau of Labor Statistics (Bulletins 521 and 453) for the five years 1910-14 is 71.28. To convert index numbers since 1890 to the 1910-14 base, multiply by 1.402918.

For the four years 1890-93, the Bureau of Labor Statistics index numbers on the 1910-14 base averaged 72.04. On the 1876-81 base, the four years 1890-93 averaged 81.642. The index numbers prior to January, 1890, were converted to the 1910-14 base by multiplying by 0.7881.

From April, 1861, to October, 1871, the weights for cotton were reduced in proportion to the reduced quantities used.

TABLE 35 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1835	67	67	69	72	75	78	80	80	78	78	79	82	75
1836	81	83	88	89	89	85	85	88	90	94	95	96	89
1837	94	97	95	87	78	80	82	81	77	77	78	83	84
1838	80	79	77	78	81	79	79	79	83	88	87	92	82
1839	92	94	92	94	92	89	85	83	81	78	74	72	86
1840	66	67	66	65	66	65	64	64	65	64	64	65	65
1841	65	66	64	62	62	63	64	65	67	66	62	61	64
1842	58	58	57	56	56	55	54	51	51	49	47	48	53
1843	48	46	45	46	48	48	49	48	50	48	49	51	48
1844	52	54	54	53	52	50	49	50	50	51	53	53	52
1845	53	53	54	55	54	55	57	58	60	60	63	68	58
1846	66	63	62	62	58	55	53	52	59	59	59	60	58
1847	63	73	75	76	78	82	74	69	70	69	66	63	72
1848	62	62	62	62	60	58	54	54	58	60	57	58	59
1849	63	63	64	61	61	60	60	61	63	63	64	65	62
1850	68	70	70	70	71	73	72	69	69	71	73	73	71
1851	77	77	75	74	73	70	69	69	69	67	67	69	71
1852	72	74	76	76	74	75	77	79	78	78	82	83	77
1853	82	81	81	80	80	80	81	84	83	85	85	88	83
1854	91	101	94	95	99	98	91	90	89	85	91	94	93
1855	98	99	104	109	111	111	100	94	89	86	89	91	98
1856	90	90	87	85	82	77	80	81	81	84	86	90	84
1857	94	96	98	98	101	102	101	98	95	87	84	80	95
1858	75	78	79	79	76	73	74	74	74	76	76	79	76
1859	83	87	89	89	86	84	82	79	76	75	79	79	82
1860	78	79	79	77	79	76	78	76	78	78	78	73	77
1861	81	78	77	78	76	70	68	70	72	72	77	80	75
1862	83	81	81	81	75	75	80	85	86	93	99	104	86
1863	109	123	125	120	110	105	104	112	99	111	116	122	113
1864	130	134	139	142	146	162	183	192	188	163	180	187	162
1865	186	184	174	146	131	123	126	131	139	147	146	141	148
1866	142	138	139	134	141	143	141	141	141	149	141	133	140
1867	137	136	140	143	146	132	129	129	127	126	124	129	133
1868	134	142	149	152	148	139	139	140	135	127	122	127	138
1869	134	136	132	129	127	125	122	134	130	122	119	121	128
1870	118	118	115	117	119	116	117	108	110	107	103	101	112
1871	103	107	110	105	102	101	102	98	100	99	97	101	102
1872	106	108	112	115	114	112	106	105	104	106	104	104	108
1873	107	109	111	110	106	100	101	99	100	95	93	100	103
1874	105	104	106	106	103	102	102	101	104	97	98	99	102
1875	100	100	103	107	103	98	99	100	97	94	93	91	99
1876	92	94	96	96	89	83	84	83	85	87	88	92	89
1877	97	95	92	95	96	91	91	85	85	84	80	81	89
1878	79	78	75	74	71	68	71	72	72	70	68	67	72
1879	67	72	72	71	73	71	69	67	69	73	77	82	72
1880	84	84	85	81	78	76	76	76	78	78	79	81	80
1881	84	86	86	88	87	85	87	90	95	96	94	95	89
1882	96	97	99	103	104	105	104	105	98	93	92	90	99
1883	92	95	94	94	93	87	83	82	82	81	81	82	87
1884	85	87	88	85	83	82	81	82	81	78	74	73	82
1885	75	77	74	76	73	70	71	72	69	10	70	72	72
1886	70	71	72	69	67	65	67	66	67	66	64	67	68
1887	69	70	72	73	72	70	69	70	69	69	71	75	71
1888	76	76	76	75	75	73	75	76	76	75	74	74	75
1889	71	70	69	69	66	66	66	66	66	66	65	65	67
1890	63	66	68	69	71	69	69	75	75	75	74	74	71
1891	74	74	78	82	80	76	76	76	76	74	74	74	76
1892	70	70	67	64	67	67	69	70	69	70	73	76	69
1893	81	82	87	75	74	69	67	64	69	71	68	67	72
1894	66	63	61	62	59	61	61	63	67	63	63	62	63

TABLE 35 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1895....	61	60	61	63	64	64	63	63	61	61	59	58	62
1896....	59	58	56	55	53	51	51	53	54	57	60	59	56
1897....	59	58	56	57	57	56	57	61	64	62	63	64	60
1898....	64	66	65	66	73	62	60	59	59	59	60	62	63
1899....	63	63	62	62	61	61	62	65	67	68	68	69	64
1900....	69	69	69	70	68	69	71	72	73	72	73	74	71
1901....	74	72	71	71	70	71	72	75	77	77	77	82	74
1902....	82	81	80	81	83	82	86	82	83	82	80	79	82
1903....	79	79	79	79	77	78	77	78	79	77	76	79	78
1904....	82	85	85	82	80	79	80	81	83	83	83	81	82
1905....	79	81	79	79	77	77	81	80	78	79	80	81	79
1906....	80	79	79	80	80	80	80	78	79	82	83	85	80
1907....	83	86	83	83	86	88	88	88	90	92	94	87	87
1908....	84	82	85	85	86	87	88	89	89	89	91	92	87
1909....	91	93	94	97	100	100	100	97	100	101	105	107	98
1910....	107	107	110	107	104	103	105	106	104	102	98	98	104
1911....	98	92	90	89	89	91	93	96	95	96	97	97	94
1912....	96	98	100	104	105	102	101	103	104	104	103	101	102
1913....	99	97	98	98	97	98	100	101	105	105	105	103	100
1914....	102	102	101	100	100	100	100	102	100	96	98	97	100
1915....	100	102	100	101	101	99	101	100	97	101	100	103	100
1916....	108	108	108	109	110	110	113	121	126	132	141	139	118
1917....	146	151	159	176	187	188	189	192	191	196	200	198	181
1918....	206	207	207	203	197	197	206	215	220	212	211	212	208
1919....	216	208	214	222	227	220	231	229	216	214	224	222	221
1920....	239	229	231	237	238	235	225	210	202	179	167	147	211
1921....	143	130	126	116	117	113	121	126	126	126	123	123	124
1922....	123	133	131	130	132	130	134	128	130	132	137	139	132
1923....	140	140	141	138	136	135	132	134	140	141	143	142	136
1924....	142	139	134	137	133	132	138	143	141	145	145	152	140
1925....	160	158	158	151	151	153	157	157	154	150	152	148	154
1926....	151	147	143	144	144	142	138	136	139	137	133	133	141
1927....	135	134	132	132	135	135	137	144	149	147	146	146	139
1928....	149	147	145	151	154	150	152	150	153	145	143	145	149
1929....	149	148	150	147	143	145	151	151	150	146	142	143	147
1930....	142	137	133	134	130	125	117	119 <sup>v</sup>	120	116	111	105	124
1931....	103	98	99	98	94	92	91	89 <sup>v</sup>	85	82	82	78	91
1932....	74	71	70	69	65	64	67	69 <sup>v</sup>	69	66	66	62	68

TABLE 36. INDEX NUMBERS OF THE WHOLESALE PRICES OF FOODS, 1786 TO 1932\*  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1786....	...	...	...	...	...	...	...	...	...	...	112	114	...
1787....	113	112	108	105	104	103	101	101	99	99	98	97	103
1788....	...	...	91	...	...	...	...	...	...	...	...	95	...
1789....	95	98	92	91	92	96	95	94	95	96	93	95	94
1790....	99	99	104	105	106	107	107	107	108	107	103	100	104
1791....	100	99	96	97	98	99	100	100	100	102	102	100	99

\* On the 1926 base, the average of the foods index of the Bureau of Labor Statistics (Bulletins 521 and 453) for the five years 1910-14 is 64.520. To convert index numbers since January, 1890, to the 1910-14 base, multiply by 1.549907.

For the four years 1890-93, the Bureau of Labor Statistics index numbers on the 1910-14 base averaged 83.695. On the 1876-91 base, the four years 1890-93 averaged 85.842. The index numbers prior to 1890 were converted to the 1910-14 base by multiplying by 0.9421.

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932

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TABLE 36 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1792	....	....	....	....	....	....	....	....	....	....	....	....	....
1793	....	....	....	....	....	....	....	....	....	....	....	....	....
1794	132	132	136	130	131	131	134	134	137	139	139	143	135
1795	151	151	153	156	161	163	171	164	173	173	170	170	163
1796	179	187	194	191	193	190	187	184	184	184	184	181	186
1797	179	178	172	169	170	164	160	158	154	148	152	152	163
1798	155	155	149	146	142	138	139	140	141	144	146	148	145
1799	149	146	144	143	142	142	148	147	149	151	153	154	147
1800	154	150	150	147	150	153	158	162	169	164	162	161	157
1801	174	178	183	185	184	184	186	183	181	171	163	146	177
1802	140	133	132	132	130	131	132	133	134	134	126	124	132
1803	130	130	131	131	133	133	136	141	142	143	137	137	135
1804	140	141	141	138	133	133	135	137	143	144	154	163	142
1805	164	165	171	168	165	166	161	157	159	159	158	155	162
1806	150	151	151	147	151	145	156	155	154	149	143	143	150
1807	146	150	145	143	144	142	143	140	140	138	135	134	142
1808	130	125	119	111	109	107	105	107	108	106	112	116	113
1809	120	123	133	129	132	134	132	133	135	125	129	127	129
1810	130	132	132	135	133	133	141	142	145	147	148	146	139
1811	149	144	144	144	143	140	137	140	138	138	134	131	140
1812	138	140	139	136	132	136	133	140	143	146	153	156	141
1813	168	170	172	175	173	165	163	164	167	176	183	188	172
1814	182	180	181	179	176	176	177	178	178	183	188	193	181
1815	190	182	180	168	179	185	193	201	202	194	186	180	187
1816	179	179	178	168	166	170	171	173	172	164	168	174	172
1817	189	190	192	191	195	190	180	189	180	176	172	177	184
1818	182	182	180	167	161	167	166	171	172	177	174	166	172
1819	161	155	153	147	143	138	136	134	133	134	127	122	140
1820	120	118	111	108	110	107	105	110	110	106	101	102	109
1821	102	99	97	97	98	96	98	102	107	109	110	113	102
1822	113	111	110	109	108	110	108	106	106	108	111	110	109
1823	110	110	109	108	107	110	112	110	108	107	102	103	108
1824	100	98	97	98	99	101	100	100	101	100	99	97	99
1825	97	96	97	97	102	102	100	101	104	103	101	99	100
1826	99	99	97	97	95	96	101	98	96	100	98	100	98
1827	102	104	102	102	101	99	98	98	99	98	98	103	100
1828	100	97	95	94	93	95	97	96	100	107	107	108	99
1829	108	110	107	104	103	103	97	96	97	94	92	92	100
1830	91	90	91	91	92	93	93	94	99	98	95	95	94
1831	97	100	101	103	100	97	94	93	96	98	98	98	98
1832	104	100	96	93	95	97	98	98	100	100	103	103	99
1833	103	99	98	99	99	97	98	100	102	103	101	101	100
1834	97	96	93	91	90	91	90	92	93	92	92	93	93
1835	94	96	98	102	107	111	114	116	111	106	108	117	107
1836	119	120	123	133	128	120	117	120	126	136	142	143	128
1837	142	150	148	137	118	123	133	128	123	124	126	133	132
1838	129	123	123	124	122	122	123	124	129	137	137	138	128
1839	138	138	136	135	131	128	123	121	122	116	112	109	126
1840	106	107	107	105	101	98	98	102	103	101	99	96	102
1841	92	90	83	87	88	84	89	93	99	93	89	90	90
1842	89	87	84	83	82	82	78	78	76	75	73	76	80
1843	73	72	73	76	78	80	82	81	81	77	76	75	77
1844	69	70	70	73	74	73	72	72	72	71	72	72	72
1845	76	77	82	85	84	81	81	82	87	85	92	98	84
1846	94	90	87	86	81	79	74	75	76	87	89	87	84
1847	89	97	101	102	103	107	98	90	92	91	94	91	96
1848	89	87	87	88	87	84	85	85	91	89	85	86	87
1849	93	91	91	89	86	83	87	90	92	87	84	85	88
1850	84	86	86	84	84	85	83	83	83	83	84	83	84
1851	86	86	86	86	87	84	82	81	81	83	82	83	84
1852	87	89	94	93	93	92	97	99	99	97	98	102	95

TABLE 36 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1853....	103	100	97	92	94	92	92	95	98	104	107	106	98
1854....	110	117	115	113	116	120	112	118	125	114	122	120	117
1855....	119	116	120	123	131	134	124	124	127	130	132	134	126
1856....	129	124	118	115	108	106	110	117	115	117	117	119	116
1857....	122	126	129	127	130	132	131	134	134	117	102	97	123
1858....	93	92	96	101	100	95	93	100	105	104	97	98	97
1859....	99	106	104	102	104	108	99	94	91	91	83	96	99
1860....	96	94	96	93	95	93	97	96	98	99	100	96	96
1861....	93	93	91	91	88	85	81	81	83	92	95	95	89
1862....	106	109	108	106	101	96	98	105	106	112	122	120	107
1863....	121	131	132	124	120	113	113	111	112	124	134	140	123
1864....	146	145	154	168	167	182	218	218	222	205	217	229	190
1865....	233	225	203	166	155	144	146	160	169	190	188	176	180
1866....	165	165	170	172	179	177	175	176	172	180	177	168	173
1867....	166	164	163	171	175	162	162	161	169	174	170	170	167
1868....	173	173	180	182	178	170	166	170	170	167	159	158	171
1869....	158	161	158	154	151	146	148	153	153	151	156	154	154
1870....	146	137	133	130	135	137	140	146	142	146	141	136	139
1871....	139	147	143	138	128	125	122	119	121	125	126	129	130
1872....	124	124	123	124	124	118	115	118	119	112	124	123	121
1873....	119	130	129	128	123	116	118	119	122	119	117	129	122
1874....	132	133	131	125	124	119	125	126	126	125	123	123	126
1875....	122	121	122	120	118	115	117	118	119	124	122	119	120
1876....	118	116	116	116	111	106	105	108	109	113	116	121	113
1877....	125	119	113	120	125	116	116	110	110	111	110	108	115
1878....	105	103	97	96	90	87	87	91	91	90	90	89	93
1879....	91	89	88	85	85	82	84	83	88	96	103	104	90
1880....	103	102	101	95	92	90	93	94	94	95	98	100	96
1881....	98	100	99	102	99	100	103	107	116	119	114	114	106
1882....	112	114	112	113	115	119	119	118	114	114	110	109	114
1883....	108	110	108	108	106	101	99	99	97	98	98	100	103
1884....	100	101	99	94	91	91	90	91	91	91	90	87	93
1885....	89	89	87	89	85	79	80	80	81	82	84	86	84
1886....	85	84	80	78	74	73	74	78	78	78	78	82	78
1887....	85	86	87	86	85	83	83	84	84	86	87	90	86
1888....	90	88	87	86	84	83	83	82	85	87	91	91	86
1889....	84	81	80	78	76	76	77	77	80	80	80	81	79
1890....	86	84	84	83	82	82	83	88	91	91	91	92	86
1891....	90	90	93	87	86	82	81	81	83	83	83	84	85
1892....	82	81	79	75	74	73	76	79	82	83	86	88	79
1893....	92	92	88	87	86	83	81	79	83	86	82	80	85
1894....	77	76	73	72	71	71	73	77	80	78	78	77	75
1895....	76	76	73	74	74	74	72	72	72	74	74	74	78
1896....	73	71	70	69	67	65	65	66	66	69	73	73	68
1897....	71	71	69	68	66	66	66	72	76	76	76	77	71
1898....	76	75	74	74	80	73	73	73	73	72	74	75	74
1899....	74	75	73	73	71	72	72	73	75	77	78	79	74
1900....	78	77	77	75	75	77	79	80	81	81	82	82	79
1901....	80	78	76	77	76	76	77	78	79	79	80	84	78
1902....	83	84	81	83	82	81	81	80	81	83	85	87	83
1903....	85	82	82	81	79	79	78	80	80	82	82	82	81
1904....	83	85	82	81	79	80	81	83	85	86	90	92	84
1905....	93	93	88	88	84	82	82	83	82	82	83	84	85
1906....	83	82	81	80	79	80	81	83	84	86	88	89	83
1907....	87	87	84	84	85	85	86	88	91	95	94	93	88
1908....	91	90	89	89	88	89	90	90	91	94	95	96	91
1909....	94	94	93	94	95	95	95	96	98	101	104	105	97
1910....	104	101	103	101	98	97	100	101	102	101	100	100	101
1911....	97	93	90	88	87	90	93	97	101	104	106	103	96
1912....	105	104	102	103	103	101	101	102	104	106	107	105	104

TABLE 36 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1913.....	98	97	98	98	96	97	100	102	102	102	103	101	100
1914.....	100	98	96	94	95	96	97	107	109	106	105	103	100
1915.....	103	103	102	101	101	99	100	98	97	101	105	106	101
1916.....	105	106	108	110	111	113	115	119	122	130	135	132	117
1917.....	134	138	143	158	168	165	163	170	172	178	178	177	162
1918.....	178	178	172	176	176	176	183	186	192	197	199	202	185
1919.....	199	188	196	199	204	197	202	205	199	200	203	214	201
1920.....	225	214	211	224	228	231	228	215	209	198	192	170	213
1921.....	161	147	145	139	133	130	136	142	140	139	139	135	140
1922.....	129	130	131	131	131	134	137	135	137	142	147	147	136
1923.....	143	141	144	145	143	142	140	139	146	148	147	144	144
1924.....	142	141	138	134	132	134	135	140	144	147	150	154	141
1925.....	155	151	154	151	150	152	154	157	157	161	165	159	155
1926.....	159	156	154	156	155	156	153	151	155	156	156	156	155
1927.....	159	149	147	147	148	147	146	146	150	155	157	156	150
1928.....	156	153	152	155	157	155	158	161	165	158	155	152	156
1929.....	153	152	152	152	152	154	159	160	160	157	153	153	155
1930.....	151	148	146	147	143	141	135	136	130	138	134	128	141
1931.....	125	121	120	118	114	114	115	116	114	114	110	107	116
1932.....	100	97	97	95	92	91	94	96	96	94	94	90	95

TABLE 37. INDEX NUMBERS OF THE WHOLESALE PRICES OF HIDES AND LEATHER, 1797 TO 1932\* (1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1797.....	...	...	...	...	...	...	...	...	...	70	70	70	70
1798.....	70	70	70	70	64	64	63	63	63	63	62	62	65
1799.....	62	62	62	62	56	62	62	62	62	62	62	62	62
1800.....	62	62	62	62	62	62	62	62	62	62	62	62	62
1801.....	63	66	66	67	68	70	71	71	71	71	84	87	71
1802.....	82	82	81	81	81	80	80	80	79	79	79	79	80
1803.....	79	79	79	85	85	85	83	83	83	83	83	83	83
1804.....	85	85	85	84	84	84	84	83	83	83	83	81	84
1805.....	81	81	81	81	81	88	88	88	88	88	88	88	85
1806.....	88	88	88	88	88	88	88	80	80	80	80	80	85
1807.....	80	80	80	83	83	83	83	83	81	81	81	81	82
1808.....	81	81	81	81	81	79	79	79	79	79	79	72	79
1809.....	72	72	72	72	72	72	72	72	76	76	76	75	73
1810.....	75	75	75	75	75	75	75	76	75	75	76	76	75
1811.....	76	75	75	74	75	72	72	72	72	72	72	72	73
1812.....	72	72	72	72	72	72	72	72	72	72	74	74	72
1813.....	74	74	76	76	76	76	78	78	76	77	79	82	77
1814.....	106	106	107	107	107	108	107	74	74	79	83	88	96
1815.....	88	88	87	87	86	86	80	83	83	87	85	83	85

\* On the 1926 base, the average of the hides-and-leather index of the Bureau of Labor Statistics (Bulletins 521 and 453) for the five years 1910-14 is 64.50. To convert index numbers from January, 1890, to 1926, multiply by 1.550388.

For the four years 1890-93, the Bureau of Labor Statistics index numbers on the 1910-14 base averaged 72.75. On the 1876-91 base, the four years 1890-93 averaged 73.97. The index numbers prior to January, 1890, were converted to the 1910-14 base by multiplying by 0.9835.

From 1797 to 1889, the index is based on prices of hides and sole leather. From 1890 to 1931, the Bureau of Labor Statistics index includes leather goods, shoes, and so forth. The index therefore fluctuates less in the latter period.



TABLE 37 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1810....	88	88	86	86	86	86	85	84	84	84	84	85	86
1817....	85	85	85	85	83	83	104	104	104	104	111	111	96
1818....	111	111	111	111	111	111	115	114	114	114	114	114	113
1819....	111	110	110	112	110	110	98	91	90	90	92	90	101
1820....	90	90	90	90	90	90	75	75	75	78	79	79	83
1821....	80	81	81	82	82	82	82	89	100	102	102	102	89
1822....	93	93	93	93	93	94	93	93	93	93	93	93	93
1823....	93	93	98	98	98	98	98	98	97	98	97	97	97
1824....	97	98	98	95	95	95	95	96	97	98	98	98	97
1825....	97	97	96	98	102	101	101	101	101	101	101	97	99
1826....	95	96	96	93	93	89	88	88	88	88	88	88	91
1827....	86	86	87	88	88	84	84	84	84	89	89	89	87
1828....	90	90	90	90	90	90	90	90	90	90	90	90	90
1829....	87	85	85	87	87	87	85	84	84	85	85	85	85
1830....	79	85	85	85	85	85	85	85	85	87	88	88	85
1831....	88	88	83	93	92	92	92	92	92	92	92	89	91
1832....	89	89	92	92	92	92	79	79	78	78	78	78	85
1833....	78	78	78	78	78	75	75	75	75	74	74	74	78
1834....	73	73	73	68	68	66	66	66	66	72	73	74	70
1835....	74	74	74	76	76	75	75	75	73	73	69	69	74
1836....	71	71	71	74	76	75	75	75	84	88	86	84	78
1837....	84	87	87	87	81	81	81	79	80	75	73	71	80
1838....	73	73	73	73	73	75	75	78	90	91	91	93	80
1839....	101	99	100	100	92	88	86	87	84	84	80	74	90
1840....	74	82	81	80	75	75	75	76	78	78	91	94	80
1841....	92	86	79	83	83	82	85	87	90	91	90	82	96
1842....	78	76	70	72	72	72	72	69	70	71	71	71	72
1843....	70	69	65	65	65	65	70	74	73	71	71	70	69
1844....	70	70	67	70	70	68	68	67	62	61	62	62	66
1845....	62	62	62	62	62	67	66	66	62	60	60	60	63
1846....	60	60	60	58	60	60	59	55	52	54	54	54	57
1847....	53	63	67	67	66	65	68	72	72	69	68	63	66
1848....	62	59	59	55	55	55	53	51	54	59	59	56	56
1849....	57	60	65	66	63	62	63	63	65	68	66	65	64
1850....	65	65	68	69	69	67	67	67	69	68	69	66	67
1851....	67	69	66	67	66	66	65	65	64	62	60	60	65
1852....	58	61	61	62	67	78	71	77	76	77	74	74	70
1853....	76	80	83	86	82	81	80	83	85	86	87	96	84
1854....	105	113	106	105	105	111	104	97	97	86	87	90	100
1855....	89	96	105	105	102	102	99	105	109	109	113	115	104
1856....	114	115	118	120	120	116	115	118	120	123	133	135	121
1857....	145	151	151	152	144	123	132	151	142	130	121	121	139
1858....	99	94	108	108	112	112	115	115	118	115	110	118	110
1859....	117	118	117	124	120	118	119	114	115	113	107	97	118
1860....	103	102	100	104	104	104	108	99	96	102	103	101	102
1861....	95	96	92	92	91	85	80	80	80	85	100	98	90
1862....	96	102	107	109	105	103	101	106	106	106	120	137	108
1863....	134	141	147	137	122	120	128	124	129	135	140	138	133
1864....	141	143	143	149	155	159	199	198	185	153	172	176	164
1865....	176	172	169	136	138	125	128	138	156	164	165	155	152
1866....	152	149	144	129	128	140	151	159	150	153	154	142	146
1867....	136	132	127	134	134	133	136	137	136	135	120	122	132
1868....	115	119	123	123	123	124	131	133	129	128	130	130	126
1869....	131	132	135	131	137	141	140	140	130	130	131	131	134
1870....	131	130	123	122	127	124	126	129	130	132	132	130	129
1871....	128	125	126	126	124	125	126	126	126	127	125	125	126
1872....	136	128	130	133	135	132	132	127	126	127	129	131	130
1873....	136	136	136	134	134	131	129	130	130	130	129	132	132
1874....	130	128	128	129	129	127	128	129	129	128	127	128	128
1875....	127	129	129	128	128	122	118	121	121	121	119	116	123

TABLE 37 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1876	114	112	108	105	99	99	95	94	93	96	108	120	104
1877	120	110	106	106	113	110	106	105	108	110	107	108	109
1878	104	87	97	99	94	82	93	96	98	96	95	94	95
1879	95	93	91	90	91	95	99	99	98	107	120	128	100
1880	125	117	115	116	112	109	109	109	115	112	111	111	113
1881	108	104	105	107	112	113	113	114	107	110	109	110	109
1882	105	107	106	107	107	107	108	109	112	112	112	110	108
1883	108	107	107	106	105	106	106	107	108	106	108	108	107
1884	107	106	111	119	119	117	114	108	109	110	107	104	111
1885	105	106	107	107	107	106	102	102	102	103	106	106	105
1886	106	103	103	101	100	100	100	100	99	99	99	98	101
1887	98	98	96	93	92	92	90	89	89	90	91	90	92
1888	93	88	84	85	84	83	82	79	80	90	90	89	86
1889	83	82	82	81	79	79	80	80	80	80	77	77	80
1890	73	73	71	71	71	71	74	76	77	76	76	75	74
1891	74	72	72	72	72	72	75	75	76	76	76	76	74
1892	75	75	73	71	72	71	72	72	74	73	73	73	73
1893	72	71	72	71	71	70	69	67	67	69	70	69	70
1894	69	68	67	67	66	65	66	65	66	68	67	67	67
1895	67	67	67	71	74	82	85	86	84	83	80	73	77
1896	72	71	71	68	68	69	70	67	67	69	74	76	70
1897	70	70	70	69	69	69	70	72	73	73	74	74	71
1898	74	74	74	73	75	77	76	76	76	76	74	74	75
1899	75	75	75	76	76	76	76	77	77	78	79	80	77
1900	81	80	79	78	78	78	74	73	74	74	76	75	77
1901	75	74	73	73	74	75	76	76	77	78	79	79	76
1902	78	78	77	76	77	78	78	80	81	81	81	80	79
1903	79	77	77	77	78	78	78	77	78	77	76	76	77
1904	76	75	75	76	76	76	76	77	77	79	81	81	77
1905	81	81	80	80	82	82	84	86	86	86	87	88	84
1906	88	88	87	87	88	88	90	90	92	91	92	93	89
1907	92	92	91	90	90	90	90	89	89	90	88	86	90
1908	83	81	79	81	82	85	88	90	90	91	91	92	86
1909	93	93	92	90	93	96	96	97	97	98	99	99	95
1910	99	97	93	94	94	94	91	92	92	93	91	90	93
1911	88	87	87	87	88	89	91	94	94	94	95	95	91
1912	95	95	95	94	97	99	100	102	104	105	107	107	100
1913	106	106	105	105	104	104	103	105	106	107	108	108	106
1914	107	108	108	109	109	110	108	110	111	112	113	115	110
1915	116	117	117	114	114	115	116	118	117	119	120	121	117
1916	122	125	129	130	138	142	142	143	144	154	175	193	145
1917	200	200	198	198	196	191	190	187	183	183	188	189	192
1918	186	182	179	185	193	197	200	202	205	205	204	204	195
1919	209	211	213	220	236	267	298	324	322	316	313	309	270
1920	311	315	306	305	300	272	264	249	238	226	205	195	266
1921	185	182	176	166	166	166	165	166	167	164	163	165	169
1922	163	162	160	155	154	157	160	163	166	169	171	169	162
1923	167	168	169	169	169	169	169	168	166	166	166	166	162
1924	155	160	159	157	155	154	154	156	156	158	161	165	157
1925	170	171	169	165	162	160	162	161	161	160	160	161	163
1926	160	157	155	153	153	153	153	154	153	156	156	156	155
1927	156	155	156	158	161	166	173	173	174	175	177	181	167
1928	187	192	192	196	195	191	192	187	187	182	179	179	188
1929	176	169	168	167	165	167	169	170	171	171	168	166	169
1930	163	161	160	159	159	159	156	153	154	150	146	142	155
1931	138	135	136	136	136	136	139	138	132	128	127	124	134
1932	123	121	120	116	112	110	106	108	112	113	111	108	113

TABLE 38. INDEX NUMBERS OF THE WHOLESALE PRICES OF TEXTILES, 1797 TO 1932\*  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1797....	...	...	...	...	...	...	...	...	...	217	220	213	...
1798....	220	221	226	231	230	230	231	225	225	225	225	225	226
1799....	224	224	224	225	224	228	231	230	230	230	230	229	227
1800....	227	231	231	229	229	222	221	221	222	224	224	224	225
1801....	232	232	233	233	233	238	238	238	239	237	236	238	236
1802....	239	240	232	232	230	234	234	233	223	221	220	221	230
1803....	217	217	218	219	220	238	238	240	240	240	242	251	232
1804....	249	249	250	250	251	252	255	256	257	251	250	249	252
1805....	262	265	265	265	266	266	266	274	272	277	279	266	270
1806....	283	285	284	283	281	278	277	278	280	280	271	275	280
1807....	274	274	275	274	274	276	276	276	275	270	270	270	274
1808....	269	269	269	268	268	274	281	281	285	283	286	318	279
1809....	318	321	345	346	338	332	313	311	315	317	312	313	323
1810....	272	272	272	270	294	293	293	281	280	281	262	260	278
1811....	256	250	238	246	246	246	244	244	238	236	234	233	243
1812....	233	234	235	236	238	238	278	278	277	277	282	279	257
1813....	284	284	289	289	287	293	293	293	294	294	297	299	291
1814....	299	293	294	303	303	300	300	294	294	301	307	315	300
1815....	316	324	324	312	294	289	287	288	296	294	290	289	300
1816....	283	281	280	278	278	276	272	272	269	267	267	266	274
1817....	264	264	264	264	274	268	268	266	267	267	278	269	268
1818....	269	278	278	278	278	280	272	272	272	272	273	273	275
1819....	270	270	243	242	228	228	219	219	219	219	219	221	233
1820....	221	219	220	219	219	206	206	206	208	203	203	203	211
1821....	205	212	212	212	212	212	212	220	219	219	220	219	215
1822....	219	219	221	220	218	218	219	219	219	217	217	215	218
1823....	211	211	211	211	210	210	210	209	209	210	203	203	209
1824....	192	193	191	192	191	192	190	192	191	188	189	191	191
1825....	189	189	192	199	204	203	204	202	200	198	200	198	198
1826....	199	199	191	188	188	188	188	186	188	180	180	182	188
1827....	184	183	183	183	183	184	184	185	186	192	192	192	186
1828....	192	191	190	190	192	191	189	188	188	189	188	186	190
1829....	187	187	185	187	183	183	181	178	177	178	180	183	182
1830....	183	184	183	181	182	182	181	184	182	177	175	175	181
1831....	165	166	169	178	183	183	182	179	187	188	186	185	179
1832....	179	179	173	159	158	156	155	155	154	154	153	154	161
1833....	156	156	156	162	161	160	161	161	170	170	168	168	162
1834....	167	168	163	158	157	158	159	158	159	159	159	163	161
1835....	159	163	165	172	173	174	175	174	173	171	168	168	170
1836....	168	170	172	175	179	180	180	180	183	179	181	181	177
1837....	176	180	181	176	172	168	163	163	157	154	157	157	167
1838....	157	157	157	157	157	155	155	157	156	159	158	158	157
1839....	160	160	162	161	162	162	162	156	156	156	156	156	159
1840....	156	155	148	148	147	146	144	143	143	142	142	142	146
1841....	141	141	141	141	140	140	140	140	140	140	140	140	140
1842....	140	138	137	137	136	136	136	136	124	123	121	121	132
1843....	120	120	113	113	113	113	112	112	112	112	114	115	114
1844....	121	121	122	125	126	126	127	127	127	126	126	126	125
1845....	125	125	124	124	125	125	124	125	125	125	125	126	125
1846....	127	127	128	128	126	126	126	119	118	111	113	114	122
1847....	114	116	116	117	117	116	118	118	118	118	116	116	117

\* On the 1926 base, the average of the textiles index of the Bureau of Labor Statistics (Bulletins 521 and 453) for the five years 1910-14 is 56.300. To convert index numbers since 1890 to the 1910-14 base, multiply by 1.776199.

For the four years 1890-93, the Bureau of Labor Statistics index numbers on the 1910-14 base averaged 98.446. On the 1876-91 base, the four years 1890-93 averaged 88.427. The index numbers prior to January, 1890, were converted to the 1910-14 base by multiplying by 1.1133.

From April, 1861, to October, 1871, the weights for cotton goods were reduced in proportion to the reduced quantities used.

TABLE 38 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1848....	116	115	115	115	116	113	113	111	110	109	109	110	113
1849....	109	110	110	110	111	110	111	110	111	112	111	111	111
1850....	110	116	116	116	116	116	116	116	116	116	116	117	116
1851....	120	119	118	118	114	116	116	113	112	112	112	112	115
1852....	112	112	112	112	112	112	112	113	113	114	114	114	113
1853....	114	115	114	115	116	117	116	116	126	127	125	124	119
1854....	124	124	124	124	125	124	124	124	124	123	123	123	124
1855....	122	121	121	120	119	127	128	128	128	128	127	126	125
1856....	126	127	127	127	130	130	130	129	129	129	134	134	129
1857....	137	137	137	137	137	137	136	138	142	142	139	135	138
1858....	131	128	122	121	122	123	123	123	124	122	121	121	123
1859....	123	123	126	119	118	119	119	118	118	118	118	118	120
1860....	119	119	119	120	119	119	119	119	119	119	119	120	119
1861....	120	117	116	115	118	117	119	120	124	123	128	125	120
1862....	130	132	129	129	129	130	138	160	163	166	174	178	147
1863....	193	208	223	219	208	205	205	195	191	198	208	215	206
1864....	215	218	219	220	235	264	293	295	318	295	298	301	264
1865....	301	287	275	245	259	249	257	259	268	267	261	260	266
1866....	284	254	240	226	258	236	242	243	247	251	255	248	245
1867....	241	243	239	229	223	219	215	214	214	207	198	195	220
1868....	186	193	198	199	201	199	200	202	200	198	192	191	197
1869....	195	197	196	193	192	194	196	196	197	194	187	187	194
1870....	186	182	181	181	180	180	177	177	177	178	175	168	179
1871....	165	165	165	165	166	170	173	174	175	176	176	175	170
1872....	176	177	178	181	180	179	178	171	173	175	177	177	177
1873....	179	180	180	181	178	177	176	176	177	175	160	156	175
1874....	156	166	156	153	154	154	152	151	148	148	144	143	151
1875....	141	142	142	143	142	141	141	142	142	142	140	139	141
1876....	137	137	138	136	135	134	134	137	140	142	143	137	138
1877....	132	130	127	125	122	123	123	125	124	124	123	121	125
1878....	119	117	116	114	116	115	115	115	116	115	114	112	115
1879....	111	110	109	109	108	111	116	118	119	119	117	120	114
1880....	121	125	129	128	130	131	131	130	128	128	125	124	128
1881....	120	120	120	121	120	119	118	117	117	118	119	120	119
1882....	120	121	121	118	118	118	118	118	118	118	118	117	119
1883....	117	117	116	116	116	117	116	117	116	116	115	113	116
1884....	110	109	110	110	110	110	110	110	109	109	108	107	109
1885....	107	108	106	106	106	107	107	105	104	104	104	100	105
1886....	100	99	99	99	100	100	100	100	99	99	100	100	100
1887....	100	100	99	99	99	99	99	98	97	97	97	97	98
1888....	98	98	98	98	98	98	98	99	99	99	98	97	98
1889....	98	98	98	98	98	98	99	99	99	100	101	102	99
1890....	102	103	103	103	103	103	102	102	102	102	101	100	103
1891....	98	98	97	98	97	97	97	97	97	96	96	97	97
1892....	96	96	97	97	97	97	98	98	100	101	101	100	98
1893....	99	100	101	100	99	98	96	94	93	92	91	90	96
1894....	86	85	84	83	82	81	81	81	82	80	79	79	82
1895....	76	76	76	76	77	77	79	79	81	82	82	82	79
1896....	80	80	78	77	76	75	74	74	75	75	76	75	77
1897....	74	74	73	73	74	74	76	76	79	81	81	80	76
1898....	80	81	81	80	80	81	80	80	80	79	78	78	80
1899....	78	79	80	81	83	83	84	85	87	89	93	96	85
1900....	98	99	99	99	97	94	94	93	93	90	91	90	95
1901....	88	87	86	85	84	84	84	84	85	86	86	88	85
1902....	86	86	87	87	88	88	87	87	87	89	90	90	88
1903....	91	92	93	92	93	94	95	95	95	94	94	94	94
1904....	96	99	97	97	95	93	91	91	91	93	93	93	94
1905....	93	92	92	92	94	93	95	99	100	101	101	101	96
1906....	104	104	103	104	105	103	103	103	103	104	106	109	104
1907....	110	110	111	112	113	114	115	115	116	113	112	109	113
1908....	104	102	100	96	96	95	95	94	94	85	96	97	97
1909....	97	97	98	97	97	98	101	102	103	104	105	105	100

TABLE 38 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1910....	106	106	104	103	103	102	101	101	102	108	104	108	104
1911....	102	101	101	101	101	99	99	97	97	95	94	94	99
1912....	94	94	96	98	98	99	99	101	101	102	101	102	99
1913....	102	103	103	102	102	101	101	101	102	102	102	101	102
1914....	99	99	99	99	99	99	98	98	97	94	91	90	97
1915....	90	91	92	94	94	94	95	96	97	100	104	107	96
1916....	111	115	118	118	119	119	123	127	129	135	140	147	123
1917....	149	149	150	156	163	171	182	189	190	193	201	208	178
1918....	216	221	229	241	245	252	254	254	258	257	253	246	244
1919....	226	211	203	202	213	232	249	256	258	264	278	292	240
1920....	332	344	342	346	334	321	300	286	257	235	216	202	293
1921....	181	171	165	163	162	163	162	160	169	173	173	173	168
1922....	174	172	169	169	173	177	179	178	180	185	180	192	178
1923....	186	189	201	203	201	196	192	180	186	187	188	200	198
1924....	199	194	190	187	185	184	184	188	186	189	191	191	189
1925....	193	194	194	193	191	190	190	191	191	192	191	190	192
1926....	188	187	182	180	178	177	178	176	175	174	171	169	178
1927....	168	168	167	168	168	168	168	171	174	174	172	172	170
1928....	171	171	170	170	170	170	170	170	169	169	169	169	170
1929....	164	164	164	163	161	160	150	160	160	169	157	156	161
1930....	155	153	151	149	148	145	142	139	135	133	132	131	143
1931....	127	126	124	121	120	118	118	116	115	112	110	106	118
1932....	106	106	104	101	99	96	94	96	101	98	96	94	99

TABLE 39. INDEX NUMBERS OF THE WHOLESALE PRICES OF FUEL AND LIGHTING, 1786 TO 1932\*  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1786....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	137	143	.....
1787....	138	136	129	129	129	125	125	125	124	124	124	124	127
1788....	.....	.....	108	.....	.....	.....	.....	.....	.....	.....	.....	107	.....
1789....	107	101	99	99	99	103	103	99	96	96	96	96	99
1790....	95	95	95	95	95	95	95	95	95	95	95	95	95
1791....	96	96	96	96	96	96	106	103	103	103	103	103	100
1792....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1793....	.....	.....	.....	100	108	116	122	128	133	133	133	123	122
1794....	119	119	119	126	126	126	126	126	126	126	126	126	125
1795....	159	159	148	148	148	155	172	162	159	154	149	144	155
1796....	145	147	150	150	148	158	156	151	147	148	146	151	150
1797....	151	141	141	141	141	147	147	145	145	134	146	144	144
1798....	131	123	127	131	131	130	131	132	132	133	134	135	131
1799....	135	135	135	137	165	165	157	153	153	156	157	156	150
1800....	156	156	157	157	156	156	157	158	159	160	159	172	159
1801....	174	154	158	162	167	171	175	175	161	160	162	179	167
1802....	179	177	166	152	144	147	147	146	140	145	145	145	153
1803....	151	150	149	144	144	144	144	159	159	159	146	169	152
1804....	172	172	172	172	170	181	181	181	183	185	185	228	182
1805....	212	212	212	213	211	213	211	173	173	174	174	172	196
1806....	172	154	154	161	153	149	161	150	150	150	160	149	153

\*On the 1926 base, the average of the fuel-and-lighting index of the Bureau of Labor Statistics (Bulletins 521 and 453) for the five years 1910-14 is 52.720. To convert index numbers since 1890 to the 1910-14 base, multiply by 1.896813.

For the four years 1890-93, the Bureau of Labor Statistics index numbers on the 1910-14 base averaged 68.85. On the 1876-81 base, the four years 1890-93 averaged 82.17. The index numbers prior to 1890 were converted to the 1910-14 base by multiplying by 0.8378.

TABLE 39 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1807	148	167	167	167	166	160	154	154	165	163	161	163	161
1808	163	149	147	147	147	147	147	147	147	147	147	147	148
1809	144	146	146	149	149	148	148	139	140	153	153	153	147
1810	185	185	185	174	163	158	159	157	157	157	162	161	167
1811	173	172	172	151	172	150	155	166	164	164	165	167	166
1812	186	186	186	185	153	153	156	201	199	199	208	207	185
1813	207	208	208	262	263	298	335	371	407	443	483	518	334
1814	530	525	525	525	524	524	524	524	524	525	525	526	525
1815	525	478	429	382	334	287	241	194	210	210	259	261	318
1816	231	226	226	198	198	182	175	175	175	164	165	159	190
1817	158	158	159	159	133	131	128	130	132	137	136	136	141
1818	136	137	134	136	134	133	131	165	158	172	175	177	149
1819	176	162	162	159	153	176	175	149	149	149	169	170	162
1820	170	170	169	156	156	156	157	157	157	146	146	146	157
1821	146	143	143	142	140	140	140	140	140	140	142	142	142
1822	140	140	139	137	136	136	137	137	137	137	137	137	138
1823	133	131	129	130	130	130	130	132	132	133	131	134	131
1824	134	135	137	126	126	125	125	126	126	139	149	149	133
1825	140	138	134	125	124	124	123	126	130	131	140	141	131
1826	149	135	133	131	133	135	137	137	142	141	141	138	138
1827	136	141	141	137	137	135	137	135	135	130	137	143	137
1828	143	148	148	142	137	134	132	135	130	131	131	149	136
1829	148	136	142	138	132	123	123	126	129	134	135	132	133
1830	134	132	128	115	115	115	113	114	114	103	104	102	116
1831	103	107	105	104	109	110	109	110	110	116	124	131	112
1832	168	160	161	140	140	119	117	117	126	131	133	131	137
1833	132	114	110	109	105	104	107	105	104	104	118	120	111
1834	103	103	102	99	98	98	98	101	102	102	101	100	101
1835	100	102	101	102	102	103	109	110	111	121	126	134	111
1836	132	132	134	134	123	117	116	116	127	134	144	148	130
1837	148	152	144	139	129	119	117	116	114	114	131	131	130
1838	135	121	121	116	130	119	119	117	115	115	118	120	121
1839	124	124	124	125	128	121	116	113	119	124	127	124	122
1840	121	110	106	109	105	99	96	97	99	102	103	109	105
1841	111	114	108	108	107	105	99	106	111	114	128	123	111
1842	119	110	109	94	92	91	90	83	83	86	86	85	94
1843	86	82	79	81	81	80	83	83	88	91	103	102	87
1844	94	92	89	87	85	83	86	89	91	90	94	103	90
1845	101	98	101	100	98	91	92	95	94	93	93	90	96
1846	84	90	89	86	86	85	88	92	88	87	90	92	88
1847	91	86	86	87	85	84	85	87	93	97	101	100	90
1848	96	96	95	96	94	91	91	88	90	94	93	93	93
1849	92	94	90	91	88	90	91	90	93	95	97	100	93
1850	99	97	93	90	89	89	88	94	99	103	101	98	95
1851	95	94	89	85	82	79	85	87	89	90	88	85	87
1852	87	93	90	90	91	89	89	89	91	97	105	105	93
1853	104	106	104	94	87	90	90	100	104	112	116	118	102
1854	116	134	134	131	112	108	112	123	130	125	117	108	121
1855	103	101	97	96	97	97	98	103	104	105	112	109	102
1856	89	90	93	99	96	95	101	101	100	103	105	97	97
1857	96	100	98	91	90	91	92	101	102	103	99	99	97
1858	94	90	96	90	87	88	89	88	88	86	89	87	90
1859	90	91	91	92	90	92	92	92	94	95	98	104	93
1860	108	113	107	101	95	88	88	93	96	95	95	96	98
1861	89	87	88	79	76	75	73	83	82	82	75	75	80
1862	77	75	74	73	72	75	87	93	93	100	109	111	87
1863	111	117	113	111	111	113	124	121	124	140	160	160	125
1864	159	158	158	162	173	194	235	241	234	216	219	220	197
1865	219	231	229	216	206	191	190	195	216	230	223	217	214
1866	208	196	169	138	139	144	152	157	150	157	151	157	160
1867	157	152	147	142	140	135	135	139	140	147	149	143	144
1868	143	127	138	138	140	146	148	149	153	156	180	171	149
1869	171	172	155	156	153	154	165	176	174	172	179	164	166

TABLE 39 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1870....	151	142	137	138	138	136	133	129	134	118	124	127	134
1871....	148	154	173	151	150	140	138	138	143	159	164	164	162
1872....	161	143	140	138	139	150	152	160	163	153	170	164	163
1873....	158	150	145	147	149	155	154	150	150	142	142	139	148
1874....	141	145	141	145	140	137	131	131	128	128	127	128	136
1875....	130	132	129	127	125	126	124	125	128	129	132	133	128
1876....	134	127	123	122	121	122	124	134	133	129	129	129	127
1877....	128	122	110	109	108	102	104	104	105	103	98	100	108
1878....	95	98	98	96	95	94	93	93	91	91	92	82	93
1879....	83	81	77	77	76	76	77	77	77	80	86	90	80
1880....	87	88	90	91	91	93	93	93	94	94	93	93	92
1881....	93	93	92	91	91	90	90	90	91	92	91	91	91
1882....	91	91	91	91	90	89	89	91	92	94	96	94	92
1883....	94	93	91	90	89	90	87	87	86	87	88	87	89
1884....	87	86	83	80	79	74	73	74	74	73	73	73	77
1885....	72	73	73	72	71	71	71	71	70	71	72	72	72
1886....	73	72	73	74	71	68	66	68	68	67	68	68	70
1887....	68	69	69	70	70	69	69	69	70	72	73	73	70
1888....	75	74	73	70	71	70	70	71	71	73	72	73	72
1889....	72	71	70	69	69	69	70	71	71	71	72	73	71
1890....	78	76	72	70	71	71	73	74	72	71	70	69	72
1891....	70	70	70	71	72	72	71	69	68	70	73	68	70
1892....	67	67	68	65	64	64	65	66	67	67	68	67	66
1893....	67	69	69	69	67	67	66	66	67	68	68	68	67
1894....	67	67	67	63	67	68	66	65	65	64	63	65	65
1895....	66	67	68	66	66	61	80	75	74	75	80	80	78
1896....	78	77	75	78	75	75	74	73	75	75	75	71	75
1897....	68	68	68	65	65	65	63	62	62	62	61	61	64
1898....	60	61	62	61	64	65	66	67	67	70	71	70	65
1899....	70	70	69	73	74	74	76	80	85	88	91	94	78
1900....	95	96	96	93	89	85	84	84	84	82	82	82	88
1901....	84	85	85	83	81	80	82	85	85	86	91	90	85
1902....	82	82	82	82	80	95	87	88	92	145	121	132	98
1903....	145	139	114	111	107	106	107	107	107	109	110	111	114
1904....	112	110	107	101	99	99	97	97	97	97	98	100	101
1905....	97	95	95	93	91	91	91	91	91	91	97	98	94
1906....	99	98	97	99	99	98	98	98	98	98	100	100	99
1907....	100	100	101	102	103	102	103	103	103	108	109	104	103
1908....	104	103	103	101	100	101	101	101	101	102	102	103	102
1909....	101	101	100	99	99	97	97	95	95	97	96	96	98
1910....	94	93	93	92	90	91	88	88	89	88	89	90	90
1911....	90	90	90	88	88	88	88	88	88	89	88	89	89
1912....	90	94	94	101	97	96	97	97	97	99	101	106	97
1913....	124	119	116	114	112	112	113	116	117	118	119	115	116
1914....	116	114	115	114	110	108	106	105	104	100	98	99	107
1915....	99	97	93	92	92	91	91	94	99	103	109	118	98
1916....	128	129	130	131	129	131	131	129	131	146	188	191	141
1917....	204	213	205	189	215	217	203	203	186	181	190	192	200
1918....	195	197	200	205	208	207	208	208	211	212	217	217	207
1919....	206	196	192	191	188	189	191	196	199	204	202	219	198
1920....	223	231	249	283	303	336	377	398	381	361	311	274	311
1921....	250	200	190	192	181	166	157	156	156	175	192	184	184
1922....	179	178	178	184	209	205	232	242	233	212	198	195	204
1923....	206	212	210	200	188	185	178	173	171	168	162	162	185
1924....	178	188	186	182	179	173	171	166	167	165	167	171	175
1925....	174	191	186	179	181	188	186	181	178	180	185	186	183
1926....	187	188	186	186	191	191	189	191	192	192	194	189	190
1927....	186	183	173	165	163	164	164	163	164	163	161	161	168
1928....	157	157	157	157	158	159	160	163	164	163	163	162	160
1929....	160	157	156	155	156	160	158	156	157	158	158	158	158
1930....	155	153	151	151	152	150	148	148	150	147	143	140	149
1931....	139	138	130	124	124	119	119	126	128	129	132	130	128
1932....	129	130	129	133	134	136	137	137	134	135	135	131	133

TABLE 40. INDEX NUMBERS OF THE WHOLESALE PRICES OF METALS AND METAL PRODUCTS, 1786 to 1932\*  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1786											236	238	
1787	239	240	243	235	235	235	235	235	235	235	235	235	236
1788												245	
1789	248	250	252	252	253	252	252	251	251	250	250	241	250
1790	241	248	248	248	248	248	248	248	248	248	246	244	247
1791	242	240	238	238	238	238	233	243	243	243	243	244	240
1792													
1793				247	244	241	241	238	237	237	237	237	240
1794	258	258	258	258	258	258	258	258	258	258	258	258	258
1795	257	257	254	259	254	254	261	261	259	264	261	261	259
1796	276	274	274	279	280	288	282	286	287	287	292	300	284
1797	296	296	297	303	303	304	305	299	305	291	297	297	299
1798	293	293	293	303	300	306	306	310	310	310	309	310	304
1799	310	309	308	307	307	311	310	309	311	311	311	312	310
1800	312	312	314	319	318	315	318	327	329	331	332	342	322
1801	341	341	342	352	363	359	369	351	346	334	337	336	348
1802	323	312	311	309	307	304	302	291	290	287	287	287	301
1803	289	289	289	289	289	289	289	289	289	289	291	297	290
1804	287	298	288	299	300	301	301	301	301	300	302	302	300
1805	302	302	302	302	302	307	311	314	315	316	316	321	309
1806	324	324	324	324	330	330	332	332	332	331	328	328	328
1807	326	326	326	328	329	329	329	328	328	328	324	324	327
1808	324	324	324	327	331	336	337	338	338	342	350	359	336
1809	366	366	365	364	345	344	343	343	344	344	335	335	350
1810	335	335	336	335	345	343	340	327	327	323	321	321	332
1811	319	319	317	320	321	321	321	328	334	334	334	334	325
1812	335	335	340	342	342	343	358	362	364	365	367	401	356
1813	395	396	400	402	419	422	422	423	425	425	446	455	419
1814	484	456	456	445	442	442	436	440	440	482	515	551	464
1815	551	466	446	441	401	405	350	353	344	346	347	337	399
1816	336	333	332	327	320	311	303	298	291	290	290	286	310
1817	284	284	283	283	286	286	277	275	267	263	268	271	277
1818	274	277	279	280	278	277	281	281	280	281	281	282	279
1819	282	282	288	289	288	288	288	287	285	285	286	273	285
1820	273	273	273	273	273	273	273	273	271	262	262	261	270
1821	261	261	261	262	262	262	261	261	260	260	260	260	261
1822	261	261	260	261	261	257	257	255	254	254	252	252	257
1823	251	251	250	250	250	247	248	248	245	245	241	237	247
1824	237	237	237	239	241	243	243	243	243	246	249	250	242
1825	240	237	242	266	274	306	308	304	296	293	292	284	279
1826	281	279	279	279	275	273	270	259	258	253	262	258	269
1827	251	244	252	252	252	241	239	240	236	235	236	237	243
1828	237	236	234	235	232	232	235	234	235	234	234	234	234
1829	235	234	234	233	233	233	230	219	219	219	219	218	227
1830	212	211	210	210	210	210	209	206	207	206	206	205	209
1831	205	204	205	205	206	208	209	212	212	213	215	215	209
1832	215	215	216	215	213	211	211	210	208	210	211	212	212
1833	212	211	209	207	204	204	203	202	202	201	204	206	205
1834	206	205	202	202	202	202	200	200	200	200	198	199	201
1835	199	200	204	205	205	208	207	207	208	207	208	209	206
1836	210	211	210	246	250	251	250	247	248	250	252	254	241
1837	262	263	263	268	247	237	230	229	224	228	237	238	243

\* On the 1926 base, the average of the metals-and-metal-products index of the Bureau of Labor Statistics (Bulletins 521 and 453) for the five years 1910-14 is 85.30. To convert index numbers since 1890 to the 1910-14 base, multiply by 1.172333.  
For the two years 1890-91, the Bureau of Labor Statistics index numbers on the 1910-14 base averaged 115.768. On the 1876-91 base, the two years 1890-91 averaged 89.763. The index numbers prior to January, 1890, were converted to the 1910-14 base by multiplying by 1.3042.



TABLE 40 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1838....	235	235	230	226	225	218	213	210	207	210	211	211	219
1839....	214	220	225	229	225	220	221	219	217	217	217	215	220
1840....	210	209	206	205	202	202	201	201	202	202	206	207	204
1841....	207	207	207	206	206	202	199	200	200	201	205	203	204
1842....	201	193	193	187	180	178	177	173	180	178	178	177	183
1843....	179	177	177	173	173	171	167	166	165	168	178	178	172
1844....	177	177	178	176	177	183	182	180	179	179	178	177	179
1845....	173	173	178	190	201	193	190	191	191	194	197	198	189
1846....	197	197	196	193	193	190	190	189	187	187	187	187	191
1847....	186	188	188	189	189	186	185	184	181	182	186	186	186
1848....	182	182	175	173	171	168	167	167	166	165	163	161	170
1849....	161	161	163	164	161	156	153	150	148	147	147	147	156
1850....	147	149	150	149	149	148	147	146	145	146	146	146	147
1851....	146	147	147	147	141	139	138	139	138	138	138	138	141
1852....	136	138	139	138	138	138	140	143	146	150	159	160	144
1853....	170	185	201	200	189	180	178	178	183	189	191	192	186
1854....	191	194	194	194	191	190	194	193	193	191	184	182	191
1855....	176	176	174	173	170	165	170	176	181	194	184	180	176
1856....	176	178	183	180	177	173	172	170	170	171	173	170	174
1857....	178	180	183	186	184	173	170	169	166	164	163	162	173
1858....	160	159	159	156	155	154	155	154	152	152	147	149	154
1859....	150	153	155	153	151	149	147	148	147	145	150	149	150
1860....	152	151	151	151	150	147	147	148	148	149	148	146	149
1861....	147	146	151	148	148	147	146	151	153	154	163	178	152
1862....	172	171	169	167	167	170	175	179	181	187	207	216	190
1863....	212	235	246	247	235	231	230	224	221	240	251	263	236
1864....	272	288	296	311	329	345	406	416	412	389	393	389	354
1865....	384	359	345	303	284	268	259	269	283	298	309	312	306
1866....	309	294	284	266	261	268	277	277	281	278	275	270	278
1867....	264	261	252	246	248	247	248	247	245	243	240	232	246
1868....	228	225	224	224	222	222	223	222	224	225	234	232	225
1869....	230	229	233	227	226	226	227	226	226	227	224	219	227
1870....	213	209	202	200	196	195	195	199	198	196	196	195	200
1871....	195	194	198	200	201	201	202	202	206	207	209	216	203
1872....	217	222	242	257	258	263	263	273	281	274	271	257	257
1873....	255	257	259	258	252	247	244	249	237	230	220	207	243
1874....	203	202	200	199	198	197	195	190	188	187	185	183	194
1875....	183	182	181	178	175	175	175	174	172	168	168	166	175
1876....	165	165	165	162	160	155	153	152	152	152	151	149	157
1877....	148	147	145	144	153	140	150	136	133	132	131	131	141
1878....	130	129	128	128	127	127	127	126	123	121	121	121	126
1879....	124	124	121	120	122	123	124	126	140	154	163	168	134
1880....	190	198	196	182	167	157	148	151	150	149	149	149	166
1881....	148	150	151	150	149	147	147	148	150	151	153	156	150
1882....	157	156	156	155	154	154	155	159	159	159	158	157	157
1883....	155	153	151	149	146	143	143	143	138	137	135	133	144
1884....	131	129	128	128	127	127	127	123	118	117	115	113	124
1885....	111	110	108	108	108	109	109	109	109	109	109	109	109
1886....	109	109	110	111	110	109	110	110	109	110	112	113	110
1887....	118	118	118	118	119	119	119	119	119	119	121	126	119
1888....	127	125	125	124	121	118	118	118	119	118	118	118	121
1889....	120	118	118	118	115	113	112	112	113	113	116	118	116
1890....	129	126	122	117	117	121	126	127	127	126	123	120	123
1891....	114	114	112	111	110	109	108	106	105	105	102	101	108
1892....	100	98	97	100	100	100	99	99	98	96	98	97	98
1893....	96	95	96	95	94	93	90	88	86	84	81	83	90
1894....	79	78	77	77	78	78	78	78	76	76	75	74	77
1895....	75	73	72	72	73	75	81	85	91	95	91	84	83
1896....	82	83	83	85	85	85	83	82	83	83	84	82	83
1897....	79	78	78	78	74	75	75	74	76	77	77	75	76
1898....	75	74	76	76	76	76	76	76	78	78	78	79	77
1899....	82	95	104	111	116	120	122	128	134	135	131	129	117

TABLE 40 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1800	126	125	126	126	122	117	110	108	105	102	104	105	115
1801	105	105	108	110	110	110	108	111	112	110	110	110	109
1802	101	104	108	108	108	110	110	110	106	108	105	104	107
1803	106	107	110	113	112	110	107	104	104	102	100	94	106
1804	94	93	94	96	95	94	92	92	90	90	95	100	94
1805	102	103	103	104	102	101	100	104	108	108	109	113	104
1806	116	115	115	115	115	117	117	117	120	125	132	135	120
1807	137	140	140	139	141	138	136	126	122	112	109	106	129
1808	104	104	101	102	101	99	98	100	101	100	101	103	101
1809	103	100	96	95	95	96	97	98	100	102	103	105	99
1910	106	105	104	102	100	99	98	97	97	97	97	97	100
1911	97	96	96	96	96	94	95	94	92	92	92	94	95
1912	98	96	97	100	101	104	106	107	110	114	114	114	105
1913	114	112	111	111	110	109	107	102	103	102	100	96	106
1914	96	97	96	96	94	93	93	93	94	92	91	92	94
1915	92	94	98	97	102	104	107	101	102	102	105	112	101
1916	120	125	133	138	141	138	135	133	135	138	143	158	137
1917	157	162	169	177	182	195	200	204	194	163	153	153	177
1918	155	155	154	154	155	156	159	164	167	168	168	166	160
1919	159	155	151	145	145	146	149	158	157	158	156	161	153
1920	165	173	179	183	182	180	181	184	184	172	165	157	175
1921	153	151	147	146	146	144	139	129	126	129	125	124	138
1922	121	119	119	120	121	122	122	118	121	122	121	121	121
1923	123	126	130	132	131	129	131	130	129	125	125	125	128
1924	127	127	128	125	123	122	122	123	122	122	123	124	125
1925	125	124	124	121	121	121	121	119	118	118	119	119	121
1926	117	117	117	116	116	116	118	118	118	118	118	118	117
1927	114	113	113	112	113	113	112	113	112	112	112	113	113
1928	112	112	112	113	113	113	113	114	114	115	116	117	114
1929	117	118	120	120	119	119	118	118	118	117	116	115	118
1930	114	114	113	112	110	108	106	105	104	103	103	103	108
1931	102	101	101	100	100	99	99	98	98	97	97	96	99
1932	96	95	95	94	94	94	93	94	94	94	93	93	94

TABLE 41. INDEX NUMBERS OF THE WHOLESALE PRICES OF BUILDING MATERIALS, 1786 TO 1932\*

(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1786	...	...	...	...	...	...	...	...	...	...	...	...	...
1787	36	37	39	39	39	35	35	35	34	34	35	36	36
1788	...	...	30	...	...	...	...	...	...	...	...	37	...
1789	37	38	37	36	35	34	34	34	34	34	34	34	35
1790	35	35	35	35	35	35	35	34	34	34	35	34	35
1791	34	34	34	34	34	34	33	33	33	33	33	33	34
1792	...	...	...	...	...	...	...	...	...	...	...	...	...
1793	...	...	...	39	39	39	38	38	38	39	39	39	39

\* On the 1926 base, the average of the building-materials index of the Bureau of Labor Statistics (Bulletin 521 and 453) for the five years 1910-14 is 55.180. To convert index numbers since 1890 to the 1910-14 base, multiply by 1.812251.

For the four years 1890-93, the Bureau of Labor index numbers on the 1910-14 base averaged 78.833. On the 1876-91 base, the four years 1890-93 averaged 97.273. The index numbers prior to January, 1890, were converted to the 1910-14 base by multiplying by 0.8104.

From 1860 to 1869 inclusive, no yellow pine was included in the index, as this material was very scarce owing to the Civil War.

TABLE 41 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1794....	39	39	39	40	39	39	40	40	40	41	43	46	40
1795....	55	55	55	55	54	54	50	51	63	61	58	56	56
1796....	55	54	55	54	59	59	59	59	57	59	59	61	58
1797....	61	61	60	59	58	51	51	49	49	51	51	51	54
1798....	52	53	52	52	51	50	50	51	51	50	49	49	51
1799....	51	50	51	51	51	48	48	49	50	51	52	55	51
1800....	54	54	53	50	48	48	49	49	50	51	53	55	51
1801....	55	55	55	54	54	55	54	55	55	56	56	56	55
1802....	57	57	57	58	56	54	54	54	54	55	54	53	55
1803....	54	53	53	54	53	53	53	52	53	53	53	54	53
1804....	55	56	58	58	55	56	55	55	56	56	58	58	56
1805....	58	58	59	58	58	57	58	58	57	57	58	58	58
1806....	60	60	60	57	58	57	57	58	58	58	58	58	58
1807....	59	59	59	59	59	59	59	58	58	58	57	58	59
1808....	58	57	57	56	56	56	57	57	57	57	59	60	57
1809....	61	60	60	61	61	61	59	59	58	58	58	59	60
1810....	59	59	59	59	59	59	58	58	58	58	58	58	59
1811....	59	58	58	58	57	57	56	56	55	55	55	57	57
1812....	57	57	57	58	58	58	60	59	60	59	59	59	58
1813....	60	61	61	61	62	63	63	63	63	64	65	65	63
1814....	66	67	66	68	68	68	67	68	68	71	74	78	69
1815....	80	82	78	75	74	74	75	75	74	74	75	76	76
1816....	77	77	76	74	72	67	65	64	63	61	61	63	68
1817....	63	64	64	63	63	62	61	61	56	54	54	56	60
1818....	57	59	58	58	56	56	56	56	56	55	55	55	56
1819....	56	57	57	57	56	56	55	54	54	54	55	54	55
1820....	54	54	54	54	53	53	53	53	53	53	52	51	53
1821....	51	51	50	50	50	49	49	49	49	49	49	49	50
1822....	49	50	50	50	50	49	49	49	49	49	50	50	50
1823....	50	50	50	50	49	49	48	48	48	48	48	48	49
1824....	48	48	49	49	48	48	48	48	48	48	48	48	48
1825....	48	48	49	50	51	51	52	52	51	51	51	51	50
1826....	51	51	51	51	51	52	53	52	52	52	51	51	52
1827....	50	51	51	51	51	52	51	51	52	52	52	52	51
1828....	51	51	50	50	50	50	51	51	50	51	51	51	51
1829....	51	50	50	50	49	48	48	48	47	47	47	48	49
1830....	48	48	48	46	46	46	46	46	46	47	48	48	47
1831....	48	48	49	48	49	49	49	49	49	49	50	49	49
1832....	49	49	50	49	49	49	49	49	49	49	49	49	49
1833....	50	50	50	49	49	49	50	52	52	52	53	53	51
1834....	53	52	52	52	52	52	52	52	52	51	51	51	52
1835....	51	52	52	52	53	52	53	52	52	52	52	52	52
1836....	52	52	52	52	53	53	53	53	53	53	54	54	53
1837....	57	72	72	72	72	70	70	71	70	70	70	70	70
1838....	70	70	70	70	70	70	69	69	70	70	70	70	70
1839....	70	70	70	70	70	69	70	69	69	69	69	69	70
1840....	67	67	67	67	67	66	63	64	64	64	64	64	65
1841....	68	69	69	68	68	66	67	65	65	65	65	65	67
1842....	65	65	64	64	63	63	63	61	58	58	58	58	62
1843....	58	57	58	57	58	57	57	57	58	58	58	58	58
1844....	58	59	59	60	59	58	59	59	58	59	59	60	59
1845....	60	62	62	62	62	62	62	65	66	66	67	67	64
1846....	67	67	67	67	67	67	61	61	61	60	60	59	64
1847....	58	59	60	60	60	59	62	63	63	63	64	66	61
1848....	66	66	66	65	65	59	58	58	56	56	57	56	61
1849....	56	56	56	56	58	58	58	58	58	60	59	60	58
1850....	61	61	63	63	62	61	62	62	61	60	60	61	61
1851....	62	62	62	61	61	61	60	60	61	61	62	62	61
1852....	62	62	63	63	64	64	64	65	65	66	66	67	64
1853....	68	69	69	68	67	67	66	66	66	67	68	68	67

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932 101

TABLE 41 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1854....	68	69	69	70	70	71	71	71	70	69	70	70	70
1855....	70	70	72	72	72	71	71	71	71	71	72	72	71
1856....	72	72	74	74	74	73	73	73	72	73	73	73	73
1857....	73	74	74	74	74	73	73	73	74	73	73	70	73
1858....	69	69	69	69	69	69	69	69	64	63	63	63	67
1859....	63	63	63	63	63	63	64	64	64	65	65	65	64
1860....	65	65	65	65	65	64	66	65	64	64	64	64	65
1861....	63	63	63	64	64	63	62	63	63	63	64	64	63
1862....	66	66	66	67	68	67	67	69	70	72	76	79	69
1863....	80	82	88	89	89	86	86	87	87	90	93	94	88
1864....	67	100	105	107	109	113	120	123	122	125	125	125	114
1865....	126	125	124	120	110	107	105	108	118	122	123	127	118
1866....	126	127	128	128	128	129	128	128	129	128	128	128	128
1867....	127	127	126	126	123	118	115	116	114	115	115	115	120
1868....	116	117	117	118	117	117	116	115	114	113	114	114	116
1869....	116	117	117	115	114	106	106	106	104	105	105	104	110
1870....	105	104	103	103	102	101	99	100	99	99	99	99	101
1871....	98	100	101	102	103	102	101	101	103	103	104	104	102
1872....	106	107	108	108	106	104	107	106	107	107	106	106	107
1873....	106	108	109	109	107	107	106	105	106	105	104	104	106
1874....	104	105	105	103	102	101	99	99	98	98	99	99	101
1875....	98	98	94	94	92	91	90	88	87	84	84	84	90
1876....	85	85	84	83	83	84	84	84	84	85	85	84	84
1877....	84	83	83	83	82	81	80	79	78	75	74	75	80
1878....	75	75	75	74	73	72	71	71	71	70	70	70	72
1879....	70	78	74	73	73	73	73	75	74	74	76	78	74
1880....	81	81	85	82	84	80	79	79	79	80	80	81	81
1881....	81	81	81	81	81	82	83	85	86	86	86	87	83
1882....	87	87	88	89	90	88	88	88	88	88	88	87	88
1883....	86	87	87	87	87	84	85	84	84	83	83	82	85
1884....	83	84	84	84	83	85	85	84	84	83	82	81	84
1885....	80	80	81	81	80	81	80	80	80	80	81	82	81
1886....	81	82	82	82	82	83	83	83	83	83	82	82	82
1887....	82	82	82	82	81	81	81	81	80	80	80	81	81
1888....	82	81	81	80	80	81	81	80	80	79	80	80	80
1889....	81	81	81	82	82	80	80	80	80	81	82	81	81
1890....	83	84	84	84	84	84	85	85	85	85	85	84	84
1891....	84	83	83	82	82	82	80	78	79	76	76	76	80
1892....	75	75	76	76	76	76	75	75	76	76	76	76	76
1893....	76	76	77	77	76	76	75	75	75	74	74	74	75
1894....	73	73	73	72	72	72	72	72	71	71	71	72	72
1895....	72	70	70	69	69	69	70	71	69	70	70	72	70
1896....	70	70	70	70	71	71	71	70	70	71	71	69	70
1897....	69	68	68	68	68	67	66	67	67	67	68	72	68
1898....	72	72	72	72	72	72	71	72	72	72	72	71	72
1899....	73	73	74	76	77	79	80	81	82	83	85	86	79
1900....	86	86	86	87	85	84	83	81	81	81	82	81	84
1901....	80	80	81	80	79	79	80	80	80	82	82	81	80
1902....	80	80	80	81	82	83	83	83	83	84	84	84	82
1903....	84	84	85	85	85	86	86	84	85	83	84	83	85
1904....	83	82	82	82	81	82	81	82	81	80	81	81	82
1905....	81	82	82	83	83	83	83	83	81	81	81	81	82
1906....	84	86	85	85	85	85	85	85	85	85	85	85	87
1907....	102	104	105	104	106	105	105	104	103	100	98	98	103
1908....	97	96	96	96	95	94	94	93	93	93	93	94	94
1909....	96	95	97	97	96	96	97	99	100	96	97	98	97
1910....	99	100	100	100	100	100	101	100	100	100	101	101	100
1911....	101	101	101	102	101	101	100	100	100	99	98	98	100
1912....	99	98	100	100	101	101	102	102	103	103	103	103	101
1913....	104	104	105	105	105	104	102	102	102	101	99	99	103

TABLE 41 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1914.....	97	97	98	97	96	96	96	97	96	94	92	92	96
1915.....	92	93	93	94	96	96	97	96	97	101	104	107	97
1916.....	112	115	120	122	123	122	122	122	123	126	128	134	123
1917.....	139	142	146	158	163	172	171	171	171	181	181	183	160
1918.....	167	167	171	175	177	179	184	186	186	184	184	184	179
1919.....	184	182	180	177	181	197	215	233	236	236	239	255	209
1920.....	281	299	304	305	298	281	275	272	262	245	225	214	272
1921.....	203	191	184	179	177	175	171	167	166	168	171	166	177
1922.....	166	165	164	165	168	174	176	179	186	190	191	191	176
1923.....	194	198	203	209	207	201	197	194	191	192	190	188	197
1924.....	190	192	191	190	189	183	180	181	181	181	182	184	186
1925.....	188	191	187	183	184	181	180	182	183	184	184	185	184
1926.....	184	183	182	181	180	180	180	181	181	181	182	181	181
1927.....	178	176	175	175	174	173	172	171	169	169	167	166	172
1928.....	167	167	167	168	169	171	172	172	172	173	174	174	171
1929.....	173	174	175	175	173	173	172	173	173	174	171	171	178
1930.....	171	170	170	169	167	163	160	159	158	156	155	154	163
1931.....	152	150	150	148	145	144	142	141	140	138	138	137	144
1932.....	136	133	133	131	130	128	126	126	128	128	128	128	130

TABLE 42. INDEX NUMBERS OF THE WHOLESALE PRICES OF DRUGS AND CHEMICALS, 1797 TO 1932\*

(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1797.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	414	444	431	.....
1798.....	439	424	412	400	418	448	454	461	460	466	473	449	442
1799.....	456	510	550	545	548	549	562	562	549	515	481	447	823
1800.....	436	420	411	420	414	425	428	431	435	427	437	437	427
1801.....	426	420	420	433	448	462	475	473	460	426	450	442	445
1802.....	483	390	383	371	376	366	366	366	355	355	360	356	377
1803.....	379	379	378	387	401	459	459	459	459	453	456	499	431
1804.....	502	502	502	495	486	485	485	490	495	498	493	481	493
1805.....	496	496	496	492	492	492	490	530	530	529	539	553	511
1806.....	553	553	535	535	541	541	529	528	515	464	457	471	519
1807.....	471	471	469	468	442	436	436	436	402	411	416	416	440
1808.....	416	413	420	405	431	431	470	458	458	461	480	617	455
1809.....	710	710	733	668	504	476	447	418	426	433	458	475	538
1810.....	499	499	499	493	510	473	452	460	467	452	505	496	443
1811.....	466	466	441	470	502	511	582	617	691	682	706	705	570
1812.....	701	724	724	724	639	639	646	633	636	724	713	713	738
1813.....	762	767	737	729	799	799	869	867	872	872	920	1,178	848
1814.....	1,134	947	858	811	731	725	723	723	723	784	769	835	814
1815.....	948	932	568	561	429	444	417	415	417	430	467	425	534
1816.....	408	411	411	407	411	398	372	363	362	324	325	319	376
1817.....	810	310	320	322	325	353	346	346	328	318	318	323	327
1818.....	315	323	319	327	316	319	315	312	310	314	325	321	318

\* On the 1926 base, the average of the drugs-and-chemicals index of the Bureau of Labor Statistics (Bulletins 521 and 453) for the five years 1910-14 is 81.18. To convert index numbers since 1890 to the 1910-14 base, multiply by 1.231531.

For the four years 1890-93, the Bureau of Labor Statistics index numbers on the 1910-14 base averaged 50.694. On the 1879-91 base, the four years 1890-93 averaged 81.504. The index numbers prior to January, 1890, were converted to the 1910-14 base by multiplying by 1.1128.

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932 103

TABLE 42 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1810....	320	320	313	315	305	302	302	298	298	298	299	299	306
1820....	299	298	295	291	295	295	295	295	303	311	313	313	300
1821....	288	310	294	292	296	305	304	304	304	313	328	337	306
1822....	325	321	316	243	374	345	349	349	349	349	349	349	342
1823....	332	332	332	334	334	324	323	323	315	306	304	286	320
1824....	270	265	275	287	290	317	324	330	326	324	325	317	304
1825....	307	303	301	302	314	317	318	315	317	319	321	317	313
1826....	319	318	317	317	314	291	291	288	283	277	275	281	298
1827....	281	284	293	296	299	289	289	286	286	284	277	275	287
1828....	297	294	284	282	244	241	241	250	250	247	247	237	251
1829....	238	230	230	230	226	226	217	217	213	213	212	214	222
1830....	212	213	213	213	213	207	207	207	207	200	196	200	207
1831....	228	204	204	204	204	207	207	207	214	214	222	222	211
1832....	222	222	230	230	230	226	226	226	226	226	226	226	226
1833....	226	224	222	214	214	214	214	225	228	228	220	215	220
1834....	215	215	215	213	213	209	209	209	209	209	209	218	212
1835....	222	218	218	217	217	220	221	225	231	231	240	240	225
1836....	248	240	241	249	253	254	254	254	254	254	251	261	251
1837....	262	262	263	263	262	261	260	268	268	268	265	264	264
1838....	265	265	265	252	252	252	252	252	252	261	260	260	257
1839....	252	266	260	260	254	249	244	244	244	246	244	244	250
1840....	243	243	253	245	242	240	237	230	231	230	233	232	238
1841....	228	227	226	225	224	224	221	218	215	209	209	213	220
1842....	213	219	211	208	204	198	198	199	194	195	196	196	203
1843....	197	198	198	194	194	190	181	180	179	181	181	181	188
1844....	175	177	180	190	189	189	192	192	191	193	190	184	187
1845....	184	184	181	179	176	179	179	178	177	175	173	173	178
1846....	172	172	171	169	169	167	160	160	158	156	154	154	164
1847....	164	155	158	160	159	156	156	156	155	154	152	151	156
1848....	154	152	151	153	151	154	154	153	154	153	153	153	153
1849....	153	150	150	150	150	150	151	151	151	151	156	158	152
1850....	153	152	154	154	153	154	152	153	155	155	155	155	154
1851....	155	155	154	152	152	154	153	151	154	153	152	152	153
1852....	152	151	153	153	156	153	151	156	158	162	165	165	156
1853....	165	167	176	176	173	170	167	163	166	167	169	170	169
1854....	171	172	174	175	172	175	174	175	174	175	173	173	174
1855....	179	177	176	175	175	176	178	178	177	182	180	181	178
1856....	181	181	182	175	176	176	174	172	171	171	171	177	176
1857....	171	172	174	172	173	172	171	173	170	168	168	168	171
1858....	165	164	161	161	162	164	166	173	173	174	180	170	168
1859....	170	174	177	175	168	168	166	165	164	163	165	163	168
1860....	170	180	180	179	176	177	176	176	176	174	172	169	175
1861....	172	169	171	171	173	172	173	173	175	176	176	180	174
1862....	198	188	200	195	194	192	195	206	214	220	237	238	206
1863....	227	253	263	247	236	236	227	220	217	224	221	239	234
1864....	233	237	242	251	266	276	322	343	365	345	338	343	297
1865....	339	327	327	308	309	367	271	269	283	298	308	297	300
1866....	293	297	283	288	276	288	294	287	281	272	273	268	283
1867....	262	257	246	234	232	229	215	213	218	218	213	209	229
1868....	198	200	200	200	200	200	196	200	209	214	213	218	204
1869....	235	247	242	232	239	229	219	216	211	218	220	219	227
1870....	223	220	205	195	197	198	205	183	187	194	195	192	199
1871....	189	188	180	173	173	174	168	174	174	176	177	180	177
1872....	178	174	170	189	180	173	185	175	171	172	172	168	175
1873....	170	171	169	177	178	177	187	190	193	196	182	184	181
1874....	181	179	180	183	182	182	181	177	176	167	160	158	176
1875....	158	157	154	155	153	152	144	145	145	140	141	141	149
1876....	144	145	136	138	138	137	141	143	143	140	138	136	140
1877....	147	148	144	135	136	133	131	131	130	130	130	132	136
1878....	135	134	132	126	126	124	123	123	121	128	128	128	127
1879....	129	129	130	118	116	117	117	116	116	112	117	119	120

TABLE 42 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1880....	121	123	123	123	122	119	118	119	118	119	118	119	120
1881....	125	122	122	120	120	120	120	119	118	117	116	117	120
1882....	116	117	116	114	113	113	112	113	114	116	110	117	114
1883....	116	116	117	116	109	110	108	107	108	103	103	103	110
1884....	108	108	107	107	107	105	105	103	100	104	105	102	105
1885....	102	102	101	100	102	105	102	100	99	94	96	101	100
1886....	100	94	93	100	100	100	99	101	99	99	99	98	99
1887....	98	98	97	98	98	97	95	95	96	96	95	95	97
1888....	99	99	104	104	105	102	102	102	105	106	106	106	103
1889....	101	104	105	103	103	102	101	100	97	97	97	97	101
1890....	92	92	92	94	88	91	90	89	90	91	85	87	90
1891....	86	86	88	85	95	92	91	91	92	93	92	92	91
1892....	93	89	89	88	93	93	93	93	93	93	94	93	92
1893....	97	95	93	92	91	88	88	88	88	84	84	84	90
1894....	84	82	80	79	79	78	78	78	84	81	80	82	81
1895....	80	79	80	81	79	80	80	80	79	79	80	80	80
1896....	81	80	80	80	80	80	80	80	80	81	80	81	80
1897....	80	89	88	89	88	88	88	89	85	85	84	84	87
1898....	90	89	90	89	102	99	98	98	97	98	98	98	95
1899....	99	99	100	99	99	99	100	100	100	101	101	101	100
1900....	102	102	102	102	101	99	100	100	101	102	101	101	101
1901....	102	101	101	101	101	101	101	105	106	103	110	111	104
1902....	111	107	107	107	107	106	106	106	106	106	106	103	107
1903....	103	103	102	101	104	104	104	104	104	103	104	104	104
1904....	105	105	105	104	104	104	104	104	103	103	99	103	104
1905....	103	103	103	103	103	103	96	100	101	101	101	101	101
1906....	94	94	94	94	94	94	94	94	94	95	96	96	95
1907....	95	96	96	96	96	97	97	98	98	98	97	97	97
1908....	97	101	100	101	94	97	97	97	98	98	98	98	98
1909....	99	98	98	97	97	98	98	98	99	100	100	100	98
1910....	101	101	101	102	100	100	100	100	102	102	102	102	101
1911....	102	102	101	100	100	99	100	100	101	101	101	100	101
1912....	99	99	99	99	100	99	99	99	100	100	100	99	99
1913....	99	99	99	99	99	99	99	98	99	99	99	98	99
1914....	98	97	97	97	96	96	96	97	107	108	107	107	100
1915....	108	114	115	127	121	125	139	144	151	157	171	184	138
1916....	204	217	217	215	213	205	193	180	177	182	185	187	198
1917....	187	186	191	193	198	198	203	207	216	222	217	221	202
1918....	231	233	234	235	230	224	220	222	221	221	219	207	225
1919....	203	194	188	187	188	188	193	194	192	194	197	203	193
1920....	201	202	208	211	214	213	212	209	206	200	187	172	203
1921....	161	153	148	142	141	140	137	136	138	137	135	133	142
1922....	124	123	125	125	124	123	121	122	123	123	125	125	124
1923....	125	126	128	128	126	123	122	122	122	124	125	125	125
1924....	123	122	122	121	119	118	119	122	122	123	125	125	122
1925....	127	125	125	124	124	123	124	125	126	127	128	127	125
1926....	125	124	124	123	123	124	124	123	124	122	122	122	124
1927....	121	121	120	120	118	118	118	118	119	120	120	120	119
1928....	119	118	118	118	118	117	117	117	117	118	118	118	118
1929....	118	118	117	117	116	115	115	115	115	116	116	115	116
1930....	115	114	113	112	111	110	109	108	107	107	106	105	110
1931....	104	103	102	100	99	98	97	95	94	93	94	94	98
1932....	93	93	93	92	91	90	90	90	90	90	89	89	91

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932 105

TABLE 43. INDEX NUMBERS OF THE WHOLESALE PRICES OF HOUSE-FURNISHING GOODS, 1840 TO 1932\*

(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1840....	133	133	130	130	130	130	129	129	126	125	123	122	128
1841....	121	121	121	122	120	121	121	121	122	121	122	121	121
1842....	120	118	117	115	114	113	113	112	110	110	106	102	113
1843....	99	98	97	97	97	96	96	98	99	100	102	103	99
1844....	106	107	107	109	108	108	109	111	111	110	108	107	108
1845....	107	107	105	105	105	105	105	106	107	108	109	110	107
1846....	113	111	112	112	117	111	111	113	108	108	110	112	110
1847....	115	116	117	117	117	115	117	117	118	118	117	116	117
1848....	113	114	114	114	113	113	113	110	108	108	108	108	111
1849....	109	110	110	110	109	109	109	108	110	110	111	111	110
1850....	111	114	115	115	114	115	115	114	114	114	115	115	114
1851....	120	119	120	119	116	116	115	114	115	115	115	115	117
1852....	117	117	117	117	117	117	116	119	119	120	121	123	118
1853....	125	125	125	126	127	127	127	128	130	132	132	132	128
1854....	131	131	131	131	131	130	129	128	128	127	128	128	129
1855....	128	127	126	125	126	130	131	131	133	134	132	129	129
1856....	126	126	127	128	129	128	128	128	128	128	130	130	128
1857....	131	131	132	132	132	131	133	130	131	130	127	124	130
1858....	121	121	119	120	120	121	121	122	122	122	121	120	121
1859....	118	118	121	117	119	119	119	118	118	118	118	117	118
1860....	118	117	118	119	119	119	118	117	115	114	113	113	117
1861....	112	110	110	109	109	109	108	109	110	110	112	112	110
1862....	113	115	113	114	119	119	123	130	133	134	136	142	124
1863....	154	164	171	171	164	160	160	164	162	163	169	179	165
1864....	188	192	195	200	211	229	243	243	241	232	243	244	222
1865....	237	227	222	199	200	194	192	199	211	227	228	230	214
1866....	233	222	218	215	220	220	219	219	217	218	219	215	220
1867....	207	205	204	201	197	197	198	195	194	192	184	180	196
1868....	175	178	179	179	179	180	179	180	179	178	177	175	178
1869....	177	178	180	180	178	178	177	178	178	177	177	177	178
1870....	177	173	171	170	167	162	157	158	159	160	157	155	164
1871....	152	152	153	153	152	153	154	156	156	157	156	155	154
1872....	153	157	160	163	162	160	160	159	157	158	158	157	159
1873....	157	158	160	162	162	163	161	161	161	161	157	156	160
1874....	155	156	156	156	153	152	149	149	145	142	141	138	149
1875....	136	136	136	136	134	134	134	133	133	134	131	129	134
1876....	127	126	126	125	124	123	121	121	121	121	121	120	123
1877....	119	119	118	118	117	118	118	117	117	117	117	116	118
1878....	116	115	113	111	110	109	108	107	106	105	104	103	109
1879....	103	102	102	102	102	104	104	105	104	104	109	115	105
1880....	118	120	121	122	121	119	118	115	113	112	111	111	117
1881....	110	110	110	111	111	110	110	109	109	107	107	107	109
1882....	108	108	107	107	107	107	107	108	111	111	111	110	109
1883....	110	110	110	111	110	110	110	110	111	108	108	107	110
1884....	107	106	106	105	104	104	104	104	104	104	103	103	105
1885....	103	102	99	98	98	98	98	97	97	99	97	97	99
1886....	96	95	94	94	93	93	93	93	94	94	94	95	94
1887....	93	93	93	93	92	92	92	92	93	93	93	93	92
1888....	93	93	93	94	93	92	92	93	95	96	95	95	94
1889....	95	94	94	94	94	94	94	94	93	92	92	92	94

\* On the 1926 base, the average of the house-furnishing-goods index of the Bureau of Labor Statistics (Bulletins 521 and 453) for the five years 1910-14 is 54.560. To convert index numbers since 1890 to the 1910-14 base, multiply by 1.832845.

For the four years 1890-93, the Bureau of Labor Statistics index numbers on the 1910-14 base averaged 90.038. On the 1876-91 base, the four years 1890-93 averaged 86.819. The index numbers prior to January, 1890, were converted to the 1910-14 base by multiplying by 1.0371.



TABLE 43 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1890....	91	91	91	91	91	91	91	91	91	92	92	92	91
1891....	93	94	94	93	93	93	92	92	92	91	91	91	92
1892....	89	89	89	89	88	88	87	87	87	87	87	87	88
1893....	88	88	88	88	88	89	89	89	88	87	87	87	88
1894....	85	85	85	84	83	83	83	83	83	82	82	82	83
1895....	79	79	79	79	79	79	79	79	80	81	81	82	80
1896....	81	80	80	79	79	79	79	79	79	79	79	79	80
1897....	78	78	78	77	77	77	78	79	79	79	79	78	78
1898....	80	80	81	81	81	81	80	80	80	81	81	80	81
1899....	80	80	80	82	82	82	83	83	83	84	84	88	82
1900....	90	90	91	91	91	91	89	89	88	89	89	88	90
1901....	90	90	90	90	90	90	90	90	91	90	90	90	90
1902....	90	90	90	90	90	90	90	90	90	90	91	91	90
1903....	91	91	92	92	93	93	95	95	94	94	95	95	93
1904....	93	94	94	94	94	94	91	91	91	90	90	90	92
1905....	91	90	90	90	90	90	91	91	92	92	93	93	91
1906....	93	93	93	92	92	93	94	94	94	95	97	97	94
1907....	98	98	99	100	100	102	102	102	102	102	102	102	101
1908....	101	98	98	98	97	93	93	91	91	91	91	91	95
1909....	94	94	94	94	94	93	94	94	95	95	97	97	95
1910....	98	99	99	99	98	98	98	99	99	99	99	99	99
1911....	99	99	99	98	96	96	95	96	96	94	94	94	97
1912....	95	95	95	96	98	98	98	98	98	98	98	99	97
1913....	102	102	102	102	102	102	102	102	102	104	104	104	103
1914....	104	104	104	104	104	104	104	104	104	103	103	103	104
1915....	101	101	102	102	103	103	103	103	103	104	104	104	103
1916....	107	108	108	109	111	111	113	114	114	116	119	119	113
1917....	125	125	127	128	130	133	141	141	144	144	145	148	136
1918....	154	155	159	163	168	172	177	180	182	182	182	181	171
1919....	181	177	176	177	179	190	194	200	208	208	220	229	194
1920....	245	252	254	255	263	263	275	274	271	287	255	245	260
1921....	227	225	224	224	215	209	194	194	194	196	194	194	207
1922....	192	191	190	188	189	188	187	187	188	191	192	194	190
1923....	201	201	201	202	203	203	202	199	199	200	198	196	200
1924....	196	196	195	195	192	191	190	190	191	191	192	192	192
1925....	192	192	190	190	190	190	189	189	188	189	187	187	189
1926....	185	185	185	185	184	184	183	183	183	183	183	181	184
1927....	179	179	179	179	179	179	179	179	179	178	179	179	179
1928....	177	177	176	175	175	174	174	174	174	172	172	172	174
1929....	172	172	172	172	172	173	173	173	173	174	173	174	173
1930....	172	172	171	171	171	171	171	170	169	169	168	163	170
1931....	162	161	161	161	159	158	157	156	152	148	148	144	156
1932....	142	142	141	140	137	137	136	135	135	135	135	135	138

TABLE 44. INDEX NUMBERS OF THE WHOLESALE PRICES OF SPIRITS, 1786 to 1889\*  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1786....	15	15	15	15	15	15	15	15	15	15	15	15	15
1787....	15	15	15	15	15	15	15	15	15	15	15	15	15
1788....	15	15	15	15	15	15	15	15	15	15	15	15	15
1789....	15	15	15	15	15	17	17	16	16	16	16	17	16

\* In 1910-14, grain alcohol was worth \$2.5417 per gallon. In 1876-81 it was worth \$2.0589 per gallon. To convert to a 1910-14 base, the index numbers on the 1876-81 base were multiplied by 0.8101. After 1889, this index number and the one for drugs are combined in the Bureau of Labor Statistics index of drugs and chemicals.

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932 107

TABLE 44 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1790	17	17	17	17	16	17	17	17	17	17	17	17	17
1791	17	18	18	18	18	18	19	20	20	20	20	20	19
1792													
1793				22	22	22	22	22	22	22	22	22	22
1794	23	23	23	23	23	23	23	23	23	23	23	23	23
1795	24	24	24	24	24	24	25	25	25	27	28	30	25
1796	33	33	33	32	33	34	32	31	30	31	30	28	31
1797	28	28	28	27	27	27	27	26	25	24	24	24	26
1798	23	24	25	26	26	26	26	26	26	26	26	26	26
1799	26	25	24	24	24	24	22	22	22	23	24	24	24
1800	25	24	23	23	24	26	26	27	27	27	26	26	25
1801	26	27	27	27	27	27	27	27	26	27	34	27	27
1802	25	24	24	24	24	24	24	24	24	24	25	25	24
1803	25	24	24	24	25	25	25	26	26	26	26	25	25
1804	24	24	24	24	23	23	23	22	22	22	22	22	23
1805	22	22	23	24	24	24	24	24	24	24	24	24	24
1806	24	23	24	24	24	23	23	23	23	23	23	23	23
1807	23	23	23	23	23	22	22	22	22	22	22	22	22
1808	23	23	23	23	23	23	22	22	22	23	23	29	23
1809	29	29	28	28	26	24	25	26	27	27	29	29	27
1810	29	30	28	28	29	29	29	29	29	29	29	29	29
1811	29	29	28	27	27	32	32	31	32	33	33	33	31
1812	34	34	34	34	34	34	36	36	35	35	35	33	34
1813	33	33	34	34	34	36	36	36	36	37	42	47	37
1814	54	53	49	46	45	45	46	46	47	47	47	47	48
1815	47	46	44	41	40	42	39	41	40	41	40	36	41
1816	37	37	36	35	35	33	32	31	31	31	32	33	34
1817	33	35	35	35	29	29	29	28	29	30	31	31	31
1818	29	31	29	28	28	27	28	28	29	29	29	29	29
1819	28	26	26	25	24	23	23	23	23	23	24	23	24
1820	23	23	24	22	22	22	22	22	22	22	22	22	22
1821	22	22	22	21	21	21	21	21	21	21	21	22	21
1822	22	22	22	21	21	21	20	20	20	20	20	20	21
1823	20	20	20	20	20	20	20	20	20	20	20	20	20
1824	19	19	19	19	19	19	19	19	19	19	18	18	19
1825	21	22	21	21	22	21	22	22	22	24	22	22	22
1826	20	20	19	20	20	20	20	20	20	22	22	23	21
1827	22	23	23	22	22	20	20	20	21	21	21	21	21
1828	20	20	20	18	19	19	19	18	18	20	18	19	19
1829	20	20	20	19	18	18	17	18	18	19	18	18	19
1830	20	19	18	18	18	18	18	18	20	20	21	22	19
1831	21	22	24	24	21	23	22	23	23	23	24	22	23
1832	24	23	23	20	20	20	21	20	22	22	22	22	22
1833	22	22	22	24	21	22	21	21	21	22	21	20	22
1834	20	19	18	17	18	18	18	19	19	22	20	20	19
1835	22	22	22	22	22	23	24	24	23	23	23	25	23
1836	25	23	24	25	24	22	24	24	26	26	27	26	25
1837	27	28	29	24	23	20	22	23	23	25	26	27	25
1838	27	24	24	24	23	23	22	24	25	28	28	27	25
1839	27	29	28	26	25	25	24	24	25	24	21	22	25
1840	22	22	21	19	20	20	18	20	22	22	21	19	21
1841	20	19	19	18	18	19	19	20	20	19	18	18	19
1842	17	17	16	16	16	16	16	17	18	18	18	18	17
1843	18	18	18	18	18	20	19	20	19	19	19	19	19
1844	19	20	20	20	20	20	20	20	21	21	23	21	20
1845	21	20	20	21	20	19	19	20	20	21	22	23	21
1846	21	21	20	20	20	18	19	20	20	22	21	20	20
1847	21	24	24	24	24	26	23	23	23	24	25	23	24
1848	23	24	22	23	23	21	21	21	21	22	21	21	22
1849	21	22	21	20	20	20	20	21	22	22	23	22	21



WHOLESALE PRICES IN THE UNITED STATES, 1797 to 1932 109

TABLE 45. INDEX NUMBERS OF THE WHOLESALE PRICES OF MISCELLANEOUS PRODUCTS, 1786 to 1932\*

(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1786	....	....	....	....	....	....	....	....	....	....	145	146	....
1787	147	147	148	148	148	148	148	148	148	148	148	148	148
1788	....	....	172	....	....	....	....	....	....	....	....	....	157
1789	157	157	156	155	154	154	151	149	148	150	151	147	152
1790	143	143	143	143	143	139	139	139	139	139	141	142	141
1791	144	145	144	146	147	146	151	151	153	152	149	149	148
1792	....	....	....	....	....	....	....	....	....	....	....	....	....
1793	....	....	....	160	161	162	163	164	156	166	166	166	163
1794	158	158	158	158	158	158	158	158	153	158	158	158	158
1795	234	234	221	221	222	223	221	223	121	214	207	200	220
1796	198	205	204	208	210	209	206	203	207	202	200	197	204
1797	189	187	185	183	182	180	177	176	174	161	161	166	177
1798	182	165	162	181	192	185	180	179	180	178	177	177	177
1799	204	206	206	206	207	202	205	206	206	208	210	210	206
1800	206	206	208	205	205	202	201	172	171	173	173	174	194
1801	169	175	176	175	173	174	173	173	172	174	174	167	173
1802	153	153	163	152	150	144	145	144	133	134	135	135	145
1803	135	135	139	138	137	141	140	141	139	139	138	137	138
1804	139	139	143	147	147	149	147	149	150	152	171	157	149
1805	158	158	158	163	164	165	159	169	171	172	174	174	165
1806	180	181	180	176	176	195	177	173	174	175	179	182	179
1807	181	177	177	174	177	174	168	164	166	171	170	171	173
1808	162	162	162	162	159	156	158	161	162	166	166	188	164
1809	191	200	200	199	202	180	207	188	193	198	200	204	197
1810	203	203	203	204	207	203	201	206	213	215	216	218	208
1811	215	215	213	211	211	201	201	201	199	198	193	193	204
1812	226	225	224	223	222	223	244	243	243	243	245	245	234
1813	248	250	250	250	249	247	247	248	252	252	252	269	251
1814	271	272	272	263	249	248	231	230	230	229	228	227	246
1815	227	237	210	207	182	185	189	191	192	195	205	199	202
1816	204	196	196	192	194	177	169	158	157	161	160	161	177
1817	160	160	160	159	160	154	152	154	150	152	156	157	156
1818	157	158	150	148	145	144	143	146	146	149	148	153	149
1819	151	148	147	145	140	146	142	142	141	144	142	142	144
1820	128	128	128	124	124	120	121	122	121	124	124	124	124
1821	132	132	131	131	132	132	133	126	127	126	127	122	129
1822	122	123	125	127	115	115	114	113	113	113	114	116	118
1823	118	119	119	121	120	121	118	118	119	119	119	120	119
1824	123	123	122	121	118	118	118	117	117	119	119	117	119
1825	116	118	116	115	115	115	114	113	113	113	112	111	114
1826	112	111	111	111	109	107	109	108	107	110	111	111	110
1827	116	111	111	108	106	110	110	113	114	114	115	115	112
1828	115	117	115	113	111	111	109	110	110	111	113	116	113
1829	119	121	120	121	116	111	111	110	114	120	120	118	117
1830	118	118	115	112	109	110	110	108	108	108	108	108	111
1831	108	108	112	109	109	110	110	108	112	113	116	116	111

\* On the 1926 base, the average of the miscellaneous index of the Bureau of Labor Statistics (Bulletins 521 and 453) for the five years 1910-14 is 110.140. To convert index numbers since 1890 to the 1910-14 base, multiply by 0.907935.

For the four years 1890-93, the Bureau of Labor Statistics index numbers on the 1910-14 base averaged 83.485. On the 1876-81 base, the four years 1890-93 averaged 97.531. The index numbers prior to January, 1890, were converted to the 1910-14 base by multiplying by 0.8560.

The list of products from 1797 to 1889 is fairly uniform. Rubber and oil materially affect the index in recent years.

TABLE 45 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1832....	115	115	123	122	109	109	104	104	106	105	104	104	110
1833....	104	104	103	103	108	103	103	106	106	106	106	110	105
1834....	109	108	108	108	108	106	106	107	110	109	109	115	109
1835....	119	124	127	127	123	121	127	124	123	127	131	144	126
1836....	144	141	141	134	127	116	122	129	127	131	125	122	130
1837....	121	129	126	120	112	118	117	114	117	117	115	119	119
1838....	121	121	120	117	117	117	116	119	121	126	125	122	120
1839....	122	128	134	129	124	122	122	121	119	119	113	115	122
1840....	112	112	108	107	105	109	106	106	109	109	106	109	106
1841....	110	114	114	114	113	110	111	113	113	115	114	113	112
1842....	114	114	113	113	108	109	106	110	108	110	108	112	111
1843....	114	112	112	115	109	109	109	106	105	108	107	105	100
1844....	104	102	101	100	99	94	95	95	93	91	91	92	96
1845....	93	93	92	94	80	80	80	80	81	81	85	84	85
1846....	84	85	85	85	84	84	84	85	87	85	90	92	86
1847....	93	91	94	93	99	97	96	105	99	107	110	104	99
1848....	103	108	107	103	97	97	96	97	95	97	95	95	99
1849....	98	97	95	95	89	87	87	89	91	91	92	92	92
1850....	91	90	88	87	87	86	88	88	88	87	87	87	84
1851....	86	86	87	87	86	86	86	86	86	86	86	86	86
1852....	86	88	90	90	89	87	86	86	90	92	93	93	89
1853....	95	95	95	95	95	93	94	96	95	99	102	103	96
1854....	103	104	106	104	104	101	101	101	99	98	102	107	103
1855....	106	103	101	96	96	96	99	95	101	112	112	122	103
1856....	120	119	119	120	117	114	113	108	108	109	106	106	114
1857....	107	107	106	108	107	109	108	107	105	105	109	110	107
1858....	102	106	104	103	107	102	102	100	101	100	99	98	102
1859....	96	97	97	95	95	102	103	101	100	97	96	96	98
1860....	96	95	99	100	100	100	100	99	99	99	99	96	94
1861....	90	92	93	93	95	95	96	101	100	102	109	110	94
1862....	122	123	115	114	115	112	116	125	122	129	135	137	122
1863....	135	144	154	146	146	144	145	140	140	147	158	157	146
1864....	155	156	161	170	190	186	208	235	222	191	204	205	199
1865....	206	202	192	178	155	152	153	154	165	175	177	190	175
1866....	180	167	162	153	163	172	178	174	169	174	176	167	170
1867....	159	161	165	167	170	165	164	165	160	163	153	149	162
1868....	150	149	153	155	155	152	148	148	165	161	154	149	153
1869....	142	139	138	136	135	135	136	135	134	134	133	135	126
1870....	134	133	132	132	132	130	127	127	125	123	121	119	129
1871....	117	116	117	116	117	119	120	124	126	125	124	125	120
1872....	124	124	129	124	126	125	125	127	126	123	121	121	125
1873....	119	118	118	117	116	115	113	113	112	112	111	112	115
1874....	112	112	112	112	111	111	110	113	112	112	106	105	111
1875....	103	100	102	100	98	99	99	98	97	96	93	95	95
1876....	96	96	98	98	100	100	100	98	98	97	97	97	94
1877....	96	96	95	95	96	95	95	96	95	94	93	93	95
1878....	92	91	89	89	88	88	86	87	87	87	84	88	88
1879....	88	89	89	90	88	89	89	88	89	91	94	92	90
1880....	92	92	92	92	92	92	91	91	90	90	90	90	91
1881....	86	86	91	89	89	91	91	91	92	91	91	92	90
1882....	90	91	92	93	95	93	93	93	94	94	94	93	93
1883....	96	93	93	99	97	96	93	92	90	90	90	89	93
1884....	82	80	80	78	78	77	75	78	78	78	77	78	78
1885....	78	78	79	79	78	78	77	76	77	77	77	78	78
1886....	77	77	75	75	76	76	77	77	72	72	71	69	74
1887....	75	75	75	75	76	76	75	75	74	74	73	73	75
1888....	74	73	73	73	73	74	71	71	70	70	70	81	73
1889....	81	81	81	81	81	81	80	79	79	80	81	79	80
1890....	84	81	85	88	91	93	92	94	96	91	88	89	89
1891....	85	91	90	93	92	89	89	86	77	78	78	79	86

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932

TABLE 45 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1892....	77	77	79	82	79	79	79	78	76	79	78	79	79
1893....	79	83	84	84	83	82	81	78	79	80	78	78	81
1894....	79	78	78	78	78	78	78	77	78	79	80	80	78
1895....	81	80	80	80	80	81	80	79	80	81	84	81	81
1896....	81	77	79	81	83	86	84	83	82	83	83	83	82
1897....	82	82	83	83	84	84	84	85	86	85	85	83	84
1898....	80	81	84	82	83	79	88	91	89	86	85	84	85
1899....	86	89	89	90	90	88	87	87	86	87	88	94	88
1900....	96	97	97	98	98	88	90	90	91	93	90	86	93
1901....	87	85	85	84	87	85	84	84	86	85	82	83	85
1902....	85	81	80	80	79	79	79	77	80	80	80	81	80
1903....	88	86	90	88	89	87	89	90	93	95	92	90	90
1904....	90	93	95	99	100	100	100	104	102	100	102	109	99
1905....	102	106	108	109	108	110	107	106	107	107	103	104	107
1906....	107	107	106	106	106	105	103	103	103	102	104	104	105
1907....	104	103	103	102	102	99	97	98	97	96	92	85	98
1908....	84	82	81	84	86	90	90	87	90	93	96	103	89
1909....	102	102	105	103	105	111	115	136	129	142	134	129	118
1910....	129	133	143	173	173	158	156	147	133	111	103	105	139
1911....	101	102	122	111	99	90	89	95	97	96	90	91	99
1912....	92	96	98	101	99	97	95	97	101	97	93	93	97
1913....	89	88	87	84	83	84	83	84	86	84	81	82	85
1914....	81	81	81	82	82	80	80	81	84	81	82	85	82
1915....	87	79	79	79	77	77	78	78	77	77	78	81	79
1916....	86	84	87	88	88	91	90	91	93	96	99	102	91
1917....	107	108	110	113	113	114	113	113	112	109	110	109	111
1918....	113	112	115	119	121	123	123	125	127	128	129	130	122
1919....	130	129	127	126	121	119	121	125	126	127	130	132	126
1920....	138	144	150	155	160	161	162	161	159	154	144	135	152
1921....	122	115	110	106	98	96	94	91	91	92	88	88	99
1922....	85	85	85	85	85	83	82	81	82	84	86	87	84
1923....	91	94	95	95	94	90	89	89	89	88	87	87	91
1924....	83	87	86	86	84	82	82	83	84	84	85	90	85
1925....	87	85	86	90	94	100	108	103	105	109	111	109	99
1926....	100	97	95	94	93	92	89	88	87	87	85	84	91
1927....	83	83	83	83	83	83	82	83	83	82	81	82	83
1928....	82	81	81	80	79	77	76	75	75	75	75	75	78
1929....	75	75	75	74	74	75	75	75	75	76	75	75	75
1930....	74	74	73	74	73	71	70	69	68	68	67	67	71
1931....	66	65	65	65	64	63	63	62	62	60	62	61	63
1932....	60	59	59	59	58	58	58	59	59	58	58	58	59

## FARM-FOOD INDEX NUMBERS

Because of the general interest in prices of farm-food products, index numbers for such a group were calculated. The weights are in the same proportion as those given for the farm-products group, but only those farm products a part of which is used for human food are included.<sup>18</sup> These products show a material rise in the past century. They fell very low in price from 1921 to 1924, but were approximately the same as the average of all commodities from 1925 to 1929.

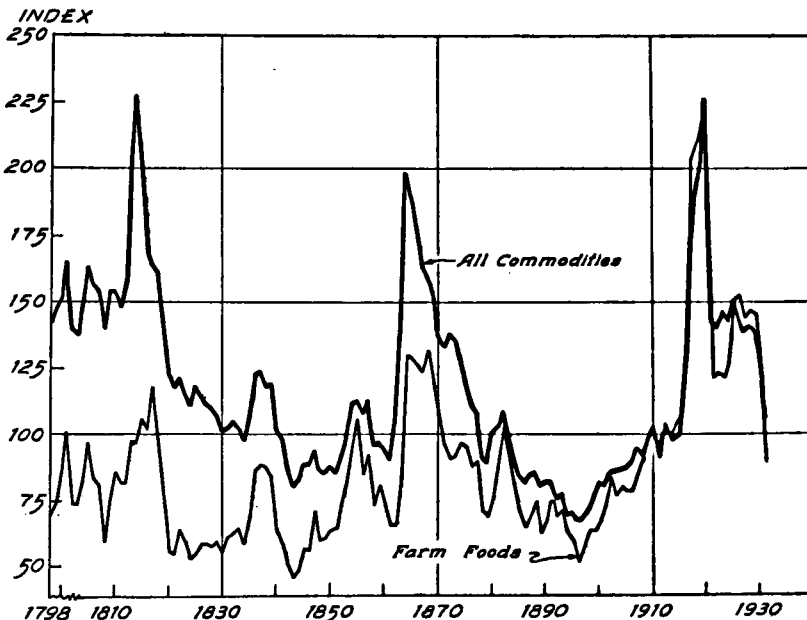


FIGURE 36. INDEX NUMBERS OF WHOLESALE PRICES OF FARM-FOOD PRODUCTS AND ALL COMMODITIES, 1798 TO 1931 (TABLES 46 AND 28)

(1910-14 = 100)

Farm-food products have risen in price as compared with all commodities

It should be remembered that these are not the prices which farmers receive nor the prices which consumers pay, but are the wholesale prices in cities of food products of the farm. When prices fall, retail prices are high as compared with wholesale prices, and farm prices are low.

<sup>18</sup>The products included and the comparative weights are those given in table 51, page 121, from barley to pork inclusive. An index number was calculated from 1797 to 1891 with 1878-91 taken as 100. Another index number was calculated from 1890 to 1931 with 1910-14 taken as 100. The earlier index was converted to the 1910-14 base.

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932 113

TABLE 46. INDEX NUMBERS OF THE WHOLESALE PRICES OF FARM FOODS, 1797 TO 1932\* (1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1797										81	81	80	
1798	79	75	73	71	69	66	66	66	67	67	68	69	70
1799	70	70	70	70	70	77	77	79	79	80	81	82	75
1800	80	78	79	79	81	84	86	88	93	92	93	93	86
1801	99	104	107	106	106	105	105	103	104	99	92	80	101
1802	78	74	72	71	71	73	76	77	78	76	72	69	74
1803	70	72	73	71	72	70	75	80	79	81	74	76	74
1804	77	77	79	73	72	72	74	81	87	90	96	101	82
1805	100	100	104	103	99	98	93	92	95	95	95	92	97
1806	90	91	84	82	80	83	89	88	87	82	77	80	84
1807	83	85	84	80	81	80	80	81	80	80	79	78	81
1808	70	68	62	59	59	58	56	58	57	59	59	59	60
1809	61	62	73	72	79	79	79	81	79	76	81	79	75
1810	83	86	81	84	82	83	88	90	91	89	89	86	86
1811	86	79	82	84	84	81	80	82	79	82	81	79	82
1812	84	88	83	78	73	80	72	77	81	86	89	93	82
1813	101	102	101	101	105	95	92	89	90	99	100	100	98
1814	93	94	92	105	101	95	96	97	96	98	99	101	97
1815	100	103	99	91	101	105	111	116	112	114	112	110	106
1816	105	104	99	93	91	97	104	106	105	103	106	116	102
1817	121	124	125	129	127	126	117	123	113	108	103	103	118
1818	104	105	103	95	95	96	94	100	97	103	101	94	99
1819	89	85	84	81	81	76	74	75	75	75	68	63	77
1820	68	63	58	54	57	55	54	57	57	54	49	49	56
1821	51	48	47	48	53	51	52	56	60	62	64	68	55
1822	68	66	67	64	66	64	64	60	61	62	64	63	64
1823	62	61	61	60	58	62	62	60	59	57	56	56	60
1824	55	54	53	53	54	55	55	55	55	55	54	54	54
1825	52	53	52	55	56	57	56	56	59	59	56	56	56
1826	58	58	58	58	57	62	63	59	59	61	61	59	59
1827	61	62	60	60	58	60	57	57	57	54	56	62	59
1828	59	57	54	54	54	54	55	55	59	63	63	63	58
1829	66	64	63	63	63	63	56	57	56	55	55	54	60
1830	53	53	52	53	54	57	57	59	60	60	57	58	56
1831	59	62	63	64	65	62	60	60	61	62	61	61	62
1832	66	64	63	59	60	62	63	65	64	63	65	66	63
1833	66	65	65	65	67	65	63	64	64	65	64	63	65
1834	61	62	68	57	59	59	57	59	60	58	59	57	59
1835	60	60	62	65	68	71	73	72	71	72	75	80	69
1836	79	80	85	87	86	81	80	86	90	95	96	98	87
1837	96	100	99	90	83	85	89	87	81	81	83	91	89
1838	87	85	84	85	90	86	84	85	88	94	91	95	88
1839	94	94	90	93	90	88	83	81	79	74	70	68	84
1840	64	67	65	64	65	63	61	63	64	63	62	61	64
1841	59	58	57	54	55	58	61	61	64	62	59	57	59
1842	54	64	55	55	54	54	53	49	47	45	44	46	51
1843	46	44	43	44	45	46	48	46	46	44	46	48	46
1844	46	48	50	50	51	48	46	47	47	49	52	54	49
1845	53	53	54	55	56	56	56	57	59	58	64	68	57
1846	66	63	60	60	55	52	51	49	48	57	57	58	56
1847	60	73	76	77	78	86	74	65	67	67	67	63	71
1848	61	61	61	64	62	59	54	55	60	63	60	60	60
1849	65	65	65	61	60	60	59	58	60	59	60	60	61

\* For the three years 1890-92, the index on the 1910-14 base averaged 71.7222. On the 1870-91 base, the three years 1890-92 averaged 92.3333. The index numbers prior to January, 1890, were converted to the 1910-14 base by multiplying by 0.7768.



TABLE 46 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1850....	62	63	64	64	65	68	65	62	61	62	65	66	64
1851....	68	68	67	66	67	64	62	61	62	63	64	66	65
1852....	70	73	77	78	73	72	71	72	74	74	80	82	73
1853....	84	82	82	80	80	77	79	81	81	84	84	87	82
1854....	90	106	95	99	104	104	95	94	92	88	96	101	97
1855....	106	108	115	121	121	119	105	97	94	91	94	98	106
1856....	94	93	88	85	81	76	80	80	80	82	85	90	85
1857....	93	94	97	97	101	102	100	95	92	82	84	80	93
1858....	76	77	79	78	74	70	70	71	70	72	74	77	74
1859....	81	86	89	88	86	85	81	76	74	72	77	77	81
1860....	74	75	76	74	76	73	76	73	74	75	75	69	74
1861....	77	74	73	74	71	63	59	58	58	59	64	65	66
1862....	65	67	68	68	60	59	61	62	65	68	71	75	66
1863....	78	85	88	88	85	80	77	87	73	82	87	94	84
1864....	101	106	114	118	119	126	147	150	148	132	143	152	130
1865....	158	161	153	131	111	105	108	114	125	130	130	122	129
1866....	121	119	123	122	130	133	130	130	128	132	125	118	126
1867....	121	123	129	135	139	123	120	118	119	123	122	132	125
1868....	137	143	149	147	141	129	129	132	129	119	113	119	132
1869....	127	127	124	120	116	111	114	119	119	113	110	114	118
1870....	109	110	109	111	114	111	115	115	109	106	100	99	109
1871....	102	108	112	106	99	94	91	87	88	87	85	88	96
1872....	91	93	96	97	94	89	86	88	90	92	91	88	91
1873....	93	94	99	101	97	87	87	86	89	85	86	95	92
1874....	101	100	103	102	97	94	95	94	99	91	94	95	97
1875....	96	95	98	102	98	92	95	97	94	92	91	88	95
1876....	90	93	96	96	88	81	82	80	85	87	87	92	88
1877....	97	95	92	97	100	93	91	84	85	82	79	80	90
1878....	78	76	74	73	70	65	69	70	71	69	67	66	71
1879....	66	73	72	70	69	66	65	62	65	71	74	79	69
1880....	81	80	81	76	72	71	71	72	75	75	77	77	76
1881....	81	84	86	88	88	86	88	90	97	98	95	96	90
1882....	98	100	102	108	110	110	109	109	101	95	93	90	102
1883....	93	97	95	97	94	89	84	83	82	81	81	83	89
1884....	86	88	90	85	82	81	80	81	80	77	72	71	81
1885....	73	76	72	74	70	67	69	70	67	68	68	72	71
1886....	69	70	71	68	65	63	65	63	64	62	60	64	65
1887....	67	69	71	71	70	66	66	69	68	67	70	75	69
1888....	76	75	77	76	76	73	75	76	75	74	73	73	75
1889....	69	67	66	65	61	61	61	61	61	62	61	62	63
1890....	63	63	64	68	67	62	65	68	73	73	73	73	68
1891....	75	77	85	89	87	82	78	78	75	71	71	70	78
1892....	69	70	67	67	68	67	70	71	69	70	71	73	69
1893....	74	83	80	79	78	71	68	64	69	69	65	64	72
1894....	63	62	59	63	62	65	64	66	68	63	61	61	63
1895....	59	61	65	68	67	65	64	61	57	54	53	50	60
1896....	53	54	54	51	50	48	48	48	49	53	56	56	53
1897....	56	54	56	57	55	55	57	63	67	64	64	63	59
1898....	65	68	68	69	76	63	64	61	60	60	59	59	64
1899....	62	63	64	66	64	64	64	65	66	65	64	66	64
1900....	66	67	67	68	66	67	67	68	69	67	68	67	67
1901....	69	69	71	71	72	73	73	74	78	75	77	82	74
1902....	83	83	84	89	87	89	91	85	85	82	78	77	84
1903....	78	79	80	80	77	80	77	76	77	72	70	72	77
1904....	75	82	83	83	81	83	82	81	82	80	78	76	81
1905....	79	82	81	82	78	79	80	80	78	76	78	75	79
1906....	77	77	78	80	80	82	80	78	78	76	78	79	79
1907....	80	83	82	83	87	87	87	87	90	92	83	84	85
1908....	85	87	90	94	93	92	96	94	93	89	90	90	91
1909....	93	95	99	102	106	106	105	100	98	95	96	99	100

WHOLESALE PRICES IN THE UNITED STATES, 1797 to 1932 115

TABLE 46 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1910....	101	103	110	106	103	99	100	98	98	94	89	88	99
1911....	89	86	85	85	84	86	90	94	95	97	97	98	91
1912....	102	101	107	114	115	105	103	102	101	100	96	96	104
1913....	95	98	101	102	100	98	99	99	101	100	99	100	99
1914....	101	103	103	104	103	104	105	112	112	105	105	103	105
1915....	107	110	109	113	112	107	110	107	103	103	101	106	107
1916....	115	118	122	125	125	124	125	135	140	141	151	147	131
1917....	161	173	187	211	227	222	217	219	214	203	201	197	203
1918....	205	205	205	209	208	206	211	215	218	207	207	210	209
1919....	211	206	220	234	231	213	227	223	202	206	211	220	217
1920....	233	222	232	250	258	251	235	221	213	179	166	145	217
1921....	142	133	138	121	121	116	119	117	114	113	108	107	121
1922....	115	125	131	131	128	123	126	114	117	123	122	122	123
1923....	122	124	125	126	123	116	115	121	124	125	119	120	122
1924....	122	125	125	127	122	124	128	131	127	132	129	136	127
1925....	150	151	156	147	147	147	152	145	146	149	153	157	150
1926....	164	162	159	166	159	152	143	141	144	145	142	146	152
1927....	148	146	144	145	139	141	142	141	144	143	144	142	143
1928....	145	147	151	155	153	149	148	147	149	141	135	135	146
1929....	139	141	146	148	143	144	154	149	149	147	141	141	145
1930....	145	143	136	136	130	122	111	114	121	116	108	106	124
1931....	103	98	99	97	89	85	84	83	83	82	83	77	89
193....	74	72	73	70	64	61	68	68	67	63	60	....	....

In table 47 are given the wholesale prices of farm products at full weight during the period when the cotton supply was reduced and prices were very high. The table shows the striking effect of including at full weight a product that was so high in price.

TABLE 47. INDEX NUMBERS OF WHOLESALE PRICES OF FARM PRODUCTS, WITH COTTON AT FULL WEIGHT, 1860 TO 1871 (1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1860....	78	79	79	77	79	76	78	76	76	78	78	73	77
1861....	81	78	77	78	76	71	68	71	75	76	83	94	77
1862....	96	89	90	91	85	88	101	108	119	125	134	140	106
1863....	149	173	167	155	143	139	138	150	145	169	170	172	156
1864....	181	184	184	189	202	248	296	318	302	241	265	266	240
1865....	247	230	202	159	154	140	148	149	156	170	165	158	173
1866....	153	152	150	143	148	151	147	147	146	154	145	138	148
1867....	141	140	143	145	148	135	131	132	129	127	124	129	135
1868....	134	142	150	153	150	140	141	141	136	139	123	128	139
1869....	138	137	134	130	129	129	132	136	133	124	120	123	130
1870....	119	119	116	118	120	117	117	117	111	107	103	101	114
1871....	104	107	110	105	102	103	103	98	100	99	97	101	102

TABLE 48. INDEX NUMBERS OF WHOLESALE PRICES OF BASIC COMMODITIES WITH COTTON AT FULL WEIGHT, 1860 TO 1871  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1860....	104	104	104	101	102	101	101	101	102	103	102	97	102
1861....	97	96	95	96	98	94	92	101	105	112	119	128	103
1862....	133	130	126	126	128	127	138	156	166	173	187	191	148
1863....	204	235	235	216	201	198	199	196	199	224	232	237	215
1864....	242	248	252	257	270	319	386	404	384	321	347	343	314
1865....	324	300	270	210	214	193	199	200	213	226	221	213	232
1866....	209	196	191	181	182	187	189	190	190	197	190	179	190
1867....	178	173	173	173	173	169	170	171	172	169	163	157	170
1868....	159	162	169	175	172	170	169	172	168	166	163	160	167
1869....	164	168	164	160	161	164	166	169	166	160	160	158	163
1870....	152	149	142	142	145	145	144	145	141	139	138	132	143
1871....	135	138	138	134	130	131	132	131	134	136	137	139	135

## LUMBER INDEX NUMBERS

The index numbers of building materials cover nails, glass, and the like, which have declined in price, and lumber, which has risen steadily (table 49). Since lumber is so important, an index number of lumber prices was prepared. When the five years 1910 to 1914 are taken as 100, the index number of lumber prices for 1800 was 24. Since that time there has been a gradual increase. In the fifty-five years from 1800 to 1854, lumber prices doubled. In the fifty-four years from 1854 to 1907, lumber prices again doubled. The striking rise in this group of commodities is due to the diminishing supplies. From 1839 to 1907, the production of forest products per capita increased at a decreasing rate. Since 1907, a very striking decline has occurred.

TABLE 49. INDEX NUMBERS OF THE WHOLESALE PRICES OF LUMBER, 1797 TO 1932\*  
(1910-14 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1797										24	24	24	
1798	25	26	25	24	24	23	23	23	24	23	22	23	24
1799	24	24	23	23	23	22	22	23	23	23	24	26	23
1800	26	26	25	23	22	22	22	23	23	24	25	26	24
1801	27	27	27	27	26	26	26	26	27	27	28	28	27
1802	28	29	29	28	27	26	26	26	26	26	25	25	27
1803	25	25	25	24	24	24	24	24	24	24	24	25	24
1804	26	26	27	27	25	25	25	25	25	25	27	27	26
1805	27	27	27	27	27	27	26	26	26	26	26	26	27
1806	28	28	28	26	26	26	26	26	26	26	26	26	27
1807	27	27	27	27	27	27	27	27	27	27	26	27	27
1808	27	26	26	26	26	26	26	26	26	26	26	26	26
1809	26	26	26	26	26	26	26	26	26	26	26	26	26
1810	26	26	26	26	26	26	25	25	25	25	25	26	26
1811	26	26	26	26	25	25	24	24	24	24	24	25	25
1812	24	24	24	24	24	24	24	24	24	24	24	24	24
1813	24	24	24	24	25	25	25	25	25	25	25	25	25
1814	25	25	25	25	25	25	25	25	25	26	32	35	27
1815	35	37	37	36	35	35	36	36	36	36	39	40	37
1816	42	41	41	39	38	34	33	32	31	31	31	32	35
1817	32	33	33	32	33	33	32	32	28	27	27	28	31
1818	30	30	29	29	28	28	28	28	28	27	27	27	28
1819	27	28	28	28	28	28	28	27	27	27	27	27	28

\* From 1797 to 1824 the following commodities and weights were used: North River pine, 16.8; Albany boards, 16.8; pine scantling, 7.9; yellow pine, 9.0; oak boards, 7.9; oak timber, 9.0; cypress shingles, 13.5; white oak hogshead staves, 6.7; white oak pipe staves, 5.6; white oak headings, 3.4; hoops, 3.4.

There were no data for yellow pine or white oak headings from 1797 to 1801; so the weight for yellow pine was added to that for pine scantling for that period, and the weight for white oak headings was added to that of hoops.

From 1825 to 1839 the following commodities and weights were used: white pine, 41.5; yellow pine, 9.0; oak timber, 16.8; cypress shingles, 13.5; white oak hogshead staves, 3.4; red oak hogshead staves, 3.4; white oak barrel staves, 3.4; white oak pipe staves, 3.4; white oak headings, 3.4; hoops, 2.2.

From 1840 to 1848 the following commodities and weights were used: white pine, 38.1; yellow pine, 9.5; oak timber, 11.9; spruce boards, 5.9; cypress shingles, 14.3; white oak hogshead staves, 3.6; red oak hogshead staves, 3.6; white oak barrel staves, 3.6; white oak pipe staves, 3.6; white oak headings, 3.6; hoops, 2.3.

From 1849 to 1859 there were no data for hoops, and so the weight of each of the other commodities was raised slightly.

From 1860 to 1891 the following commodities and weights were used: white pine, 31.6; yellow pine, 10.5; oak timber, 13.2; spruce boards, 6.6; pine shingles, 15.8; white oak hogshead staves, 4.6; red oak hogshead staves, 4.6; white oak barrel staves, 4.6; white oak pipe staves, 4.5; white oak headings, 3.9.

During the Civil War period, 1860 to 1869, white pine was substituted for yellow pine, and the index of white pine was raised by a variable adjustment factor (page 162).

From 1890 to 1915 an index number of wholesale prices of lumber, with 1910-14 taken as 100, was calculated from the following products reported by the Bureau of Labor Statistics: white pine boards, no. 2 barn, 10; white pine boards, uppers, 5; yellow pine siding, 33; hemlock, 7; maple, 5; white oak, plain, 5; white oak, quartered, 20; poplar, 5; spruce, 5; cypress shingles, 2; cedar shingles, 3.

Pine shingles were substituted for cedar shingles from 1890 to 1905.

Before 1890, the index numbers were calculated on the 1876-91 base. Calculations were made for a two-year overlap, 1890-91. On the 1910-14 base these two years averaged 61.300. On the 1876-91 base they averaged 100.371. The early index numbers were therefore multiplied by 0.6107 to convert to the 1910-14 base.

After 1914, the index numbers are based on the lumber index of the Bureau of Labor Statistics. For the three years 1913 to 1915, the Bureau of Labor Statistics index numbers on the 1926 base averaged 50.864.

The index numbers of prices of lumber prepared by the writers averaged 99.489 for the same three years when 1910-14 is taken as 100. The Bureau of Labor Statistics index numbers from 1914 to 1932 were therefore converted to the 1910-14 base by multiplying by 1.9560.

TABLE 49 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1820....	27	27	27	27	27	27	27	27	27	27	27	27	27
1821....	27	27	26	26	27	25	25	25	26	26	26	25	26
1822....	25	26	26	26	26	25	25	25	25	25	26	26	25
1823....	26	26	26	26	26	25	26	26	25	26	26	26	26
1824....	26	26	27	27	26	26	26	26	26	26	26	26	26
1825....	26	27	27	27	27	27	28	28	28	28	28	28	27
1826....	28	28	28	28	28	29	29	29	29	29	28	28	28
1827....	28	28	28	28	28	29	28	29	29	29	29	29	29
1828....	29	29	29	29	29	29	29	29	29	29	29	29	29
1829....	29	29	29	29	28	28	28	28	28	28	28	28	28
1830....	28	28	28	27	27	27	27	27	27	27	28	28	27
1831....	28	28	28	28	28	28	29	29	29	29	29	29	29
1832....	29	29	29	29	29	28	28	28	28	28	29	29	29
1833....	29	29	29	28	28	29	29	31	30	31	31	31	30
1834....	31	31	31	31	31	31	31	31	31	31	31	31	31
1835....	31	31	31	31	31	31	31	31	31	31	31	31	31
1836....	31	31	31	31	31	31	32	32	32	32	32	32	32
1837....	35	46	46	46	46	45	45	45	45	45	45	45	45
1838....	45	45	45	45	45	45	45	45	45	45	45	45	45
1839....	45	45	45	45	45	45	45	45	45	45	45	45	45
1840....	43	43	43	43	43	43	40	40	40	40	41	41	42
1841....	45	45	45	44	44	42	43	42	42	42	42	42	43
1842....	42	42	42	42	42	42	42	40	38	37	37	37	40
1843....	37	37	37	37	37	37	37	37	38	38	38	38	37
1844....	38	38	38	38	38	38	39	39	39	39	39	39	39
1845....	39	42	42	42	42	42	41	43	44	45	45	45	43
1846....	45	45	45	45	44	44	40	40	40	40	40	39	42
1847....	39	39	39	39	39	40	42	43	43	43	44	45	41
1848....	45	45	45	45	45	40	40	40	38	38	38	38	41
1849....	38	38	38	38	40	40	40	40	40	41	41	41	40
1850....	42	42	44	44	44	43	43	44	42	42	42	42	43
1851....	42	42	42	42	42	42	42	42	43	43	44	44	43
1852....	44	44	45	45	46	46	46	46	46	46	46	46	46
1853....	47	47	47	47	47	47	47	47	47	47	47	47	47
1854....	47	47	47	48	48	48	48	49	49	49	49	49	48
1855....	49	49	51	51	51	51	51	51	51	51	51	51	51
1856....	51	51	53	53	53	53	53	53	52	52	52	52	52
1857....	52	53	53	53	53	53	53	53	53	53	53	53	53
1858....	50	50	50	50	50	50	50	50	46	46	45	45	48
1859....	45	45	45	45	45	45	46	46	47	47	47	47	46
1860....	46	46	46	46	46	47	48	47	46	45	45	45	46
1861....	45	45	45	46	45	45	44	44	44	44	44	44	45
1862....	46	46	46	48	47	47	46	49	49	50	52	53	49
1863....	54	53	57	58	59	56	56	57	58	60	61	61	58
1864....	63	64	66	68	69	73	78	78	78	83	82	83	74
1865....	84	83	82	81	73	72	72	74	79	81	81	85	79
1866....	84	85	86	88	88	88	87	87	87	87	87	87	87
1867....	87	87	87	87	85	82	79	80	78	79	79	80	83
1868....	80	80	80	81	81	81	81	80	79	78	77	77	80
1869....	77	78	79	77	76	75	74	74	74	73	73	73	75
1870....	73	73	73	73	72	71	71	70	70	69	69	69	71
1871....	69	70	71	72	72	73	73	73	73	73	73	73	72
1872....	73	73	73	73	73	73	76	76	76	76	76	75	74
1873....	75	75	75	75	75	75	75	74	74	74	74	74	75
1874....	74	74	74	73	72	72	70	70	70	71	71	71	71
1875....	71	71	68	67	66	66	65	64	63	62	62	62	62
1876....	62	62	62	62	62	61	61	61	61	61	61	61	61
1877....	61	61	61	61	60	60	59	59	58	56	55	56	59
1878....	55	55	55	54	54	54	53	53	53	53	52	52	54
1879....	52	53	54	54	55	55	55	55	55	55	56	56	56

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TABLE 49 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1880.....	56	57	59	57	60	57	59	60	60	60	60	60	59
1881.....	61	61	61	61	62	63	63	63	63	64	64	64	63
1882.....	64	64	65	65	66	66	67	66	67	66	65	65	66
1883.....	64	64	64	64	64	65	66	65	65	64	64	64	64
1884.....	64	64	64	64	64	65	65	65	65	65	64	63	64
1885.....	62	62	62	62	61	61	61	61	61	61	61	61	61
1886.....	61	61	61	61	62	62	63	63	63	63	63	63	62
1887.....	63	63	63	63	63	63	62	62	62	62	62	62	63
1888.....	62	62	61	61	62	62	63	62	62	62	62	62	62
1889.....	62	62	62	62	62	62	62	62	62	62	62	62	62
1890.....	60	60	61	61	62	62	63	63	62	62	62	62	62
1891.....	63	63	62	62	61	61	61	61	59	59	59	59	61
1892.....	59	59	60	60	60	59	59	59	59	59	59	60	59
1893.....	60	60	60	60	60	60	60	60	60	60	60	60	60
1894.....	59	59	59	59	59	59	59	59	58	58	58	58	59
1895.....	58	57	57	56	57	57	57	57	57	56	57	58	57
1896.....	56	56	56	56	56	57	57	57	57	57	57	57	57
1897.....	56	56	56	56	56	55	55	55	54	54	54	58	55
1898.....	58	58	58	58	58	58	58	58	58	58	58	58	58
1899.....	58	58	58	58	58	65	66	67	68	69	71	71	64
1900.....	71	71	72	72	72	69	68	66	66	66	66	67	69
1901.....	67	67	67	65	65	64	64	64	65	67	67	68	66
1902.....	69	69	69	71	72	72	72	72	72	72	72	72	71
1903.....	74	74	74	74	74	77	77	77	77	77	77	79	76
1904.....	78	78	78	78	78	78	77	77	77	77	77	78	78
1905.....	78	78	78	78	79	84	84	84	85	85	86	86	82
1906.....	86	89	89	89	93	94	94	94	94	94	94	94	92
1907.....	96	96	98	98	99	98	99	99	98	97	96	96	98
1908.....	96	95	95	95	95	93	93	93	93	93	93	94	94
1909.....	96	96	97	97	97	98	101	102	102	97	97	97	98
1910.....	98	98	99	99	99	99	99	98	98	98	97	98	98
1911.....	98	98	98	98	98	98	98	98	98	98	98	99	98
1912.....	99	99	101	101	102	102	103	103	103	102	103	103	102
1913.....	103	104	104	105	105	104	103	101	101	101	101	101	103
1914.....	100	100	100	99	99	99	98	98	98	94	93	93	98
1915.....	93	93	93	94	93	93	93	93	94	100	101	103	95
1916.....	106	107	108	108	107	105	105	106	106	110	112	113	108
1917.....	119	122	126	140	145	149	150	149	151	146	147	152	141
1918.....	156	155	158	165	164	165	169	168	168	164	164	165	163
1919.....	167	167	166	168	177	204	231	260	267	268	273	304	221
1920.....	349	383	389	381	366	331	323	319	302	276	235	222	323
1921.....	206	187	177	169	169	167	163	160	162	170	182	176	174
1922.....	174	174	172	174	181	193	196	200	208	214	217	218	193
1923.....	223	223	236	241	235	223	217	210	203	205	206	198	219
1924.....	203	205	203	202	201	189	183	184	188	188	191	195	194
1925.....	202	200	202	195	197	190	189	194	194	195	197	200	197
1926.....	201	201	200	197	196	194	193	192	192	192	195	193	196
1927.....	189	188	187	187	187	186	185	182	179	179	176	174	183
1928.....	175	176	176	173	173	174	175	177	179	180	182	183	177
1929.....	182	186	187	186	184	184	182	183	186	187	180	180	184
1930.....	181	179	178	179	175	167	164	160	159	156	157	153	167
1931.....	149	145	146	144	136	134	131	131	131	128	129	129	136
1932.....	128	123	120	117	116	113	111	109	110	111	111	111	115

## TECHNICAL DETAILS OF CONSTRUCTION OF THE INDEX NUMBERS

## METHODS OF WEIGHTING

In preparing the index numbers, 116 price series were used in 1800 and 138 series in 1889. The number of quotations used in each group in different years is given in table 50.

TABLE 50. NUMBER OF PRICE SERIES USED IN EACH GROUP IN EACH YEAR

Group	1800	1810	1820	1830	1840	1850	1860	1870	1880	1889
	Number of products including duplicates*									
Farm products.....	19	25	25	24	24	23	24	24	24	23
Food.....	36	49	49	33	31	30	35	36	36	36
Hides and leather.....	1	2	2	2	2	2	2	2	2	2
Textiles.....	14	16	16	12	13	14	14	15	16	15
Fuel and lighting.....	6	6	6	5	7	7	7	8	8	8
Metals and metal products.....	11	12	12	15	15	20	16	16	16	16
Building materials.....	17	19	19	17	20	20	20	21	21	21
Drugs and chemicals.....	5	5	5	4	5	5	5	5	5	5
House-furnishing goods.....	.....	.....	.....	.....	5	6	7	10	10	10
Spirits.....	8	8	8	7	7	7	7	8	8	1
Miscellaneous.....	6	8	8	4	4	5	5	5	5	5
Total.....	125	130	150	123	136	139	142	153	153	145
Total excluding duplicates....	116	141	141	113	128	134	135	146	146	138

\* The reason for duplicates is that, following the method of the Bureau of Labor Statistics, some farm products that are ready to eat are included also as food, some textiles are included in house-furnishing goods, and some metals are included with building materials.

The commodities were classified into eleven groups, corresponding to the groups used by the Bureau of Labor Statistics except that alcoholic drinks (spirits) were included as a separate group. Spirits were important particularly in the earlier years, and the course of prices was very different from prices of other commodities because high taxes were imposed during the Civil War period and continued thereafter.

The weights used for each commodity in each group are shown in table 51.

When one commodity or quotation was substituted for another, an overlapping period was computed and the substitution was made in such a way as not to change the index number.

The percentage of the final group index represented by each commodity is given in table 52. In 1800, butter had a weight of 8 in the farm-products index but the price was so low that butter at this weight represented but 4.8 per cent of the final product.

A comparison of weighting of various index numbers is given in table 103 (page 185). It will be observed that the weights of the Bureau of Labor Statistics result in approximately the same weights as those used in this index number.





TABLE 51 (continued)

	1800	1810	1820	1830	1840	1850	1860	1870	1880	1889
<b>Foods (continued):</b>										
Cornmeal.....	...	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lard.....	9.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Hams, smoked.....	2.0	2.0	2.0	4.0	.....	4.0	4.0	4.0	4.0	4.0
pickled.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pork, mess.....	3.0	3.0	3.0	4.0	6.0	4.0	5.0	5.0	5.0	5.0
prime.....	3.0	3.0	3.0	4.0	6.0	4.0	3.0	3.0	3.0	3.0
cargo.....	3.0	3.0	3.0	.....	.....	.....	.....	.....	.....	.....
Bacon.....	3.0	3.0	3.0	.....	.....	.....	.....	.....	.....	.....
Beef, mess.....	5.0	5.0	5.0	8.0	8.0	8.0	14.0	14.0	14.0	14.0
prime.....	5.0	5.0	5.0	7.0	7.0	7.0	.....	.....	.....	.....
cargo.....	5.0	5.0	5.0	.....	.....	.....	.....	.....	.....	.....
Tallow.....	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
Milk.....	.....	.....	.....	.....	.....	.....	3.4	3.4	3.4	3.4
Molasses.....	2.0	2.0	2.0	3.0	3.0	3.0	1.0	1.0	1.0	1.0
Rice.....	3.0	3.0	2.0	3.0	3.0	3.0	0.5	0.5	0.5	0.5
Salt, Liverpool.....	0.2	0.2	0.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0
St. Ubes.....	0.1	0.1	0.1	.....	.....	.....	.....	.....	.....	.....
Turk's Island.....	0.2	0.2	0.2	.....	.....	.....	.....	.....	.....	.....
Pepper.....	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Olive oil.....	.....	.....	.....	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nutmeg.....	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Cinnamon.....	.....	0.1	0.1	.....	.....	.....	.....	.....	.....	.....
Cloves.....	.....	0.1	0.1	.....	.....	.....	.....	.....	.....	.....
Ginger.....	.....	0.1	0.1	.....	.....	.....	.....	.....	.....	.....
Pimento.....	.....	0.1	0.1	.....	.....	.....	.....	.....	.....	.....
Sugar, loaf.....	2.0	2.0	2.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0
New Orleans.....	.....	.....	.....	4.0	4.0	4.0	4.0	.....	.....	.....
muscovado.....	2.0	2.0	2.0	.....	.....	.....	.....	.....	.....	.....
lump.....	2.0	2.0	2.0	.....	.....	.....	.....	.....	.....	.....
Peas.....	1.0	1.0	1.0	.....	.....	.....	.....	.....	.....	.....
Tea, Young Hyson.....	.....	0.2	0.2	0.5	0.5	0.5	1.0	1.0	1.0	1.0
Hyson.....	0.3	0.2	0.2	.....	.....	.....	.....	.....	.....	.....
Souchong.....	0.2	0.1	0.1	.....	.....	.....	.....	.....	.....	.....
Mutton.....	.....	.....	.....	.....	.....	.....	2.0	2.0	2.0	2.0
Potatoes.....	.....	.....	.....	.....	.....	.....	6.0	6.0	6.0	6.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Hides and leather:</b>										
Hides.....	.....	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Leather.....	100.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Textiles:</b>										
Shawls.....	.....	.....	.....	.....	.....	.....	5.0	5.0	5.0	5.0
Furs.....	.....	.....	.....	.....	.....	.....	3.0	3.0	3.0	3.0
beaver.....	3.0	3.0	3.0	3.0	3.0	3.0	.....	.....	.....	.....
red fox.....	2.0	2.0	2.0	.....	.....	.....	.....	.....	.....	.....
otter, south.....	2.0	2.0	2.0	.....	.....	.....	.....	.....	.....	.....
north.....	2.0	2.0	2.0	.....	.....	.....	.....	.....	.....	.....
marten.....	2.0	2.0	2.0	.....	.....	.....	.....	.....	.....	.....
muskrat.....	2.0	2.0	2.0	.....	.....	.....	.....	.....	.....	.....
mink.....	2.0	2.0	2.0	.....	.....	.....	.....	.....	.....	.....
Carpets, ingrain.....	.....	.....	.....	.....	14.0	7.0	5.0	5.0	5.0	5.0
Brussels.....	.....	.....	.....	.....	.....	7.0	5.0	5.0	5.0	5.0
Wilton.....	.....	.....	.....	.....	.....	.....	5.0	5.0	5.0	5.0
Whalebone, slab.....	4.0	4.0	4.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
Cordage, American.....	6.0	3.0	3.0	2.0	1.5	1.5	1.5	1.0	1.0	1.0
foreign.....	.....	3.0	3.0	2.0	1.5	1.5	1.5	1.0	1.0	1.0
Silk, twistee.....	.....	.....	.....	.....	.....	.....	.....	10.0	10.0	10.0
Cassimeres.....	.....	.....	.....	.....	.....	.....	.....	5.0	5.0	5.0
Sheeting, brown 4-4.....	.....	.....	.....	15.0	15.0	15.0	15.0	10.0	10.0	10.0
Russia brown.....	.....	.....	.....	10.0	10.0	10.0	15.0	7.0	7.0	7.0
Russia white.....	30.0	15.0	15.0	17.0	10.0	10.0	.....	.....	.....	.....
bleached.....	.....	.....	.....	.....	.....	.....	15.0	7.0	7.0	7.0









WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932 127

TABLE 52 (continued)

	1800	1810	1820	1830	1840	1850	1860	1870	1880	1889
<b>Textiles:</b>										
Shawls							4.7	3.7	4.8	5.6
Furs, beaver	2.6	3.3	5.3	7.7	5.2	3.7	1.7	1.6	3.0	3.0
red fox	3.5	2.9	4.1							
otter, south	6.1	3.9	4.3							
north	3.7	3.4	4.5							
marten	2.9	3.0	2.8							
muskrat	1.8	2.6	1.9							
mink	4.1	4.7	3.5							
Carpets, ingrain					14.2	7.5	4.9	6.0	5.7	4.6
Brussels						6.4	4.6	6.4	4.8	4.7
Wilton							3.7	5.6	5.0	5.0
Whalebone, slab	0.1	0.1	0.2	0.1	0.1	0.2	0.6	0.2	0.7	1.4
Corriage, American	7.1	3.6	2.9	1.4	1.3	1.5	1.3	1.0	1.0	1.0
foreign		2.6	1.9	1.0	0.9	1.4	0.9	1.2	1.0	1.3
Silk, tawlee								14.3	9.9	9.8
Cassimeres								5.0	4.7	4.4
Satinets				23.3	22.0	16.1	15.7	9.3	9.4	8.8
Sheeting, brown 4-4				8.9	9.7	9.2	17.0	7.5	7.3	7.7
Russia brown		20.4	20.7	7.1	7.1	10.1				
Russia white	40.6	20.4	22.0	12.1	7.7	9.7				
bleached							14.7	6.6	7.4	7.4
Ducks, raven's	7.6	9.7	6.9	3.0	3.4	3.8	3.7	4.4	7.5	5.9
Russian	3.8	5.8	5.2							
American	3.9	6.1	4.4							
Nankens	12.2	7.5	9.4							
Diapers				9.9	5.1	6.7				
Gunham								6.5	6.7	6.8
Shirting, brown 3-4				11.0	7.8	7.5	11.6			
Prints								7.2	7.0	7.5
Checks				14.5	15.5	16.2	14.9			
Drills								7.3	6.8	7.7
Tickings								6.2	7.3	7.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Fuel and lighting:</b>										
Coal, anthracite	66.7	72.2	69.0	41.1	37.3	33.9	29.5	30.5	29.1	43.3
bituminous				41.6	49.8	52.0	54.8	43.1	54.7	41.5
Candles, sperm	9.2	7.3	7.6	3.1	4.8	5.8	5.2	2.2	1.3	1.7
mold	8.7	7.1	7.4	5.4	4.1	3.9				
adamantine							6.2	1.4	1.5	1.4
dipped	9.0	7.6	7.7							
Oil, whale	3.6	3.1	4.0	8.8	2.1	3.8	3.8	2.7	2.1	2.1
spermaceti	2.8	2.7	4.3							
Petroleum								18.8	9.9	9.4
Matches					1.9	0.6	0.5	1.3	1.4	0.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Metals and metal products:</b>										
Iron, pig	11.3	11.1	12.6	18.7	15.0	10.1	17.2	18.2	22.5	16.1
English bar				5.4	6.1	4.6				
country bar	23.9	19.0	18.5							
Russia bar	19.4	16.3	16.8	7.5	8.5	10.3				
Sweden	5.4	5.5	5.6							
sheet		9.0	9.4	17.0	12.4	7.7	16.8	21.1	22.1	19.5
Nails, wrought				9.3	10.2	9.8	4.9	5.0	5.5	3.5
cut				6.5	6.5	5.9	4.9	5.4	6.8	3.9
4d to 40d				7.1	5.4	4.0				
Copper, sheathing	14.5	11.5	9.1	6.3	6.9	8.7	11.5	9.2	9.3	12.4
pig				3.6	3.4	4.6	6.4	4.2	5.0	6.0
sheet	2.2	3.3	2.6	1.9	2.7	3.5	4.3	3.5	3.5	4.6
Shot	0.8	1.3	1.2	1.2	1.5	1.2	1.5	1.4	1.4	1.7
Quicksilver				0.6	1.2	1.6	0.8	1.0	0.5	1.3
Zinc					3.6	3.5	4.7	4.7	4.1	5.2
Tin, pig					1.4	2.2	6.4	5.8	3.8	5.8
plate	4.8	4.5	4.1	4.5	1.6	2.4				
Butts						2.7	1.9	2.0		1.7



WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932 129

TABLE 52 (concluded)

	1800	1810	1820	1830	1840	1850	1860	1870	1880	1889
<b>Spirits:</b>										
Alcohol.....								19.5	19.9	100.0
Brandy.....	7.5	8.1	9.4	2.9	3.7	6.2	10.9	6.7	4.2	
Rum, Jamaica.....	18.6	16.3	18.5	17.8	14.4	16.0	12.3	10.5	10.7	
Antigua.....	17.7	15.7	17.3							
Gin, Holland.....	37.6			13.2	13.2	13.8	9.6	6.8	4.7	
country.....		43.3	27.6							
Whisky.....				57.5	59.9	54.9	50.0	47.2	51.9	
Wine, port.....	5.8	5.0	11.0	3.3	3.3	3.3	7.0	4.5	2.7	
Madeira.....	6.6	6.6	9.1	4.1	4.0	4.0	6.6	3.6	2.9	
claret.....	3.5	3.1	3.9	1.2	1.5	1.8	3.6	1.2	3.0	
sherry.....	2.7	1.9	3.2							
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Miscellaneous:</b>										
Gunpowder, American.....	40.1	40.8	24.6	29.2	28.1	21.8				
rifle.....							25.3	22.9	30.9	29.2
Rubber.....								8.6	10.3	10.4
Soap, white.....				18.2	20.8	18.2	18.4			
castile.....	34.5	32.4	41.2	18.7	24.5	22.8	25.0	39.6	32.2	29.5
Ashes, pearl.....	10.2	7.4	8.4	33.9	26.6	26.3	22.2	18.7	17.5	22.0
pot.....	8.9	6.1	8.1							
Starch.....	4.3	4.1	6.8			10.9	9.1	10.2	9.1	8.9
Beeswax.....	2.0	2.8	4.0							
Glue.....		3.5	4.7							
Cork.....		2.9	2.2							
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

FARM PRODUCTS

From April, 1861, to September, 1871, the weights assigned to cotton, as shown in table 51, were reduced by the percentages given in table 53. During this period, cotton was so scarce that it rose to more than ten times the pre-war price. This would distort any index number unless the weights were changed according to the amount available. The reduced weights from 1861 to 1866 were based on consumption, and

TABLE 53. WEIGHTS USED FOR COTTON IN PERCENTAGE OF NORMAL\*

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1861.....				95	95	95	90	85	80	75	65	45
1862.....	45	45	45	45	45	45	40	40	35	35	35	35
1863.....	35	35	35	35	30	30	30	25	25	25	25	25
1864.....	25	25	25	25	25	25	20	20	20	20	25	25
1865.....	25	25	30	35	35	35	35	35	35	40	45	50
1866.....	50	50	55	55	60	60	65	70	75	75	75	75
1867.....	75	75	75	75	75	75	75	75	75	85	85	85
1868.....	85	85	85	85	85	85	85	85	85	85	85	85
1869.....	85	85	85	85	85	85	85	85	85	85	85	85
1870.....	85	85	85	85	85	85	85	85	85	90	90	90
1871.....	90	90	90	90	90	90	90	95	95			

\* The weights are based on consumption from 1861 to 1866. After 1866 the weights are based on production.



those from 1867 to 1871 on production (table 54). In the farm-products group the reduced weight for cotton was compensated by a uniform percentage increase for each of the other farm products. It is possible that most of this weight should have been added to wool.

TABLE 54. ESTIMATED PRODUCTION AND CONSUMPTION OF COTTON, NUMBER OF SHEEP, AND IMPORTS OF RAW WOOL, 1859 TO 1879\*

Year	Production of cotton		Consumption of cotton		Number of sheep	Imports of raw wool, in pounds
	Bales	Net weight in pounds (000 omitted)	Bales	Net weight in pounds (000 omitted)		
1859.....	4,018,914	1,796,455	927,651	414,660		
1860.....	4,861,292	2,241,056	978,043	450,878	22,471,275	26,282,955
1861.....	3,849,469	1,836,197	843,740	402,464		32,057,457
1862.....	4,500,000	2,146,500	370,000	176,490		44,031,091
1863.....	1,600,000	763,200	288,000	137,376		75,121,728
1864.....	450,000	214,650	220,000	104,940		91,250,114
1865.....	300,000	143,100	345,000	164,565		44,420,375
1866.....	2,269,316	1,000,768	666,100	293,750		71,287,988
1867.....	2,097,254	931,181	770,030	341,893	39,385,386	38,158,382
1868.....	2,519,554	1,121,202	906,636	408,453	38,991,912	25,467,336
1869.....	2,366,467	1,050,711	926,374	411,310	37,724,279	39,275,926
1870.....	3,122,551	1,373,922	865,160	380,670	40,853,000	49,230,199
1871.....	4,352,317	1,923,724	1,110,196	490,707	31,851,000	68,058,025
1872.....	2,974,351	1,317,637	1,237,330	518,137	31,679,300	126,507,409
1873.....	3,930,508	1,745,146	1,201,127	533,300	33,002,400	85,496,049
1874.....	4,170,388	1,851,652	1,305,943	579,639	33,938,200	42,939,541
1875.....	3,832,991	1,686,516	1,193,005	524,922	33,783,600	54,901,760
1876.....	4,632,313	2,056,747	1,351,870	600,230	35,935,300	44,642,836
1877.....	4,474,069	1,968,590	1,428,013	628,326	35,804,200	42,171,192
1878.....	4,773,865	2,148,239	1,489,022	670,060	35,740,500	48,449,079
1879.....	5,074,155	2,268,147	1,558,329	696,573	38,123,800	39,005,158

\* Watkins, J. L. Production and prices of cotton for one hundred years. U. S. Agr. Dept., Div. Statistics. Misc. ser., Bul. 9, p. 10-12. 1895.

Statistical abstract of the United States, 1916, p. 709-717. 1917.

The number of pounds per bale for each year was as follows: 1859, 447 pounds; 1860, 461; 1861 to 1865, 477; 1866, 441; 1867, 444; 1868, 445; 1869, 444; 1870, 440; 1871, 442; 1872, 443; 1873 and 1874, 444; 1875, 440; 1876, 444; 1877, 440; 1878, 450; 1879, 447.

The weight given to cotton was reduced 2 points previous to 1841. The production of cotton per capita was fairly constant as far back as 1840 (table 55). Wool quotations are not available before 1825, but prior to that date the weight for cotton is probably high enough to cover a part of the wool.

The weights for tobacco were increased somewhat in the earlier years.

Prices of milk cows, hogs, cattle, and sheep were not available before 1833. Combinations of the most important products of hogs and cattle were substituted. For example, lard and various kinds of pork were substituted for hogs. Such a substitution results in slightly less flexibility in the index.

TABLE 55. PRODUCTION OF COTTON PER CAPITA IN THE UNITED STATES, 1791 TO 1930

Three-year periods	Production of cotton (three-year averages)†		Population, census years‡	Pounds of cotton produced per 1,000 population
	Bales	Net weight in pounds‡ (000 omitted)		
1791-1792.....	11,110	5,000	3,929,214	1,273
1799-1801.....	151,657	34,333	5,309,483	6,468
1809-1811.....	325,144	82,333	7,239,881	11,372
1819-1821.....	616,657	189,000	9,638,453	17,534
1829-1831.....	962,036	327,403	12,866,020	25,447
1839-1841.....	1,724,440	666,909	17,069,453	39,070
1849-1851.....	2,551,699	1,090,733	23,191,876	47,031
1859-1861.....	4,243,225	1,957,902	31,443,321	62,268
1869-1871.....	3,121,667	1,449,453	38,558,371	37,591
1879-1881.....	5,851,333	2,640,800	50,189,209	52,617
1889-1891.....	8,388,333	3,632,352	63,069,756	57,593
1899-1901.....	9,659,333	4,617,161	77,256,630	59,764
1909-1911.....	12,435,667	5,944,249	93,402,151	63,641
1919-1921.....	10,938,333	5,228,523	105,710,620‡	49,461
1929-1930*.....	14,535,500	6,947,969	122,765,046‡	66,600

\* Crops and markets for 1929 and 1930. Yearbook of Agriculture, 1931, page 837. U. S. Agr. Dept.

† Watkins, J. L. Production and prices of cotton for one hundred years. U. S. Agr. Dept., Div. Statistics. Misc. ser., Bul. 9, p. 4-11. 1895.

‡ The average number of pounds per bale was as follows: 1791-1792, 225 pounds; 1799-1801, 229; 1809-1811, 257; 1819-1821, 274; 1829-1831, 340; 1839-1841, 357; 1849-1851, 427; 1859-1861, 462; 1869-1871, 442; 1879-1881, 454; 1889-1891, 476; 1899-1901, 1009-1911, 1919-1921, and 1929-1930, 478.

§ Statistical abstract of the United States for 1916, p. 36.

|| Fifteenth census of the United States, 1930, vol. 1, p. 5.

FOODS

When only one of a similar class of products is included in a group, the weight for this has generally been increased to represent the group. For example, the weights for butter and cheese were increased where milk was not available.

In the earlier years, the weights given to coffee and fish were increased. The weights given to sugar, tea, and salt were decreased. The latter were very high in price, and economy was practiced.

TEXTILES

Furs and whalebone were included in the textile group. Possibly the latter should have been included in the miscellaneous group. Furs were given a higher weight in the earlier years.

From April, 1861, to September, 1871, the weights for cotton were reduced, as described on page 129, to correspond with the reduced consumption of cotton. The weights for all other textiles were increased proportionately. The increase in the number of sheep and the increase

in imports of wool seem to justify adding the weight on other textiles and leaving the textile group with its regular weight in the total index.

The number of pounds of wool produced in the United States increased from 60,264,913 in 1860 to 155,000,000 in 1866 and to 162,000,000 in 1870. The amount of wool imported into the United States increased from 26,282,995 pounds in 1860 to 71,287,988 in 1866. By 1870 the imports had declined to 49,230,199 pounds.<sup>19</sup> No quotations for woolen goods were available before 1825.

#### FUEL AND LIGHTING

From 1863 to 1872, petroleum gradually replaced candles and whale oil for lighting purposes. A gradual shift was made year by year. Petroleum was given a weight of 1 in 1863 and was raised 1 point each year until the weight was 10 in 1872. A corresponding reduction was made in candles and whale oil.

The weight given to coal previous to 1840 was gradually reduced, and a corresponding increase was made in candles and whale oil in the earlier years. Whether the correct weights were used is uncertain. If too high for coal, the index numbers are high because coal was high in price in the earlier years. No quotations for firewood were available. This was cheap in the earlier years.

#### METALS AND METAL PRODUCTS

The index numbers for this group include somewhat more manufactured products in the later than in the earlier years.

#### LUMBER AND BUILDING MATERIALS

The weight given to yellow pine from January, 1860, to December, 1869, was reduced, and a corresponding addition was made to white pine. In making this adjustment the comparative price relatives at the beginning and at the end of the period were used. The white-pine relatives were carried through at these ratios to yellow pine.

During the Civil War, tar was omitted and its weight was added to that of linseed oil. The price relatives for these were about alike before and after the war.

This group includes nails, cement, brick, white lead, and linseed oil, as well as wood. The prices of the materials other than wood were high in the earlier years, when wood was cheap.

The total weight given to all wood products was increased from 76 in 1889 to 89 before 1825. In the earlier years, the products that were high in price were used very economically.

<sup>19</sup> Statistical abstract of the United States for 1916, p. 709, 717. 1917.

OTHER GROUPS

Only five quotations for drugs and chemicals were included.

In the house-furnishing group, the weight for cotton materials was reduced during the Civil War period, as described under "Farm Products."

From 1883 to 1893, alcohol was the only quotation available for spirits, but a comparison of alcohol with whisky, wine, rum, and brandy indicates that the price changes are closely associated. It was therefore possible to connect the various price series.

Quotations for sole leather were available for the entire period, and for hides for nearly the entire period.

QUANTITIES OF PRODUCTS ENTERING INTO THE COMMERCE OF THE UNITED STATES

Some of the data used in determining the weights to be given to the different commodities are presented in tables 56 to 64.

TABLE 56. IMPORTS INTO THE PROVINCES IN NORTH AMERICA, INCLUDING THE ISLANDS OF NEWFOUNDLAND, BAHAMA, AND BERMUDA, FOR THE YEAR ENDING JANUARY 5, 1771\*

	Amount	Value in pounds sterling
Cotton.....	356,591 lbs.	17,830
Coffee.....	4,084 cwt.	15,250
Molasses.....	3,645,464 gal.	186,282
Sugar, brown.....	101,474 cwt.	165,310
Sugar, other.....		2,697
Salt.....	1,021,709 bu.	51,085
Pimento.....	35,415 lbs.	885
Cocoa.....		25,799
Limes.....	2,986 bbla.	2,240
Sarsaparilla.....	19,572 lbs.	2,202
Hides.....	22,071	7,725
Mahogany.....		20,280
Logwood.....	3,028 tons	13,625
Dye-wood.....	70 tons	315
Indigo.....	4,352 lbs.	979
Rum.....	3,838,370 gal.	437,442
Wine.....	766 tuns 170 gal.	46,001
Ivory.....		3,507
Negroes.....	2,887 head	115,040
All other.....		1,114,494
Total.....		8,205
		1,122,699†

\* Sheffield, J. L. Observations on the commerce of the American States, Table IV in appendix, 1784.

† The total as given in the reference was 1,123,096. This appears to be an error in addition.

TABLE 57. EXPORTS FROM THE PROVINCES IN NORTH AMERICA, INCLUDING THE ISLANDS OF NEWFOUNDLAND, BAHAMA, AND BERMUDA, FOR THE YEAR ENDING JANUARY 5, 1771\*

	Amount	Value in pounds sterling
Corn.....	578,350 bu.	43,376
Wheat.....	851,240 bu.	131,467
Rice.....	151,419 bbls.	340,693
Butter.....	167,613 lbs.	3,492
Sheep, cattle, hogs, beef, pork, lard, hams, etc.		88,985
Tobacco.....		906,638
Flaxseed.....	312,613 bu.	85,169
Horses.....	6,892 head	60,228
Bread and flour.....	45,868 tons @ cwt.	504,553
Fish, dried.....	680,004 quintals	375,394
Fish, pickled.....	30,069 bbls.	22,552
Skins, deer.....	799,808 lbs.	57,739
Furs.....		91,486
Whale fins.....	112,971 lbs.	19,121
Other pins (pine boards and timber).....		56,342
Other oak (oak boards and timber).....		10,026
Shingles.....	38,978,857	15,592
Hoops.....	3,852,343	8,668
Masts.....		15,566
Shooks and hogsheads.....	62,678	7,835
Staves and headings.....	20,546,326 ft.	61,619
Miscellaneous lumber.....		8,396
Naval stores.....	108,497 bbls.	35,075
Indigo.....	584,672 lbs.	131,552
Rum.....	349,281 gal.	21,836
Candles.....	438,752 lbs.	24,642
Whale oil.....	5,687 tons 131 gal.	65,013
Ashes.....	1,910 tons	64,660
All else.....		3,228,015
		91,122
<b>Total.....</b>		<b>3,319,147†</b>

\* Sheffield, J. L. Observations on the commerce of the American States, Table V in appendix. 1784.

† The total as given in the reference was 3,356,159. This appears to be an error in addition.

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932 135

TABLE 58. IMPORTANT IMPORTS INTO THE UNITED STATES PAYING SPECIFIC AND AD-VALOREM DUTIES, FOR THE YEAR ENDING SEPTEMBER 30, 1807\*

	Value
Hemp.....	\$ 2,116,605
Cotton.....	1,007,139
Coffee.....	16,470,947
Cocoa.....	2,297,961
Tallow.....	262,541
Molasses.....	3,064,044
Raisins.....	430,114
Tea.....	5,112,704
Sugar, brown.....	17,511,061
Sugar, other.....	5,901,804
Salt.....	1,676,694
Pepper.....	804,869
Pimento.....	263,172
Lead, and manufactures of lead.....	270,147
White and red lead.....	420,613
Glass.....	565,260
Nails and spikes.....	544,328
Indigo.....	1,849,529
Spirits.....	10,698,854
Wine.....	4,487,669
Tallow candles.....	98,538
Other goods paying specific duties.....	4,064,366
Goods paying ad-valorem duties, not itemized.....	58,655,917
<b>Total.....</b>	<b>\$138,574,876</b>

\*Pitkin, T. A statistical view of the commerce of the United States of America, p. 195-196. 1817.

TABLE 59. IMPORTANT DOMESTIC EXPORTS FROM THE UNITED STATES FOR THE YEAR ENDING SEPTEMBER 30, 1810\*

	Value
Corn and cornmeal.....	\$ 1,138,000
Wheat, flour, etc.....	6,846,000
Rice.....	2,626,000
Butter and cheese.....	318,000
Cattle, beef, tallow, hides.....	747,000
Hogs, pork, bacon, etc.....	907,000
Tobacco.....	5,048,000
Flaxseed.....	301,000
Cotton.....	15,108,000
Dried fish or cod fisheries.....	913,000
Pickled fish.....	214,000
Lumber.....	2,537,000
Naval stores.....	473,000
Whale oil and bone.....	222,000
Sperm oil and candles.....	132,000
Ashes.....	1,570,000
<b>All other.....</b>	<b>\$39,109,000</b>
<b>Total.....</b>	<b>\$42,366,000</b>

\*American state papers, vol. 7, Commerce and navigation, Class IV, p. 870-871. 1832.

TABLE 60. MANUFACTURES OF THE UNITED STATES, 1810\*  
(Data incomplete, but may represent proportional values)

	Amount	Value
Sugar, refined.....	7,867,211 lbs.	\$ 1,418,724
Salt.....	1,238,365 bu.	1,149,725
Manufactures from hides and skins.....		17,983,253
Woolen cloth made in families.....	9,528,266 yds.	8,197,248
Cordage.....	10,843 tons	4,243,368
Cotton goods made in families, etc.....	16,582,299 yds.	7,905,077
Flaxen cloths made in families, etc.....	21,211,262 yds.	7,828,356
All cloth made in establishments.....	29,870,748 yds.	16,192,559
Nails.....	15,727,914 lbs.	2,478,139
Other manufactures of iron.....		11,736,227
Lead.....		325,660
Tin and copper ware, tin plate, etc.....		395,150
Manufactures of wood.....		5,555,748
Glass.....	4,967,000 sq. ft.	1,046,004
Alcoholic beverages.....	31,571,282 gal.	16,534,207
Earthenware.....	656,600 pieces	259,720
Candles, oil, soap.....		1,766,292
All other.....		60,466,391
<b>Total.....</b>		<b>\$165,478,748†</b>

\* A statement of the arts and manufactures of the United States of America for the year 1810, p. 2-37. 1814.

† The total as reported was \$127,694,602.

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932 137

TABLE 61. IMPORTANT IMPORTS INTO THE UNITED STATES FOR THE YEAR ENDING SEPTEMBER 30, 1840\*

	Quantity	Value
Cigars .....	73,899,000	\$ 869,434
Hemp .....		687,717
Wool .....	9,898,740 lbs.	846,076
Coffee .....	94,996,095 lbs.	8,546,222
Fish .....		261,156
Currants .....	589,765 lbs.	56,651
Raisins, muscatels, etc. ....	18,544,047 lbs.	787,228
Figs .....	2,023,073 lbs.	102,333
Prunes .....	1,652,819 lbs.	74,593
Almonds .....	2,930,889 lbs.	199,863
Molasses .....	19,703,620 gal.	2,910,791
Nutmeg .....	142,890 lbs.	122,603
Tea .....	20,006,595 lbs.	5,427,010
Sugar, brown .....	107,955,033 lbs.	4,742,492
Sugar, other .....	12,986,244 lbs.	838,636
Salt .....	8,183,203 bu.	1,015,426
Pepper .....	5,049,129 lbs.	189,928
Hides .....		2,756,214
Leather .....		473,091
Cloths and casimeres .....		4,696,529
Merino shawls .....		126,909
Other woollen goods .....		1,403,492
Worsted .....		2,387,338
Carpets, etc. ....	295,233 sq. yds.	338,501
Cordage, twine, etc. ....	2,666,440 lbs.	244,911
Sheetings, brown and white ..		261,173
Manufactures of cotton .....		6,504,484
Flannels .....	153,281 sq. yds.	67,690
Silks, etc., and manufactures of silk ..		9,526,988
Silk and worsted, and manufactures of silk and worsted ..		1,729,792
Hats .....		445,429
Linens, bleached and unbleached ..		4,614,466
Rags of any kind of cloth .....		564,689
Iron, bar, manufactured .....	1,232,955 cwt.	3,397,480
Manufactures of iron and steel ..		3,315,211
Steel .....	44,506 cwt.	528,716
Copper, pigs and bars .....		1,100,664
Copper, sheets .....		411,567
Copper, other .....		70,405
Manufactures of copper .....		70,679
Lead .....		20,356
Spelter or zinc .....		85,225
Tin, in pigs, bars, plates, sheets ..		1,079,293
Glass .....		360,847
Indigo .....	1,126,334 lbs.	1,121,701
Wines .....	5,012,119 gal.	2,209,176
Spirits .....	2,867,494 gal.	1,592,564
Beer .....		135,485
Earthenware, china, etc. ....		2,176,303
All other .....		25,646,293
<b>Total .....</b>		<b>\$107,141,520</b>

\*Letter from the Secretary of the Treasury. 26th Congress, 2d Session. Senate Document, vol. 5, part 1, no. 238, p. 120-129. March 2, 1841.



TABLE 62. IMPORTANT DOMESTIC EXPORTS OF THE UNITED STATES FOR THE YEAR ENDING SEPTEMBER 30, 1840\*

	Value
Corn.....	\$ 338,833
Wheat.....	1,635,483
Rice.....	1,942,076
Cattle, beef, etc.....	623,373
Hogs, pork, etc.....	1,864,894
Tobacco.....	9,883,957
Snuff and manufactured tobacco.....	812,671
Cotton.....	63,870,307
Biscuits or ship bread.....	428,988
Flour.....	10,143,615
Rye meal.....	170,931
Cornmeal.....	705,183
Dried fish and cod fisheries.....	541,058
Pickled fish, herring, shad, salmon, mackerel.....	179,106
Sugar, refined.....	1,214,658
Cotton, manufactured goods.....	3,549,607
Skins and furs.....	1,237,789
Whalebone.....	310,379
Iron, and iron manufactures.....	1,104,455
Staves, shingles, and lumber.....	2,101,031
Tar, pitch, rosin, and turpentine.....	602,529
Candles, sperm.....	332,353
Whale and fish oil.....	1,404,684
Sperm oil.....	430,490
Ashes.....	533,193
All other.....	7,903,191
<b>Total.....</b>	<b>\$113,895,634</b>

\*Letter from the Secretary of the Treasury. 26th Congress, 2d Session. Senate Document, vol. 5, part 1, no. 238, p. 252-253. March 2, 1841.

TABLE 63. AGRICULTURE, MINING, AND MANUFACTURING, CENSUS OF 1840\*

	Amount	Value
Barley.....	4,161,504 bu.	
Buckwheat.....	7,291,743 bu.	
Corn.....	277,531,875 bu.	
Oats.....	123,071,341 bu.	
Rye.....	18,645,567 bu.	
Wheat.....	84,823,272 bu.	
Rice.....	80,841,422 lbs.	
Potatoes.....	108,298,060 bu.	
Dairy products.....		\$33,787,008
Poultry, value on hand.....		9,344,410
Cattle.....	14,971,586 head	
Sheep.....	19,311,374 head	
Hogs.....	26,301,293 head	
Hops.....	1,238,502 lbs.	
Hay.....	10,248,109 tons	
Tobacco.....	219,163,319 lbs.	
Tobacco, manufactured.....		5,819,568
Hemp and flax.....	95,252 tons	
Cotton.....	790,479,275 lbs.	
Wool.....	35,802,114 lbs.	
Orchard products.....		7,256,904
Horses and mules on hand.....	4,335,669 head	
Market-garden products.....		2,601,196
Flour, manufactured.....	7,404,562 bbls.	
Dried fish.....	773,947 quintals	
Pickled fish.....	472,360 bbls.	
Sugar.....	155,110,809 lbs.	
Sugar, refined.....		3,250,700
Salt.....	6,179,174 bu.	
Skins of sole leather, tanned.....	3,463,611	
Skins of upper leather, tanned.....	3,781,868	
Value of articles manufactured from leather.....		33,134,403
Furs.....		1,065,869
Woolen goods, manufactured.....		20,696,999
Cordage, manufactured.....		4,078,306
Cotton goods, manufactured.....		46,350,453
Silk goods, manufactured.....		119,814
Hats and caps.....		8,704,342
Straw bonnets.....		1,476,505
Mixed manufactured goods.....		6,545,503
Flax goods, manufactured.....		322,205
Family-made goods.....		29,023,380
Cast iron.....	286,903 tons	
Bar iron.....	197,233 tons	
Hardware and cutlery.....		6,461,967
Lead.....	31,239,453 lbs.	
Machinery.....		10,980,581
Lumber.....		12,943,507
Turpentine and varnish.....		660,827
Glass.....		2,890,293
Brick and lime.....		9,736,945
Tar, pitch, turpentine, and rosin.....	619,106 bbls.	
Number of wooden houses built.....	45,684	
Number of brick houses built.....	8,429	
Wagons and carriages.....		10,897,887
Ships.....		7,016,094
Drugs.....		4,151,899
Liquors, distilled.....	41,402,627 gal.	
Beer.....	23,267,730 gal.	
Earthenware.....		1,104,825
Furniture.....		7,556,405
Anthracite coal.....	863,489 tons	
Bituminous coal.....	27,603,191 bu.	
Candles, sperm and wax.....	2,936,951 lbs.	
Candles, tallow.....	17,904,507 lbs.	
Whale and fish oil.....	7,536,778 gal.	
Sperm oil.....	4,764,708 gal.	
Wood sold.....	5,088,801 cords	
Gunpowder, American.....	8,977,348 lbs.	
Soap.....	49,820,497 lbs.	
Paper.....		5,641,495

\*Compendium of the sixth census of the United States, p. 358-364. 1841.

TABLE 64. ESTIMATED CONSUMPTION BY WHITE AND FREE COLORED POPULATION, 1840\*

	Amount	Value
Corn.....		
Buckwheat.....	52,500,000 bu.	\$23,625,000
Rye.....		
Wheat.....	60,000,000 bu.	48,000,000
Dairy products.....		23,000,000
Potatoes.....		12,000,000
Milk and cream.....		20,000,000
Foultry.....		8,000,000
Beef, veal.....		
Mutton.....	750,000,000 lbs.	30,000,000
Pork and lard.....	1,500,000,000 lbs.	67,500,000
Orchard products.....		7,256,904
Market-garden products.....		2,601,196
Domestic-garden products.....		5,000,000
Coffee (1842).....	107,383,577 lbs.	8,590,000†
Eggs.....		6,230,000
Dried fruits and almonds (1841 imports).....		1,075,639†
Molasses (1840 imports).....		2,910,791†
Spices (1840 imports).....		558,910
Tea (1842).....	13,006,540 lbs.	3,900,000†
Sugar (1842).....		31,700,000
Liquors and spirits (much at retail).....		45,000,000

\* Seaman, E. C. *Essays on the progress of nations*, p. 303-305. 1846.

† Custom-house price.

A forthcoming publication on the physical volume of production in the United States gives additional data since 1840.

#### METHODS OF TABULATING PRICES

Prices during two war periods were used in this study, because such periods show violent price fluctuations, and any method which proves reliable in such periods is likely to be reliable at other times.

One series was for corn at Chicago from 1896 to 1925. For this period excellent market reports are available, for a very active market.

The other period chosen, 1811 to 1816, was a period when market quotations were much less perfected. The volume of trading was less, and quotations were sometimes carried at the same level for some time.

#### *Prices of corn, 1896 to 1925*

Prices of cash corn (maize) of contract grade at Chicago were calculated from 1896 to 1925. Prices for a few representative years are given in table 65. Price variations in any one day are due to variations within the grade and to market conditions at different times of the day.

TABLE 65. COMPARISON OF METHODS OF TABULATING MONTHLY PRICES OF CASH CORN OF CONTRACT GRADE AT CHICAGO, FOR SIX REPRESENTATIVE YEARS, 1896 TO 1925\*

(In cents per bushel)

Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month	High for month	Low for month	Average of high and low for 8th and 23d of month
1897									
January.....	22.5	22.6	22.6	22.8	22.5	22.6	23.4	21.8	22.6
February.....	22.4	22.4	21.9	22.0	21.8	22.5	23.3	21.8	22.7
March.....	23.7	23.6	23.5	23.5	23.5	23.8	24.8	22.8	23.8
April.....	24.3	24.4	24.0	24.1	23.8	24.2	25.3	23.1	24.2
May.....	24.5	24.5	24.9	25.0	24.8	24.3	25.5	23.0	24.4
June.....	24.7	24.7	25.0	25.5	24.5	24.4	25.6	23.3	24.7
July.....	26.3	26.2	25.8	26.0	25.5	26.4	28.3	24.6	26.6
August.....	28.7	28.6	28.8	29.0	28.5	29.4	32.6	26.1	29.1
September.....	29.8	30.1	30.1	30.5	29.6	29.6	32.0	27.3	30.6
October.....	26.3	26.1	25.3	25.6	25.0	26.5	29.0	24.0	26.7
November.....	26.6	26.6	27.1	27.4	26.8	26.7	27.6	25.8	26.5
December.....	26.4	26.3	25.8	25.8	25.8	26.3	27.5	25.0	26.4
1899									
January.....	36.2	36.2	35.9	36.0	35.8	36.7	38.1	35.3	35.9
February.....	35.4	35.4	35.0	35.3	34.8	35.5	37.0	34.0	34.9
March.....	34.7	34.8	34.0	34.0	34.0	34.6	36.1	33.0	34.6
April.....	34.7	34.7	35.0	35.0	35.0	34.6	35.5	33.8	34.5
May.....	33.4	33.6	33.5	33.5	33.5	33.4	34.4	32.5	33.5
June.....	34.3	34.3	35.0	35.3	34.8	34.4	35.5	33.3	34.3
July.....	33.3	33.6	34.4	34.5	34.3	32.9	34.9	31.0	33.3
August.....	31.8	31.9	31.5	31.5	31.5	31.8	33.0	30.5	31.9
September.....	32.6	32.8	32.1	32.3	32.0	33.1	35.0	31.3	33.1
October.....	32.0	31.9	32.0	32.5	31.5	32.0	33.3	30.8	31.8
November.....	31.8	31.7	31.9	32.0	31.8	32.0	33.3	30.8	32.5
December.....	30.7	31.0	31.3	31.3	31.3	30.8	31.5	30.0	30.9
1901									
January.....	37.2	37.3	36.8	36.8	36.8	36.9	37.8	36.0	37.2
February.....	38.5	38.7	38.8	38.8	38.8	38.6	40.0	37.3	38.8
March.....	40.4	40.3	40.5	40.5	40.5	41.5	44.0	39.0	39.9
April.....	44.6	45.0	43.8	43.8	43.8	44.5	48.0	41.0	45.0
May.....	49.2	50.2	55.5	57.0	54.0	50.6	58.5	42.6	49.0
June.....	43.0	43.3	43.0	43.1	42.9	42.7	44.4	41.0	43.1
July.....	50.4	49.8	49.0	49.0	49.0	50.9	58.3	43.5	50.3
August.....	56.6	56.0	59.6	58.8	58.5	56.6	59.5	53.8	56.3
September.....	56.7	56.6	56.4	56.8	56.0	56.9	59.8	54.1	57.0
October.....	56.0	55.9	55.8	56.0	55.5	56.3	58.0	54.6	55.6
November.....	60.5	61.1	61.0	61.4	60.6	60.5	63.9	57.1	60.8
December.....	64.5	65.4	64.8	65.4	64.3	65.0	67.5	62.5	65.3
1911									
January.....	46.8	46.7	46.3	46.5	46.0	46.6	47.8	45.5	47.0
February.....	46.8	46.5	46.8	47.0	46.5	46.8	48.0	45.5	47.0
March.....	46.8	46.8	47.3	47.5	47.0	46.8	48.0	45.5	46.8
April.....	50.3	50.4	51.1	51.3	51.0	49.6	53.3	46.0	50.5

\*As it is not possible to print the entire table, six representative years were chosen. During the calendar year 1897, prices were at a low level and very stable, and the percentage deviations were small; in 1899, prices were at a low level and declining, and the percentage deviations were small; in 1901, prices were relatively low and rising, and the percentage deviations were large; in 1911, prices were at a normal level and rising, and the percentage deviations were small; in 1917, prices were relatively high and rising rapidly, and the percentage deviations were large; in 1920, prices were relatively high and falling rapidly, and the percentage deviations were large.

The quotations were tabulated from the reports of the trade and commerce of Chicago from 1896 to 1925. (Board of Trade, Chicago.)

TABLE 65 (concluded)

Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month	High for month	Low for month	Average of high and low for 8th and 23d of month
<b>1911</b>									
May.....	54.0	54.4	53.9	54.0	53.8	53.8	55.3	52.3	53.5
June.....	55.4	55.1	54.6	54.8	54.5	46.4	59.3	53.5	55.4
July.....	63.9	64.0	66.1	66.3	66.0	63.4	67.0	59.8	63.4
August.....	64.4	64.0	63.9	64.0	63.8	64.0	65.3	62.8	64.1
September.....	67.5	67.5	67.4	67.5	67.3	67.3	69.0	65.5	67.3
October.....	72.3	71.8	71.1	71.3	71.0	72.3	75.0	69.5	72.6
November.....	73.1	74.0	72.8	73.0	72.5	72.5	76.0	69.0	73.3
December.....	69.5	69.5	69.5	70.0	69.0	69.5	71.0	68.0	69.5
<b>1917</b>									
January.....	99.0	99.1	98.6	98.8	98.5	98.1	103.0	93.3	99.7
February.....	100.8	101.0	101.6	101.8	101.5	99.8	102.8	96.8	100.9
March.....	111.8	110.9	108.3	108.5	108.0	112.5	122.5	102.5	112.8
April.....	145.0	146.0	149.8	150.0	149.5	141.5	160.0	123.0	140.1
May.....	164.0	165.5	166.5	167.0	166.0	163.0	174.0	152.0	164.3
June.....	170.8	171.8	171.8	172.0	171.5	167.0	176.0	158.0	172.0
July.....	204.1	199.8	194.3	194.5	194.0	204.8	232.0	177.5	204.0
August.....	197.3	202.3	196.0	197.0	195.0	202.5	236.0	169.0	204.8
September.....	208.6	207.7	209.5	210.0	209.0	206.5	224.0	195.0	208.5
October.....	198.3	199.1	190.5	191.0	190.0	202.3	215.5	189.0	198.0
November.....	210.1	208.0	227.0	229.0	225.0	207.0	229.0	185.0	205.0
December.....	173.2	169.2	167.5	170.0	165.0	176.0	190.0	160.0	172.8
<b>1920</b>									
January.....	153.0	152.2	151.0	154.0	148.0	150.3	158.5	142.0	156.6
February.....	147.7	149.0	149.0	152.0	146.0	144.5	156.0	133.0	143.5
March.....	160.5	159.3	159.0	162.0	156.0	159.5	169.0	150.0	161.3
April.....	172.6	172.3	171.5	171.5	171.5	173.3	180.0	166.5	169.8
May.....	201.0	201.9	216.0	217.0	215.0	203.0	217.0	189.0	198.3
June.....	189.7	189.3	188.3	194.0	182.5	188.8	201.5	176.0	189.5
July.....	159.3	158.8	158.8	163.5	154.0	161.8	183.5	140.0	161.7
August.....	158.4	160.7	160.5	163.0	158.0	154.5	169.0	140.0	158.9
September.....	135.0	133.5	137.5	138.5	136.5	136.8	154.0	119.5	137.9
October.....	91.4	90.6	93.9	96.3	91.5	95.8	110.0	81.5	88.0
November.....	82.8	83.2	85.3	87.5	83.0	80.8	94.5	67.0	82.4
December.....	77.4	77.3	76.0	80.0	72.0	78.1	86.0	70.3	79.0

The first column in table 65 gives an average of the high and the low price for every week-day in the month. This is the nearest-known figure to represent a price at which all sales are made.

The second column in table 65 is an average of the high and the low quotations for the 5th, 15th, and 25th days of the month, or for the next week-day in case one of these dates was Sunday or a holiday.

The third column is an average of the high and the low for the 15th of the month, or the next week-day in case this was Sunday or a holiday.

The fourth column is the high quotation of the middle day of the month, and the fifth column is the low of the same day.

The seventh column is the high for the month. The eighth column is the low for the month. The sixth column is the average of these two.

The ninth column is the average of the high and the low for the 8th and the 23d of the month, or for the next day in case one of these was Sunday or a holiday.

The data in table 66 show the percentage difference between averages obtained by different methods and the average of the high and the low for every day in the month, or show approximately the percentage error of different methods of averaging for representative years. The number of errors of each size is shown in table 67.

In table 68 is shown the number of errors of each size when plus and minus signs are ignored. The averages obtained by taking the high and low quotations for the 5th, 15th, and 25th days of the month showed errors of less than 1 per cent in 290 out of 360 months. In only two cases was the error as high as 3 per cent.

The average of the high and the low for the middle day gave 53 cases of errors of 3 per cent or more.

TABLE 66. PERCENTAGE DEVIATIONS FROM THE AVERAGE OF HIGH AND LOW QUOTATIONS FOR ALL DAYS OF THE MONTH, RESULTING FROM DIFFERENT METHODS OF AVERAGING

(Cash corn of contract grade at Chicago. From table 65)

Date	High and low for 5th, 15th, and 25th of month	High and low for 15th of month	High for 15th of month	Low for 15th of month	High and low for month	High for month	Low for month	High and low for 8th and 23d of month
1897								
January	0.4	0.4	1.3	0	0.4	4.0	-3.1	0.4
February	0	-2.2	-1.8	-2.7	0.4	4.0	-2.7	1.2
March	-0.4	-0.8	-0.8	-0.8	0.4	4.6	-3.8	0.4
April	0.4	-1.2	-0.8	-2.1	-0.4	4.1	-4.9	-0.4
May	0	1.6	2.0	1.2	-0.8	4.1	-6.1	-0.4
June	0	1.2	3.2	-0.8	-1.2	3.6	-5.7	0
July	-0.4	-1.9	-1.1	-3.0	0.4	7.6	-6.5	1.1
August	-0.3	0.3	1.0	-0.7	2.4	13.6	-9.1	1.4
September	1.0	1.0	2.2	-0.7	-0.7	7.4	-8.4	2.7
October	-0.8	-3.8	-2.7	-4.9	0.8	10.3	-8.7	1.5
November	0	1.9	3.0	0.8	0.4	3.8	-3.0	-0.4
December	-0.4	-2.3	-2.3	-2.3	-0.4	4.2	-5.3	0
1899								
January	0	-0.8	-0.6	-1.1	1.4	5.2	-2.5	-0.8
February	0	-1.1	-0.3	-1.7	0.3	4.5	-4.0	-1.4
March	0.3	-2.0	-2.0	-2.0	-0.3	4.0	-4.9	-0.3
April	0	0.9	0.9	0.9	-0.3	2.3	-2.6	-0.6
May	0.6	0.3	0.3	0.3	0	3.0	-2.7	0.3
June	0	2.0	2.9	1.5	0.3	3.5	-2.9	0
July	0.9	3.3	3.6	3.0	-1.2	4.8	-6.9	0
August	0.3	-0.9	-0.9	-0.9	0	3.8	-4.1	0.3
September	0.6	-1.5	-0.9	-1.8	1.5	7.4	-4.0	1.5
October	-0.3	0	1.6	-1.6	0	4.1	-3.7	-0.6
November	-0.3	0.3	0.6	0	0.6	4.7	-3.1	2.2
December	1.0	2.0	2.0	2.0	0.3	2.6	-2.3	0.7
1901								
January	0.3	-1.1	-1.1	-1.1	-0.8	1.6	-3.2	0
February	0.5	0.8	0.8	0.8	0.3	2.9	-3.1	0.8
March	-0.2	0.2	0.2	0.2	2.7	8.9	-3.5	-1.2
April	0.9	-1.8	-1.8	-1.8	-0.2	7.6	-6.1	0.9

TABLE 66 (concluded)

Date	High and low for 5th, 15th, and 25th of month	High and low for 15th of month	High for 15th of month	Low for 15th of month	High and low for month	High for month	Low for month	High and low for 8th and 25th of month
<b>1901</b>								
May	2.0	12.8	15.9	9.8	2.8	18.9	-13.4	-0.4
June	0.7	0	0.2	-0.2	-0.7	3.3	-4.7	0.2
July	-1.2	-2.8	-2.8	-2.8	1.0	15.7	-13.7	-0.2
August	-1.1	3.5	3.9	3.4	0	5.1	-4.9	-0.5
September	-0.2	-0.5	0.2	-1.2	0.4	5.5	-4.6	0.5
October	-0.2	-0.4	0	-0.9	0.5	3.6	-2.5	-0.7
November	1.0	0.8	1.5	0.2	0	5.6	-5.6	0.5
December	1.4	0.5	1.4	-0.3	0.8	4.7	-3.1	1.2
<b>1911</b>								
January	-0.2	-1.1	-0.6	-1.7	-0.4	2.1	-2.8	0.4
February	-0.6	0	0.4	-0.6	0	2.6	-2.8	0.4
March	0	1.1	1.5	0.4	0	2.6	-2.8	0
April	0.2	1.6	2.0	1.4	-1.4	6.0	-8.5	0.4
May	0.7	-0.2	0	-0.4	-0.4	2.4	-3.1	-0.9
June	-0.6	-1.4	-1.1	-1.6	1.8	7.0	-3.4	0
July	0.2	3.4	3.8	3.3	-0.8	4.9	-6.4	-0.8
August	-0.6	-0.8	-0.6	-0.9	-0.6	1.4	-2.5	-0.5
September	0	-0.1	0	-0.3	-0.3	2.2	-3.0	-0.3
October	-0.7	-1.7	-1.4	-1.8	0	3.7	-3.9	0.4
November	1.2	-0.4	-0.1	-0.8	-0.8	4.0	-5.6	0.3
December	0	0	0.7	-0.7	0	2.2	-2.2	0
<b>1917</b>								
January	0.1	-0.4	-0.2	-0.5	-0.9	4.0	-5.8	0.7
February	0.2	0.8	1.0	0.7	-1.0	2.0	-4.0	0.1
March	-0.8	-3.1	-3.0	-3.4	0.6	9.8	-8.3	0.9
April	0.7	3.3	3.4	3.1	-2.4	10.3	-15.2	-3.4
May	0.9	1.5	1.8	1.2	-0.6	6.1	-7.3	2.6
June	0.6	0.6	0.7	0.4	-2.2	3.0	-7.5	0.7
July	-2.1	-4.8	-4.7	-4.9	0.3	13.7	-13.0	0
August	2.5	-0.7	-0.2	-1.2	2.6	19.6	-14.3	3.8
September	-0.4	0.4	0.7	0.2	0.4	7.4	-6.5	0.4
October	0.4	-3.9	-3.7	-4.2	2.0	8.7	-4.7	-0.2
November	-1.0	8.0	9.0	7.1	-1.5	9.0	-11.9	-2.4
December	-2.3	-3.3	-1.8	-4.7	1.0	9.7	-7.6	-0.4
<b>1920</b>								
January	-0.5	-1.3	0.7	-3.3	-1.8	3.6	-7.2	2.4
February	0.9	0.9	2.9	-1.2	-2.2	5.8	-10.0	-2.8
March	-0.7	-0.9	0.9	-2.8	-6.6	5.3	-6.5	0.5
April	-0.2	-0.6	-0.6	-0.6	0.4	4.3	-3.5	-1.6
May	0.4	7.5	8.0	7.0	1.0	8.0	-6.0	-0.1
June	-0.2	-0.7	2.3	-3.8	-0.5	6.2	-7.2	-1.3
July	-0.3	-0.3	2.6	-3.3	1.6	15.2	-12.1	1.5
August	1.5	1.3	2.9	-0.3	-2.5	6.7	-11.6	0.3
September	-1.1	1.9	2.6	1.1	1.3	14.1	-11.5	2.1
October	-0.9	2.7	5.4	0.1	4.8	20.4	-10.8	-3.7
November	0.5	3.0	5.7	0.2	-2.4	14.1	-19.1	-0.5
December	-0.1	-1.8	3.4	-7.0	0.9	11.1	-9.2	2.1





TABLE 68. FREQUENCY DISTRIBUTION OF PERCENTAGE DEVIATIONS OF MONTHLY AVERAGES OBTAINED BY DIFFERENT METHODS OF AVERAGING  
(Cash corn of contract grade at Chicago. From table 67)

Percentage deviation	High and low for 5th, 15th, and 25th of month	High and low for 15th of month	High for 15th of month	Low for 15th of month	High and low for month	High for month	Low for month	High and low for 8th and 23d of month
Less than 1.0.....	290	158	137	137	239	2	.....	234
1.0 to 1.9.....	58	103	91	104	78	16	5	89
2.0 to 2.9.....	10	46	65	56	36	49	52	27
3.0 to 3.9.....	2	28	30	34	3	54	71	8
4.0 to 4.9.....	.....	15	15	16	2	76	65	.....
5.0 to 5.9.....	.....	4	9	4	1	47	42	.....
6.0 to 6.9.....	.....	.....	2	2	.....	38	28	.....
7.0 to 7.9.....	.....	2	5	4	1	17	33	.....
8.0 to 8.9.....	.....	2	2	1	.....	21	19	1
9.0 to 9.9.....	.....	1	2	1	.....	8	16	.....
10.0 to 10.9.....	.....	.....	.....	1	.....	7	9	.....
11.0 to 11.9.....	.....	.....	1	.....	.....	2	13	.....
12.0 to 12.9.....	.....	1	.....	.....	.....	4	4	.....
13.0 to 13.9.....	.....	.....	.....	.....	.....	3	4	.....
14.0 to 14.9.....	.....	.....	.....	.....	.....	3	4	.....
15.0 to 15.9.....	.....	.....	1	.....	.....	3	2	.....
16.0 to 16.9.....	.....	.....	.....	.....	.....	1	.....	.....
17.0 to 17.9.....	.....	.....	.....	.....	.....	2	.....	.....
18.0 to 18.9.....	.....	.....	.....	.....	.....	2	1	.....
19.0 to 19.9.....	.....	.....	.....	.....	.....	1	1	.....
20.0 to 20.9.....	.....	.....	.....	.....	.....	2	1	.....
21.0 to 21.9.....	.....	.....	.....	.....	.....	.....	.....	.....
22.0 to 22.9.....	.....	.....	.....	.....	.....	.....	.....	.....
23.0 to 23.9.....	.....	.....	.....	.....	.....	1	.....	.....
24.0 to 24.9.....	.....	.....	.....	.....	.....	1	.....	.....
Total.....	360	360	360	360	360	360	360	360

The average of the high and the low for the month gave smaller errors than the average of the high and the low for the 15th.

The greatest errors resulted from taking either the low or the high for the month. Apparently the average of the high and the low for the month is more reliable than the average of the high and the low of the middle day. Usually it is easier to obtain the high and low quotations for the middle day. If the extra time required is not too great, the method of averaging the high and the low for the 5th, 15th, and 25th is still better.

Standard deviations of the errors resulting from different methods are given in table 69.

It is generally thought that the low quotations are more stable than the high. The data agree with this hypothesis. In each case the deviations are greater for the high quotations than for the low. In each case the average of high and low is less variable than either the high or the low. Therefore any average is better than any high or low quotation.

The curves in figure 37 show the frequency distribution of the errors of each size.

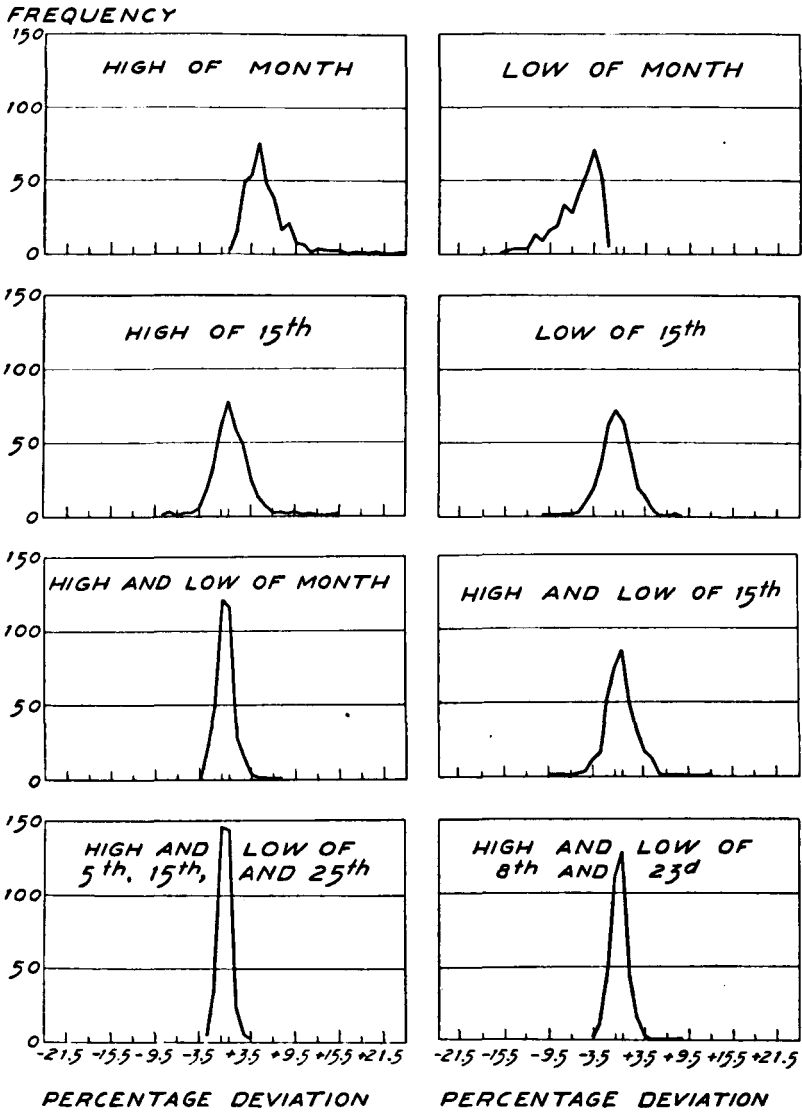


FIGURE 37. FREQUENCY DISTRIBUTION OF PERCENTAGE DEVIATIONS OF MONTHLY AVERAGE PRICES OF COMMODITIES AT CHICAGO OBTAINED BY DIFFERENT METHODS OF AVERAGING, 1896 TO 1925

Assuming the average of the high and the low quotation for each day of the month to be correct, the least variation occurs when the averages are based on the high and the low quotations for the 5th, 15th, and 25th; the greatest variation occurs when the average prices are based on the high of the month or the low of the month.

TABLE 69. STANDARD DEVIATIONS  
(From table 67)

	Standard deviation
1. High and low for 5th, 15th, and 25th days of month	0 90
2. High for middle day	2 56
3. Low for middle day	2 28
4. High and low for middle day	2 24
5. Low for month	3 20
6. High for month	3 62
7. High and low for month	1 31
8. High and low for 8th and 23d of month	1 25

*Prices of six commodities, 1811 to 1816*

Similar tabulations for butter, Hyson tea, muscovado sugar, country gin, English steel, and beaver fur, were made for the period 1811 to 1816. Some of these are given in tables 70 to 82. A period including the rise and fall in prices during the War of 1812 was chosen. In some cases these quotations remain constant for several months.

If the average of the highs and the lows for all days available is assumed to be correct, the averages for the 5th, 15th, and 25th days of the month show the smallest errors. In the case of butter, the errors by this method were less than 1 per cent in 60 of the 64 months (table 79, page 158). In no case was the error as much as 8 per cent.

The average of the high and the low of the month was next in accuracy, with 56 out of 64 months showing an error of less than 1 per cent and with no error above 10 per cent.

The method ranking third in accuracy was the average of the high and the low for the middle day. This gave 2 errors above 8 per cent, one of which was 18 per cent.

The low for the middle day had 19 errors of less than 1 per cent, 16 above 8 per cent, and 1 of over 20 per cent.

Similar calculations for Hyson tea result in the same general conclusions (table 81).

The variability of the errors of the average of high and low for the 5th, 15th, and 25th days of the month is much less than for prices obtained in other ways (table 82). The next most stable prices are the average of high and low for the month, and the next most stable that of the high and the low for the middle day of the month. Either the high or the low for the middle day is much more variable.

TABLE 70. COMPARISON OF METHODS OF TABULATING MONTHLY PRICES OF BUTTER AT NEW YORK CITY, 1811 TO 1816\*  
(In cents per pound)

Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month	Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month
1811							1814						
Jan.....							Jan.....	17	17	17	18	15	17
Feb.....							Feb.....	17	17	17	18	15	17
Mar.....	16	16	16	16	16	16	Mar.....	17	17	17	18	15	17
Apr.....	16	16	16	17	15	16	Apr.....	20	20	20	20	20	20
May.....	16	16	17	18	16	17	May.....	20	20	20	20	20	20
June.....	15	15	15	15	15	14	June.....	17	17	18	18	18	17
July.....	14	14	14	14	13	14	July.....	18	18	18	18	18	18
Aug.....	14	14	15	15	14	14	Aug.....	18	18	18	18	18	18
Sept.....	14	14	14	14	13	14	Sept.....	18	18	18	18	18	18
Oct.....	14	14	14	14	13	14	Oct.....						
Nov.....	14	14	14	14	13	14	Nov.....						
Dec.....	14	14	14	14	13	14	Dec.....	21	21	21	22	20	21
1812							1815						
Jan.....	14	14	14	14	13	14	Jan.....	21	21	21	22	20	21
Feb.....	14	14	14	14	13	14	Feb.....	25	25	25	25	25	25
Mar.....							Mar.....	23	22	22	22	22	24
Apr.....	13	13	13	13	12	13	Apr.....	23	23	23	23	22	23
May.....	13	13	13	13	12	13	May.....	23	23	23	23	22	23
June.....	13	13	13	13	12	13	June.....	23	23	23	23	22	23
July.....	12	12	12	13	12	12	July.....	19	19	19	20	18	19
Aug.....	11	11	11	11	11	11	Aug.....	22	21	23	23	22	22
Sept.....							Sept.....	24	24	24	25	22	24
Oct.....	13	13	13	14	11	13	Oct.....	24	24	24	25	22	24
Nov.....	13	13	13	14	11	13	Nov.....	20	20	20	22	18	20
Dec.....	14	13	13	14	11	14	Dec.....	20	20	20	22	18	20
1813							1816						
Jan.....	15	15	15	16	14	15	Jan.....	20	20	20	22	18	20
Feb.....	15	15	16	16	15	16	Feb.....	21	21	21	22	20	21
Mar.....	15	15	15	15	15	15	Mar.....	20	20	20	21	19	21
Apr.....	15	15	15	15	14	15	Apr.....	19	19	19	20	18	20
May.....	14	14	13	13	12	14	May.....	18	17	17	18	15	18
June.....	11	11	13	13	12	11	June.....	15	15	16	16	15	16
July.....							July.....	15	15	15	15	14	15
Aug.....	13	13	13	13	12	13	Aug.....	15	15	15	15	14	15
Sept.....	13	13	13	13	12	13	Sept.....	22	22	25	25	25	20
Oct.....	13	13	13	13	12	13	Oct.....	18	18	18	18	18	18
Nov.....							Nov.....	18	18	18	18	18	18
Dec.....	17	17	17	18	15	17	Dec.....	18	18	18	18	18	18

\* New York Spectator, 1811 to 1816

TABLE 71. COMPARISON OF METHODS OF TABULATING MONTHLY PRICES OF HYSON TEA AT NEW YORK CITY, 1811 TO 1816\*

(In cents per pound)

Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month	Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month
1811							1814						
Jan.....	.....	.....	.....	.....	.....	.....	Jan.....	287	287	287	287	287	287
Feb.....	.....	.....	.....	.....	.....	.....	Feb.....	244	229	200	200	200	244
Mar.....	95	95	95	100	90	95	Mar.....	200	200	200	200	200	200
Apr.....	95	95	95	100	90	95	Apr.....	188	188	188	200	175	188
May.....	94	94	95	100	90	93	May.....	163	163	163	175	150	163
June.....	86	86	85	90	80	86	June.....	169	169	175	200	150	175
July.....	85	85	85	90	80	85	July.....	175	175	175	200	150	175
Aug.....	85	85	85	90	80	85	Aug.....	175	175	175	200	150	175
Sept.....	85	85	85	90	80	85	Sept.....	175	175	175	200	150	175
Oct.....	83	83	83	85	80	85	Oct.....	.....	.....	.....	.....	.....	.....
Nov.....	83	83	83	85	80	83	Nov.....	.....	.....	.....	.....	.....	.....
Dec.....	83	83	83	85	80	83	Dec.....	181	181	181	187	175	181
1812							1815						
Jan.....	83	83	83	85	80	83	Jan.....	181	181	181	187	175	181
Feb.....	83	83	83	85	80	83	Feb.....	135	135	135	135	135	135
Mar.....	.....	.....	.....	.....	.....	.....	Mar.....	143	142	145	150	140	148
Apr.....	83	83	83	85	80	83	Apr.....	140	144	127	128	125	150
May.....	85	84	83	85	80	85	May.....	158	157	156	175	137	156
June.....	95	95	95	100	90	95	June.....	167	163	160	175	145	166
July.....	139	139	151	153	149	139	July.....	180	180	181	187	175	184
Aug.....	140	140	140	140	140	140	Aug.....	189	181	176	187	165	190
Sept.....	.....	.....	.....	.....	.....	.....	Sept.....	204	207	214	215	212	201
Oct.....	140	140	140	140	140	140	Oct.....	200	204	209	218	200	203
Nov.....	140	140	140	140	140	140	Nov.....	203	210	200	225	175	229
Dec.....	147	144	140	140	140	148	Dec.....	198	198	198	225	170	198
1813							1816						
Jan.....	155	155	156	156	156	153	Jan.....	198	198	198	225	170	198
Feb.....	150	160	162	162	162	159	Feb.....	195	195	196	200	190	195
Mar.....	164	164	162	162	162	165	Mar.....	199	198	195	200	190	198
Apr.....	164	164	175	198	162	169	Apr.....	203	203	203	206	200	203
May.....	154	154	153	156	150	156	May.....	196	197	200	200	200	191
June.....	166	156	156	162	150	156	June.....	199	198	188	200	175	198
July.....	.....	.....	.....	.....	.....	.....	July.....	188	188	188	200	175	188
Aug.....	156	156	156	162	150	156	Aug.....	181	181	181	187	175	181
Sept.....	185	185	188	200	175	181	Sept.....	181	181	181	187	175	181
Oct.....	206	206	212	212	212	206	Oct.....	165	166	159	168	150	162
Nov.....	.....	.....	.....	.....	.....	.....	Nov.....	141	142	144	150	137	138
Dec.....	267	256	238	250	225	263	Dec.....	141	142	144	150	137	138

\* New-York Spectator, 1811 to 1816.

TABLE 72. COMPARISON OF METHODS OF TABULATING MONTHLY PRICES OF MUSCOVADO SUGAR AT NEW YORK CITY, 1811 to 1816\*

(In dollars per hundredweight)

Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month	Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month
1811							1814						
Jan.....	.....	.....	.....	.....	.....	.....	Jan.....	20.75	20.75	21.00	21.00	21.00	20.50
Feb.....	.....	.....	.....	.....	.....	.....	Feb.....	21.38	21.08	22.75	23.50	22.00	21.75
Mar.....	12.22	12.25	12.25	13.00	11.50	12.00	Mar.....	21.00	21.00	21.50	22.00	21.00	21.00
Apr.....	12.25	12.25	12.25	13.00	11.50	12.25	Apr.....	16.00	16.00	16.00	17.00	15.00	16.00
May.....	12.25	12.25	12.25	13.00	11.50	12.25	May.....	16.00	16.00	16.00	17.00	15.00	16.00
June.....	12.25	12.25	12.25	13.00	11.50	12.25	June.....	17.50	17.50	19.00	20.00	18.00	17.50
July.....	12.25	12.25	12.25	13.00	11.50	12.25	July.....	19.00	19.00	19.00	21.00	17.00	19.50
Aug.....	12.25	12.25	12.25	13.00	11.50	12.25	Aug.....	19.50	19.50	19.50	22.00	17.00	19.50
Sept.....	12.25	12.25	12.25	13.00	11.50	12.25	Sept.....	19.50	19.50	19.50	22.00	17.00	19.50
Oct.....	12.25	12.25	12.25	13.00	11.50	12.25	Oct.....	.....	.....	.....	.....	.....	.....
Nov.....	12.25	12.25	12.25	13.00	11.50	12.25	Nov.....	.....	.....	.....	.....	.....	.....
Dec.....	12.25	12.25	12.25	13.00	11.50	12.25	Dec.....	22.50	22.50	22.50	24.00	21.00	22.50
1812							1815						
Jan.....	12.25	12.25	12.25	13.00	11.50	12.25	Jan.....	22.50	22.50	22.50	24.00	21.00	22.50
Feb.....	12.25	12.25	12.25	13.00	11.50	12.25	Feb.....	15.50	15.50	15.50	17.00	14.00	15.50
Mar.....	.....	.....	.....	.....	.....	.....	Mar.....	15.90	15.83	15.50	17.00	14.00	15.50
Apr.....	12.25	12.25	12.25	13.00	11.50	12.25	Apr.....	16.63	16.67	16.50	17.00	16.00	16.75
May.....	12.25	12.25	12.25	13.00	11.50	12.25	May.....	19.35	19.17	19.50	20.00	19.00	18.75
June.....	12.25	12.25	12.25	13.00	11.50	12.25	June.....	21.31	21.25	20.75	21.50	20.00	21.38
July.....	13.83	13.83	13.75	14.50	13.00	14.00	July.....	18.00	18.83	18.00	19.00	17.00	18.60
Aug.....	14.00	14.00	14.00	15.00	13.00	14.00	Aug.....	17.81	17.75	18.50	20.00	17.00	17.50
Sept.....	.....	.....	.....	.....	.....	.....	Sept.....	20.17	20.17	21.60	22.00	21.00	20.00
Oct.....	14.00	14.00	14.00	15.00	13.00	14.00	Oct.....	21.00	21.00	21.00	23.00	19.00	21.00
Nov.....	15.00	15.00	15.00	16.00	14.00	15.00	Nov.....	18.53	18.42	18.25	19.50	17.00	18.50
Dec.....	15.56	15.50	15.50	16.50	14.50	15.75	Dec.....	17.33	17.33	17.00	19.00	15.00	17.50
1813							1816						
Jan.....	15.75	15.75	15.75	17.00	14.50	15.74	Jan.....	16.67	16.67	17.00	18.50	15.50	16.50
Feb.....	15.75	15.75	15.75	17.00	14.50	15.75	Feb.....	16.50	16.50	16.50	18.00	15.00	16.50
Mar.....	16.58	16.58	15.75	17.00	14.50	16.25	Mar.....	16.50	16.50	16.50	18.00	15.00	16.50
Apr.....	17.00	17.00	17.00	18.00	16.00	17.00	Apr.....	17.06	17.00	17.25	18.00	16.50	16.50
May.....	18.33	18.33	17.00	18.00	16.00	18.00	May.....	15.85	16.00	16.25	17.00	15.50	15.50
June.....	19.17	19.17	19.50	21.00	18.00	19.50	June.....	14.75	14.75	14.75	16.50	13.00	14.75
July.....	.....	.....	.....	.....	.....	.....	July.....	14.85	14.58	14.25	16.50	12.00	14.25
Aug.....	21.50	21.50	21.50	22.00	21.00	21.50	Aug.....	13.69	13.67	13.75	16.00	11.50	13.75
Sept.....	21.67	21.67	21.75	22.50	21.00	21.75	Sept.....	14.33	14.33	14.00	16.50	11.50	14.25
Oct.....	22.13	22.13	22.50	23.00	22.00	22.00	Oct.....	13.90	14.00	13.50	15.50	11.50	14.50
Nov.....	.....	.....	.....	.....	.....	.....	Nov.....	14.31	14.21	14.50	16.50	12.50	14.13
Dec.....	26.75	25.67	23.50	24.00	23.00	27.50	Dec.....	14.50	14.58	14.75	16.50	13.00	14.50

\* New-York Spectator, 1811 to 1816.

TABLE 73. COMPARISON OF METHODS OF TABULATING MONTHLY PRICES OF COUNTRY GIN AT NEW YORK CITY, 1811 to 1816\*  
(In cents per gallon)

Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month	Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month
1811							1814						
Jan.....	.....	.....	.....	.....	.....	.....	Jan.....	150	150	150	150	150	150
Feb.....	.....	.....	.....	.....	.....	.....	Feb.....	150	150	150	150	150	150
Mar.....	77	77	77	77	77	80	Mar.....	125	125	125	125	125	125
Apr.....	72	72	69	75	62	74	Apr.....	125	125	125	125	125	125
May.....	66	67	69	75	62	69	May.....	116	116	116	125	106	116
June.....	84	86	98	100	95	81	June.....	94	94	113	125	100	100
July.....	97	96	95	95	95	98	July.....	113	113	113	125	100	113
Aug.....	95	95	95	95	95	95	Aug.....	113	113	113	125	100	113
Sept.....	95	95	95	95	95	95	Sept.....	113	113	113	125	100	113
Oct.....	95	95	95	95	95	95	Oct.....	.....	.....	.....	.....	.....	.....
Nov.....	95	95	95	95	95	95	Nov.....	.....	.....	.....	.....	.....	.....
Dec.....	95	95	95	95	95	95	Dec.....	113	113	113	125	100	113
1812							1815						
Jan.....	95	95	95	95	95	95	Jan.....	113	113	113	125	100	113
Feb.....	95	95	95	95	95	95	Feb.....	112	112	112	112	112	112
Mar.....	.....	.....	.....	.....	.....	.....	Mar.....	109	109	108	108	108	109
Apr.....	95	95	95	95	95	95	Apr.....	107	107	106	112	100	106
May.....	95	95	95	95	95	95	May.....	108	108	109	112	106	106
June.....	95	95	95	95	95	95	June.....	109	109	109	112	106	109
July.....	95	95	95	95	95	95	July.....	109	109	109	112	106	109
Aug.....	95	95	95	95	95	95	Aug.....	109	109	109	112	106	109
Sept.....	.....	.....	.....	.....	.....	.....	Sept.....	111	112	109	112	106	116
Oct.....	90	90	90	94	85	90	Oct.....	113	113	115	118	112	112
Nov.....	87	87	84	87	80	87	Nov.....	110	111	109	112	106	109
Dec.....	84	84	84	87	80	84	Dec.....	103	103	103	106	100	103
1813							1816						
Jan.....	84	84	84	87	80	84	Jan.....	103	103	103	106	100	103
Feb.....	84	84	84	87	80	84	Feb.....	102	101	103	106	100	101
Mar.....	88	88	84	87	80	85	Mar.....	97	97	98	100	95	95
Apr.....	90	90	90	90	90	90	Apr.....	94	94	95	100	90	95
May.....	90	90	90	90	90	90	May.....	93	93	93	95	90	93
June.....	90	90	90	90	90	90	June.....	88	88	88	90	85	88
July.....	.....	.....	.....	.....	.....	.....	July.....	88	88	88	90	85	88
Aug.....	90	90	90	95	85	90	Aug.....	88	88	88	90	85	88
Sept.....	88	88	88	95	85	88	Sept.....	88	88	88	90	85	88
Oct.....	93	93	95	95	95	90	Oct.....	88	88	88	90	85	88
Nov.....	.....	.....	.....	.....	.....	.....	Nov.....	88	88	88	90	85	88
Dec.....	125	125	125	125	125	125	Dec.....	90	91	93	100	86	93

\* New-York Spectator, 1811 to 1816.

TABLE 74. COMPARISON OF METHODS OF TABULATING MONTHLY PRICES OF ENGLISH STEEL AT NEW YORK CITY, 1811 to 1816\*  
(In cents per pound)

Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month	Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month
1811							1814						
Jan.....							Jan.....	28	28	28	30	25	28
Feb.....							Feb.....	28	28	28	30	25	28
Mar.....	16	16	16	17	14	16	Mar.....	28	28	28	30	25	28
Apr.....	16	16	16	17	14	16	Apr.....	28	28	28	30	25	28
May.....	16	16	16	17	14	16	May.....	28	28	28	30	25	28
June.....	16	16	16	17	14	16	June.....	28	28	28	30	25	28
July.....	16	16	16	17	14	16	July.....	28	28	28	30	25	28
Aug.....	16	17	17	20	14	17	Aug.....	28	28	28	30	25	28
Sept.....	17	17	17	20	14	17	Sept.....	28	28	28	30	25	28
Oct.....	17	17	17	20	14	17	Oct.....						
Nov.....	17	17	17	20	14	17	Nov.....						
Dec.....	17	17	17	20	14	17	Dec.....	28	28	28	30	25	28
1812							1815						
Jan.....	17	17	17	20	14	17	Jan.....	28	28	28	30	25	28
Feb.....	17	17	17	20	14	17	Feb.....	25	25	25	25	25	25
Mar.....							Mar.....	25	25	25	25	25	25
Apr.....							Apr.....	25	25	25	25	25	25
May.....							May.....	25	25	25	25	25	25
June.....							June.....	25	25	25	25	25	25
July.....							July.....	17	18	14	15	13	19
Aug.....							Aug.....	17	16	14	15	13	17
Sept.....							Sept.....	19	19	19	20	18	19
Oct.....							Oct.....	19	19	19	20	18	19
Nov.....	22	22	22	25	18	22	Nov.....	19	19	19	20	18	19
Dec.....	20	21	24	30	18	24	Dec.....	18	18	18	20	15	18
1813							1816						
Jan.....	23	24	24	30	18	24	Jan.....	18	18	18	20	15	18
Feb.....	24	24	24	30	18	24	Feb.....	18	18	18	20	15	18
Mar.....	24	24	24	30	18	24	Mar.....	18	18	18	20	15	18
Apr.....	26	26	24	30	18	24	Apr.....	18	18	18	20	15	18
May.....	28	28	28	30	25	28	May.....	18	18	18	20	15	18
June.....	28	28	28	30	25	28	June.....	18	18	18	20	15	18
July.....							July.....	17	18	18	20	15	18
Aug.....	28	28	28	30	25	28	Aug.....	17	17	17	17	18	17
Sept.....	28	28	28	30	25	28	Sept.....	17	17	17	17	18	17
Oct.....	28	28	28	30	25	28	Oct.....	17	17	17	17	18	17
Nov.....							Nov.....	17	17	17	18	15	17
Dec.....	28	28	28	30	25	28	Dec.....	17	17	17	18	15	17

\* New-York Spectator, 1811 to 1816.



TABLE 75. COMPARISON OF METHODS OF TABULATING MONTHLY PRICES OF BEAVER FUR AT NEW YORK CITY, 1811 TO 1816\*

(In dollars per pound)

Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month	Date	Average of high and low for all days of month	Average of high and low for 5th, 15th, and 25th of month	Average of high and low for 15th of month	High for 15th of month	Low for 15th of month	Average of high and low for month
1811							1814						
Jan.....	.....	.....	.....	.....	.....	.....	Jan.....	3.88	3.88	3.88	4.25	3.50	3.88
Feb.....	.....	.....	.....	.....	.....	.....	Feb.....	3.88	3.88	3.88	4.25	3.50	3.88
Mar.....	3.00	3.00	3.00	3.50	2.50	3.00	Mar.....	3.88	3.88	3.88	4.25	3.50	3.88
Apr.....	3.00	3.00	3.00	3.50	2.50	3.00	Apr.....	3.88	3.88	3.88	4.25	3.50	3.88
May.....	3.00	3.00	3.00	3.50	2.50	3.00	May.....	3.88	3.88	3.88	4.25	3.50	3.88
June.....	3.00	3.00	3.00	3.50	2.50	3.00	June.....	3.88	3.88	3.88	4.25	3.50	3.88
July.....	3.00	3.00	3.00	3.50	2.50	3.00	July.....	3.88	3.88	3.88	4.25	3.50	3.88
Aug.....	3.00	3.00	3.00	3.50	2.50	3.00	Aug.....	3.88	3.88	3.88	4.25	3.50	3.88
Sept.....	3.00	3.00	3.00	3.50	2.50	3.00	Sept.....	3.88	3.88	3.88	4.25	3.50	3.88
Oct.....	3.00	3.00	3.00	3.50	2.50	3.00	Oct.....	.....	.....	.....	.....	.....	.....
Nov.....	3.00	3.00	3.00	3.50	2.50	3.00	Nov.....	.....	.....	.....	.....	.....	.....
Dec.....	3.00	3.00	3.00	3.50	2.50	3.00	Dec.....	4.75	4.75	4.75	5.00	4.50	4.75
1812							1815						
Jan.....	3.00	3.00	3.00	3.50	2.50	3.00	Jan.....	4.75	4.75	4.75	5.00	4.50	4.75
Feb.....	3.00	3.00	3.00	3.50	2.50	3.00	Feb.....	4.75	4.75	4.75	5.00	4.50	4.75
Mar.....	.....	.....	.....	.....	.....	.....	Mar.....	4.75	4.75	4.75	5.00	4.50	4.75
Apr.....	3.00	3.00	3.00	3.50	2.50	3.00	Apr.....	4.75	4.75	4.75	5.00	4.50	4.75
May.....	3.00	3.00	3.00	3.50	2.50	3.00	May.....	4.75	4.75	4.75	5.00	4.50	4.75
June.....	3.00	3.00	3.00	3.50	2.50	3.00	June.....	4.75	4.75	4.75	5.00	4.50	4.75
July.....	3.33	3.33	3.50	4.00	3.00	3.25	July.....	4.75	4.75	4.75	5.00	4.50	4.75
Aug.....	3.50	3.50	3.50	4.00	3.00	3.50	Aug.....	4.75	4.75	4.75	5.00	4.50	4.75
Sept.....	.....	.....	.....	.....	.....	.....	Sept.....	4.28	4.33	4.13	4.75	3.50	4.25
Oct.....	3.50	3.50	3.50	4.00	3.00	3.50	Oct.....	4.13	4.13	4.13	4.75	3.50	4.13
Nov.....	3.50	3.50	3.50	4.00	3.00	3.50	Nov.....	4.13	4.13	4.13	4.75	3.50	4.13
Dec.....	3.50	3.50	3.50	4.00	3.00	3.50	Dec.....	4.13	4.13	4.13	4.75	3.50	4.13
1813							1816						
Jan.....	3.50	3.50	3.50	4.00	3.00	3.50	Jan.....	3.71	3.71	3.50	3.50	3.50	4.13
Feb.....	3.50	3.50	3.50	4.00	3.00	3.50	Feb.....	3.50	3.50	3.50	3.50	3.50	3.50
Mar.....	3.75	3.75	3.50	4.00	3.00	3.63	Mar.....	3.61	3.71	3.50	3.50	3.50	4.13
Apr.....	3.88	3.88	3.88	4.25	3.50	3.88	Apr.....	4.13	4.13	4.13	4.75	3.50	4.13
May.....	3.88	3.88	3.88	4.25	3.50	3.88	May.....	4.13	4.13	4.13	4.75	3.50	4.13
June.....	3.88	3.88	3.88	4.25	3.50	3.88	June.....	4.13	4.13	4.13	4.75	3.50	4.13
July.....	.....	.....	.....	.....	.....	.....	July.....	4.13	4.13	4.13	4.75	3.50	4.13
Aug.....	3.88	3.88	3.88	4.25	3.50	3.88	Aug.....	4.13	4.13	4.13	4.75	3.50	4.13
Sept.....	3.88	3.88	3.88	4.25	3.50	3.88	Sept.....	4.13	4.13	4.13	4.75	3.50	4.13
Oct.....	3.88	3.88	3.88	4.25	3.50	3.88	Oct.....	4.13	4.13	4.13	4.75	3.50	4.13
Nov.....	.....	.....	.....	.....	.....	.....	Nov.....	4.13	4.13	4.13	4.75	3.50	4.13
Dec.....	3.88	3.88	3.88	4.25	3.50	3.88	Dec.....	4.13	4.13	4.13	4.75	3.50	4.13

TABLE 76. PERCENTAGE DEVIATIONS FROM THE AVERAGE OF HIGH AND LOW QUOTATIONS FOR ALL DAYS AVAILABLE,  
 RESULTING FROM DIFFERENT METHODS OF AVERAGING  
 (Butter at New York City. From table 70)

Date	High and low for 5th, 15th, and 25th of month	High and low for 15th of month	High for 15th of month	Low for 15th of month	High and low for month	Date	High and low for 5th, 15th, and 25th of month	High and low for 15th of month	High for 15th of month	Low for 15th of month	High and low for month
1811						1814					
Jan.....						Jan.....	0	0	5.9	-11.8	0
Feb.....						Feb.....	0	0	5.9	-11.8	0
Mar.....	0	0	0	0	0	Mar.....	0	0	5.9	-11.8	0
Apr.....	0	0	6.3	-6.2	0	Apr.....	0	0	0	0	0
May.....	0	6.3	12.5	0	6.3	May.....	0	0	0	0	0
June.....	0	0	0	0	-6.7	June.....	0	5.9	5.9	5.9	0
July.....	0	0	0	-7.1	0	July.....	0	0	0	0	0
Aug.....	0	7.1	7.1	0	0	Aug.....	0	0	0	0	0
Sept.....	0	0	0	-7.1	0	Sept.....	0	0	0	0	0
Oct.....	0	0	0	-7.1	0	Oct.....	0	0	0	0	0
Nov.....	0	0	0	-7.1	0	Nov.....	0	0	0	0	0
Dec.....	0	0	0	-7.1	0	Dec.....	0	0	4.8	-4.8	0
1812						1815					
Jan.....	0	0	0	-7.1	0	Jan.....	0	0	4.8	-4.8	0
Feb.....	0	0	0	-7.1	0	Feb.....	0	0	0	0	0
Mar.....						Mar.....	-4.3	-4.3	-4.3	-4.3	4.3
Apr.....	0	0	0	-7.7	0	Apr.....	0	0	0	-4.3	0
May.....	0	0	0	-7.7	0	May.....	0	0	0	-4.3	0
June.....	0	0	0	-7.7	0	June.....	0	0	0	-4.3	0
July.....	0	0	8.3	0	0	July.....	0	0	5.3	-5.3	0
Aug.....	0	0	0	0	0	Aug.....	-4.5	4.5	4.5	0	0
Sept.....						Sept.....	0	0	4.2	-4.3	0
Oct.....	0	0	7.7	-15.4	0	Oct.....	0	0	4.2	-4.3	0
Nov.....	0	0	7.7	-15.4	0	Nov.....	0	0	10.0	-10.0	0
Dec.....	-7.1	-7.1	0	-21.4	0	Dec.....	0	0	10.0	-10.0	0
1813						1816					
Jan.....	0	0	6.7	-6.7	0	Jan.....	0	0	10.0	-10.0	0
Feb.....	0	6.7	6.7	0	6.7	Feb.....	0	0	4.8	-4.8	0
Mar.....	0	0	0	0	0	Mar.....	0	0	5.0	-5.0	5.0
Apr.....	0	0	0	-6.7	0	Apr.....	0	0	6.3	-6.3	5.3
May.....	0	-7.1	-7.1	-14.3	0	May.....	-5.6	-5.6	0	-16.7	0
June.....	0	18.2	18.2	9.1	0	June.....	0	6.7	6.7	0	6.7
July.....						July.....	0	0	0	-6.7	0
Aug.....	0	0	0	-7.7	0	Aug.....	0	0	0	-6.7	0
Sept.....	0	0	0	-7.7	0	Sept.....	0	13.6	13.6	13.6	-9.1
Oct.....	0	0	0	-7.7	0	Oct.....	0	0	0	0	0
Nov.....						Nov.....	0	0	0	0	0
Dec.....	0	0	5.9	-11.8	0	Dec.....	0	0	0	0	0

TABLE 77. PERCENTAGE DEVIATIONS FROM THE AVERAGE OF HIGH AND LOW QUOTATIONS FOR ALL DAYS AVAILABLE, RESULTING FROM DIFFERENT METHODS OF AVERAGING  
(Hyson tea at New York City. From table 71)

Date	High and low for 5th, 15th, and 25th of month	High and low for 15th of month	High for 15th of month	Low for 15th of month	High and low for month	Date	High and low for 5th, 15th, and 25th of month	High and low for 15th of month	High for 15th of month	Low for 15th of month	High and low for month
1811						1814					
Jan.						Jan.	0	0	0	0	0
Feb.						Feb.	-6.1	-18.0	-18.0	-18.0	0
Mar.	0	0	5.3	-5.3	0	Mar.	0	0	0	0	0
Apr.	0	0	5.3	-5.3	0	Apr.	0	0	6.4	-8.9	0
May.	0	1.1	6.4	-4.3	-1.1	May.	0	0	7.4	-9.0	0
June.	0	-1.2	4.7	-7.0	0	June.	0	3.6	13.3	-11.2	3.6
July.	0	0	5.9	-5.9	0	July.	0	0	14.3	-14.3	0
Aug.	0	0	5.9	-5.9	0	Aug.	0	0	14.3	-14.3	0
Sept.	0	0	5.9	-5.9	0	Sept.	0	0	14.3	-14.3	0
Oct.	0	0	2.4	-3.6	2.4	Oct.					
Nov.	0	0	2.4	-3.6	0	Nov.					
Dec.	0	0	2.4	-3.6	0	Dec.	0	0	3.3	-3.3	0
1812						1815					
Jan.	0	0	2.4	-3.6	0	Jan.	0	0	3.3	-3.3	0
Feb.	0	0	2.4	-3.6	0	Feb.	0	0	4.9	0	0
Mar.						Mar.	-0.7	1.4	4.9	-2.1	3.5
Apr.	0		2.4	-3.6	0	Apr.	2.9	-3.3	-5.5	-10.7	7.1
May.	-1.3	-2.4	0	-5.9	0	May.	-0.6	-1.3	10.3	-13.3	-1.3
June.	0	0	5.3	-5.3	0	June.	-3.4	-5.3	4.5	-13.3	-0.6
July.	0	8.6	10.1	7.2	0	July.	0	0	3.3	-3.3	3.3
Aug.	0	0	0	0	0	Aug.	0	-3.9	-1.1	-12.7	0.3
Sept.						Sept.	-4.2	4.9	5.4	2.9	-1.5
Oct.	0	0	0	0	0	Oct.	2.0	4.5	9.0	0	1.5
Nov.	0	0	0	0	0	Nov.	3.4	-1.5	10.8	-13.8	12.8
Dec.	-2.0	-4.8	-4.8	-4.8	0.7	Dec.	0	0	13.6	-14.1	0
1813						1816					
Jan.	0	0.6	0.6	0.6	-1.3	Jan.	0	0	13.6	-14.1	0
Feb.	0.6	1.9	1.9	1.9	0	Feb.	0	0	2.6	-2.6	0
Mar.	0	-1.2	-1.2	-1.2	0.6	Mar.	-0.5	-2.0	0.5	-4.5	-0.5
Apr.	0	6.7	14.6	-1.2	3.0	Apr.	0	0	1.5	-1.5	0
May.	0	-0.6	1.3	-2.6	1.3	May.	0.5	3.0	2.0	-2.0	-2.6
June.	0	0	3.3	-3.3	0	June.	0	0	6.4	-6.4	0
July.						July.	0	0	3.3	-3.3	0
Aug.	0	0	3.6	-3.6	0	Aug.	0	0	3.3	-3.3	0
Sept.	0	1.6	8.1	-5.4	-2.2	Sept.	0	0	3.3	-3.3	0
Oct.	0	3.9	3.9	2.9	0	Oct.	0.6	-3.6	1.8	-0.1	-1.8
Nov.						Nov.	0.7	3.1	6.4	-2.8	-2.1
Dec.	-4.1	-10.9	-6.4	-15.7	-1.5	Dec.	0.7	2.1	6.4	-2.8	-2.1

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TABLE 78. FREQUENCY DISTRIBUTION OF PERCENTAGE DEVIATIONS OF MONTHLY AVERAGES OBTAINED BY DIFFERENT METHODS OF AVERAGING (Butter at New York City. From table 76)

Percentage deviation	High and low for 5th, 15th, and 25th of month	High and low for 15th of month	High for 15th of month	Low for 15th of month	High and low for month
-21.0 to -21.9				1	
-20.0 to -20.9					
-19.0 to -19.9					
-18.0 to -18.9					
-17.0 to -17.9					
-16.0 to -16.9				1	
-15.0 to -15.9				2	
-14.0 to -14.9				1	
-13.0 to -13.9					
-12.0 to -12.9				4	
-11.0 to -11.9				3	
-10.0 to -10.9					
-9.0 to -9.9					1
-8.0 to -8.9				2	
-7.0 to -7.9	1	2	1	13	
-6.0 to -6.9				5	1
-5.0 to -5.9	1	1		3	
-4.0 to -4.9	2	1	1	7	
-3.0 to -3.9					
-2.0 to -2.9					
-1.0 to -1.9					
-0.1 to -0.9					
0	60	52	34	19	56
0.1 to 0.9					
1.0 to 1.9					
2.0 to 2.9					
3.0 to 3.9					
4.0 to 4.9		1	6		1
5.0 to 5.9		1	8	1	2
6.0 to 6.9		3	4		3
7.0 to 7.9		1	3		
8.0 to 8.9			1		
9.0 to 9.9				1	
10.0 to 10.9			3		
11.0 to 11.9					
12.0 to 12.9			1		
13.0 to 13.9		1	1	1	
14.0 to 14.9					
15.0 to 15.9					
16.0 to 16.9					
17.0 to 17.9					
18.0 to 18.9		1	1		
Total	64	64	64	64	64

TABLE 79. FREQUENCY DISTRIBUTION OF PERCENTAGE DEVIATIONS OF MONTHLY AVERAGES OBTAINED BY DIFFERENT METHODS OF AVERAGING

(Butter at New York City. From table 78)

Percentage deviation	High and low for 5th, 15th, and 25th of month	High and low for 15th of month	High for 15th of month	Low for 15th of month	High and low for month
Less than 1.0.....	60	52	34	19	56
1.0 to 1.9.....	.....	.....	.....	.....	.....
2.0 to 2.9.....	.....	.....	.....	.....	.....
3.0 to 3.9.....	.....	.....	.....	.....	.....
4.0 to 4.9.....	2	2	7	7	1
5.0 to 5.9.....	1	2	8	4	2
6.0 to 6.9.....	.....	3	4	5	4
7.0 to 7.9.....	1	3	4	13	.....
8.0 to 8.9.....	.....	.....	1	2	.....
9.0 to 9.9.....	.....	.....	.....	1	1
10.0 to 10.9.....	.....	.....	3	3	.....
11.0 to 11.9.....	.....	.....	.....	4	.....
12.0 to 12.9.....	.....	.....	1	.....	.....
13.0 to 13.9.....	.....	1	1	1	.....
14.0 to 14.9.....	.....	.....	.....	1	.....
15.0 to 15.9.....	.....	.....	.....	2	.....
16.0 to 16.9.....	.....	.....	.....	1	.....
17.0 to 17.9.....	.....	.....	.....	.....	.....
18.0 to 18.9.....	.....	1	1	.....	.....
19.0 to 19.9.....	.....	.....	.....	.....	.....
20.0 to 20.9.....	.....	.....	.....	.....	.....
21.0 to 21.9.....	.....	.....	.....	1	.....
Total.....	64	64	64	64	64

TABLE 80. FREQUENCY DISTRIBUTION OF PERCENTAGE DEVIATIONS OF MONTHLY AVERAGES OBTAINED BY DIFFERENT METHODS OF AVERAGING (Hyson tea at New York City. From table 77)

Percentage deviation	High and low for 5th, 15th, and 25th of month	High and low for 15th of month	High for 15th of month	Low for 15th of month	High and low for month
-18.0 to -18.9		1	1	1	
-17.0 to -17.9					
-16.0 to -16.9					
-15.0 to -15.9				1	
-14.0 to -14.9				5	
-13.0 to -13.9				3	
-12.0 to -12.9				1	
-11.0 to -11.9				1	
-10.0 to -10.9		1		1	
-9.0 to -9.9		1		1	
-8.0 to -8.9			1	1	
-7.0 to -7.9				1	
-6.0 to -6.9	1	1	1	3	
-5.0 to -5.9				8	
-4.0 to -4.9	2	2	1	3	
-3.0 to -3.9		1		12	
-2.0 to -2.9	2	2		6	4
-1.0 to -1.9	1	4	2	3	6
-0.1 to -0.9	3	1			2
0	46	35	7	7	40
0.1 to 0.9	5	2	2	1	3
1.0 to 1.9	1	4	4	1	2
2.0 to 2.9	2	4	0	2	2
3.0 to 3.9	1	1	7	1	3
4.0 to 4.9		2	3		
5.0 to 5.9			7		
6.0 to 6.9		1	6		
7.0 to 7.9			1	1	1
8.0 to 8.9		1	1		
9.0 to 9.9			1		
10.0 to 10.9			3		
11.0 to 11.9					
12.0 to 12.9					1
13.0 to 13.9			2		
14.0 to 14.9			4		
15.0 to 15.9					
16.0 to 16.9					
17.0 to 17.9					
18.0 to 18.9			1		
Total	64	64	64	64	64

TABLE 81. FREQUENCY DISTRIBUTION OF PERCENTAGE DEVIATIONS OF MONTHLY AVERAGES OBTAINED BY DIFFERENT METHODS OF AVERAGING  
(Hyson tea at New York City. From table 80)

Percentage deviation	High and low for 5th, 15th, and 25th of month	High and low for 15th of month	High for 15th of month	Low for 15th of month	High and low for month
Less than 1.0.....	54	28	9	8	45
1.0 to 1.9.....	2	8	6	4	8
2.0 to 2.9.....	4	6	9	8	6
3.0 to 3.9.....	1	2	7	13	2
4.0 to 4.9.....	2	4	4	3	.....
5.0 to 5.9.....	.....	.....	7	8	.....
6.0 to 6.9.....	1	2	7	3	.....
7.0 to 7.9.....	.....	.....	1	2	1
8.0 to 8.9.....	.....	1	2	1	.....
9.0 to 9.9.....	.....	1	1	1	.....
10.0 to 10.9.....	.....	1	3	1	.....
11.0 to 11.9.....	.....	.....	.....	1	.....
12.0 to 12.9.....	.....	.....	.....	1	1
13.0 to 13.9.....	.....	.....	2	2	.....
14.0 to 14.9.....	.....	.....	4	6	.....
15.0 to 15.9.....	.....	.....	4	1	.....
16.0 to 16.9.....	.....	.....	.....	.....	.....
17.0 to 17.9.....	.....	.....	.....	.....	.....
18.0 to 18.9.....	.....	1	2	1	.....
Total.....	64	64	64	64	64

TABLE 82. STANDARD DEVIATIONS  
(From tables 78 and 80)

	Butter	Hyson tea
High and low for 5th, 15th, and 25th days of month.....	1.45	1.46
High for middle day.....	4.50	5.82
Low for middle day.....	5.70	5.34
High and low for middle day.....	3.76	3.67
High and low for month.....	2.23	2.20

### Conclusions

The most nearly accurate monthly price, when highs and lows are available for a number of days in the month, is an average for all high and lows. If on any day only one quotation is given, this should be used to represent the high and the low unless it is clearly incorrect.

The following conclusions seem to be justified:

1. The average of the high and the low for the 5th, 15th, and 25th days of the month is the best of the abbreviated methods.
2. The average of the high and the low for the month, or that of the high and the low for the middle day of the month, is second in reliability, and these two averages seem to be about equally reliable.

Ordinarily the average of the high and the low for the 15th of the month is more easily obtained.

3. Any high or low is much less reliable than either of the averages mentioned above.

4. In freedom from erratic fluctuations, the different methods rank in the same order as above.

5. One objection to using a low or a high is that prices for the past will be compared with prices in the present. Nearly all monthly averages now published are either the average of the high and the low for every day in the month, or the average of the high and the low for the month.

Of course there will always be some erratic cases which cannot be treated by any given rule. Such cases become more numerous as we go further back in time.

#### METHODS OF COMPUTATION

The average price of each commodity for 192 months (1876 to 1891) was taken as 100 and the prices for each previous month were expressed as a percentage of this and multiplied by the weight. For convenience the actual process was to multiply the price by the weight divided by the price in the base period, so that only one operation was necessary.

The results for each commodity were added to make the group index on the 1876-91 base.

Index numbers were calculated for the years 1890 to 1893, thus providing a 48-month overlap with the index numbers of the United States Bureau of Labor Statistics. By means of this overlapping period, index numbers were converted to the 1910-14 base. The results with the 1876-91 base were nearly the same as the index numbers on the 1910-14 base, so that only moderate changes were necessary in the conversion.

When one commodity was substituted for another, an overlapping period was used and the multiplier was changed so that the substitution would make no change in the index during this overlapping period.

In a few cases independent index numbers were calculated with overlapping periods, and entire groups were adjusted.

#### *Examples of methods of handling*

From 1862 to 1893, corn quotations were for western mixed at New York City. The average price for 192 months, 1876 to 1891, was 57.174 cents. To get the price relatives, all prices would be divided by this average. During this period, corn was given a weight of 6 in the farm-products group. Instead of dividing by 57.174 and



multiplying by 6, all prices were multiplied by 0.105. From 1830 to 1840, corn was given a weight of 7; from 1826 to 1829, a weight of 8; and previous to 1826, a weight of 10. Whenever weights were changed, the shifting was done in such a way as to cause little or no change in the index numbers at the time of the shift.

From 1825 to 1861 the quotations were for northern corn. Prices of northern corn and of western mixed corn at New York City in 1862 and 1863 were about the same, and no changes were made in the multiplier.

From 1798 to 1824, north corn was used.

For the year 1825, prices of both north and northern corn were available. They averaged the same. From 1810 to 1824, quotations for both north and south corn were available. Half of the weight was given to each. For the year 1825, north corn was worth 16 per cent more than south corn, and the multiplier for south corn was increased proportionately.

Quotations for diapers were not available after 1850. The multiplier was estimated so that it would not disturb the index. The average index for the five years 1846 to 1850 without diapers was 97.41. Since the weight for diapers was 6, the index was divided by 94.0 to get what the index should be (103.628). The average price of diapers for the five years 1846 to 1850 was \$1.7604 per piece. The multiplier was calculated from the following equation:

$$97.410 + 1.7604x = 103.628$$

$$x = 3.5322$$

Previous to 1839, the weight was increased to 11. Therefore the multiplier was multiplied by eleven-sixths, or was 6.4757.

From 1861 to 1869, prices of tar rose very rapidly and were unavailable for some years. In 1860 and in 1870, prices of tar and linseed oil were about equally high. Tar was omitted and its weight was added to linseed oil for the period 1861 to 1869. In this period, turpentine rose rapidly in price. The quantity of both turpentine and tar was reduced. Since the weight of tar was added to a northern product, it was believed to be reasonable to allow turpentine to continue in the index.

Yellow pine rose very high in price during the Civil War. From 1860 to 1869, the weight for yellow pine was added to that for white pine. From 1857 to 1859 yellow pine was worth 2.1 times as much as white pine, and from 1870 to 1872 it was worth only 1.4 times as much as white pine. For December, 1869, white-pine prices were used with the yellow-pine weight and were multiplied by 1.4. This multiplier was gradually raised until January, 1860, when it was 2.1.

AN INDEX NUMBER OF WHOLESALE PRICES OF ALL COMMODITIES WITH  
VARIABLE GROUP WEIGHTS

The eleven groups were combined to make an index of wholesale prices of all commodities.

An index number of prices is not concerned with prices of commodities produced in the home and consumed there. In the earlier years, the amount of production for home use was much greater than it is at the present time. How much greater it was, is not known. Commodities such as iron and sugar were used in relatively small quantities, but a higher proportion of the farm and food products were home-produced. Even though the total quantities consumed were small, the importance of iron and sugar might be fairly high in proportion to the farm products sold.

A commodity that has a high weight and a low price contributes little to the index number directly, but it does affect the index numbers by reducing the weight of the higher-priced products.

In the index with variable group weights, the weight given to farm products was 35 in 1800 and 25 in 1889 (table 83). The weights given to foods were reduced from 27 to 25 in the same period; hides and leather, from 5 to 4; spirits, from 5 to 3; miscellaneous, from 1.5 to 1. House furnishings were given a weight of 1 after 1840. The weights for textiles were increased from 8 in 1800 to 10 in 1889; fuel and lighting, from 4 to 10; metals and metal products, from 4 to 10; drugs and chemicals, from 0.5 to 1.0. Lumber and building materials were left constant at 10.

The method of changing weights was to make one-ninetieth of the change each January. For example, going backward from 1889 the weight given to farm products was increased  $\frac{1}{9}$  of 1 per cent per year, or 0.1111 was added to the weight each January.

It is believed that the general price level of the country is best represented by an index number which gives higher weights to the cheaper products in the earlier years. Such products as iron and salt, which were high in price, were used very economically; whereas liquor, lumber, and farm products were used freely, and entered into commerce extensively. The results of different methods of group weighting are given in table 87 (page 166).

Quotations for house furnishings were not available before 1840. Their weight was added to that of the miscellaneous group before that date.

For the month of January in every decade, the percentage of the total index due to each group index was determined. For example, drugs and chemicals were given a weight of 0.5 in 1800, but this weight resulted in this group's contributing 1.8 per cent of the total index;

whereas spirits were so cheap that with a weight of 5 they represented only 1 per cent in the total index. Farm products had a weight of 35 in 1800, but they contributed only 26.1 per cent to the total index. (Tables 83 and 84.)

TABLE 83. GROUP WEIGHTS FOR JANUARY OF EACH YEAR FOR INDEX WITH VARIABLE GROUP WEIGHTS

Group	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890
Farm products	35 0	33.8	32 7	31 5	29 5	29 3	28 2	27 1	26 0	25 0
Foods	27 0	26 7	26 5	26 3	26 1	25 0	25 7	25 4	25 2	25 0
Hides and leather	5 0	4 9	4 8	4 6	4 6	4 4	4 3	4 2	4 1	4 0
Textiles	8 0	8 2	8 5	8 7	8 9	9 1	9 4	9 6	9 8	10 0
Fuel and lighting	4 0	4 7	5 4	6 1	6 7	7 4	8 1	8 7	9 4	10 0
Metals and metal products	4 0	4 7	5 4	6 1	6 7	7 4	8 1	8 8	9 4	10 0
Building materials	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0
Drugs and chemicals	0 5	0 6	0 6	0 7	0 7	0 8	0 8	0 9	0 9	1 0
House-furnishing goods					1 0	1 0	1 0	1 0	1 0	1 0
Spirits	5 0	4 8	4 5	4 2	4 1	3 9	3 6	3 4	3 2	3 0
Miscellaneous	1 5	1 6	1 6	1 7	0 7	0 8	0 8	0 9	1 0	1 0
Total	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0

TABLE 84. PERCENTAGE THAT EACH GROUP WITH VARIABLE GROUP WEIGHTS CONTRIBUTES TO THE ALL-COMMODITY INDEX

Group	January, 1800	January, 1810	January, 1820	January, 1830	January, 1840	January, 1850	January, 1860	January, 1870	January, 1880	January, 1890
Farm products	26 1	23 1	21 8	19 1	20 3	24 1	23 4	22 5	20 8	21 1
Foods	32 7	27 1	28 0	26 3	29 0	26 3	26 2	26 0	24 8	25 0
Hides and leather	2 4	2 8	3 8	4 0	3 4	3 5	4 7	3 9	4 9	3 9
Textiles	14 3	17 5	16 4	17 5	14 1	12 1	11 8	12 5	11 3	11 6
Fuel and lighting	5 0	6 8	8 1	8 9	8 3	8 8	9 3	9 2	7 8	8 6
Metals and metal products	10 0	12 3	12 9	14 2	14 2	12 2	12 1	12 1	17 1	14 3
Building materials	4 3	4 6	4 7	5 3	6 8	7 4	6 9	7 4	7 7	9 6
Drugs and chemicals	1 8	2 2	1 6	1 6	1 8	1 4	1 5	1 4	1 1	1 2
House-furnishing goods					1 3	1 3	1 3	1 2	1 1	1 1
Spirits	1 0	1 1	0 9	0 9	0 9	1 0	0 9	1 9	2 6	2 6
Miscellaneous	2 4	2 5	1 8	2 2	0 8	0 9	0 9	0 8	0 8	1 0
Total	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0

AN INDEX NUMBER OF WHOLESALE PRICES OF ALL COMMODITIES WITH CONSTANT GROUP WEIGHTS

For certain purposes it may be desirable to have an index number of all commodities with constant group weights. In any event, such an index is desirable for checking the amount of change due to using variable group weights.

The index number with constant group weights gave food and farm products a weight of 25 each for the entire period. Textiles, fuel and lighting, metals and metal products, and building materials, were

given a weight of 10 each; hides and leather, 4; drugs and chemicals, house furnishings, and miscellaneous, 1 each; spirits, 3. Before 1840, quotations for house furnishings were not available and their weight was added to that of the miscellaneous group.

For the month of January in each decade, the percentage of the final index due to each group was calculated (table 85). For example, giving metals a weight of 10 in 1800 resulted in their contributing 21 per cent to the final index, because they were so high in price.

TABLE 85. PERCENTAGE THAT EACH GROUP WITH CONSTANT GROUP WEIGHTS CONTRIBUTES TO THE ALL-COMMODITY INDEX

Group	Janu- ary, 1800	Janu- ary, 1810	Janu- ary, 1820	Janu- ary, 1830	Janu- ary, 1840	Janu- ary, 1850	Janu- ary, 1860	Janu- ary, 1870	Janu- ary, 1880	Janu- ary, 1889
Farm products	16 0	14 4	14 5	13 4	15 4	19 7	20 2	20 4	19 9	21 1
Foodst	25 9	21 3	23 0	22 2	24 8	24 3	24 9	25 3	24 4	25 0
Hides and leather	1 6	2 0	2 8	3 1	2 8	3 0	4 3	3 6	4 7	3 9
Textiles	15 2	17 8	16 9	17 9	14 6	12 7	12 3	12 9	11 5	11 6
Fuel and lighting	10 5	12 1	13 0	13 1	11 3	11 4	11 2	10 4	8 3	8 6
Metals and metal products	21 0	22 0	20 9	20 7	19 6	17 0	15 7	14 8	18 0	14 3
Building materials	3 6	3 9	4 1	4 7	6 3	7 0	6 7	7 3	7 7	9 6
Drugs and chemicals	2 9	3 3	2 3	2 0	2 3	1 8	1 8	1 5	1 1	1 2
House-furnishing goods					1 3	1 3	1 2	1 2	1 1	1 1
Spirits	0 5	0 6	0 5	0 6	0 6	0 8	0 7	1 7	2 4	2 6
Miscellaneous	2 8	2 6	2 0	2 3	1 0	1 0	1 0	0 9	0 9	1 0
Total	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0	100 0

COMPARISON OF TWO INDEX NUMBERS OF WHOLESALE PRICES

It is believed that the economies in the use of high-priced materials, and the limited supplies available, probably make the index with variable weights the better representative of price changes over a long series of years. The writers have therefore used this index in nearly all price comparisons. It is probable that there would not be any change in any conclusions if the other index were used, except as to the comparative height of prices a century ago and now. In a ten- or twenty-year period, the index numbers are almost alike, except that the index with variable weights is reduced in the earlier years.

The two index numbers are of course identical for 1889 (tables 1, page 9, and 28, page 70). They differ by 4 points for the year 1850; by 10 points in 1830; and in 1800 the index with constant group weights was 151 as compared with 129 for the index with variable group weights, a difference of 22 points.

TEST WEIGHTS

In order to test the results of different methods of weighting, several tests for each ten-year period were made. The test weights are given

in table 86 and the results in table 87. It will be observed that any of the methods of variable weighting used give about the same results, but that in the early years they all give results below the index with constant weights because the weights of the high-priced groups have been reduced.

TABLE 86. TEST WEIGHTS USED

Group	Weights					
	I	II	III	IV	V	VI
Farm products.....	25.0	25.0	23.0	20.0	25.0	23.0
Foods.....	25.0	27.0	30.0	27.0	30.0	33.0
Hides and leather.....	4.0	5.0	4.0	5.0	4.0	5.0
Textiles.....	10.0	8.0	9.0	10.0	8.0	8.0
Fuel and lighting.....	10.0	4.0	4.0	5.0	4.0	3.0
Metals and metal products.....	10.0	4.0	5.0	5.0	4.0	3.0
Building materials.....	10.0	10.0	9.0	10.0	8.0	8.0
Drugs and chemicals.....	1.0	0.5	0.5	0.5	0.5	0.5
House-furnishing goods.....	1.0	1.0	1.0	1.0	1.0	1.0
Spirits.....	3.0	5.0	4.0	5.0	4.0	5.0
Miscellaneous.....	1.0	0.5	1.5	1.5	1.5	0.5
Total.....	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 87. INDEX NUMBERS OF WHOLESALE PRICES, BASED ON DIFFERENT METHODS OF CONSTANT-GROUP WEIGHTING

(1910-14 = 100)

Method of weighting	1800	1810	1820	1830	1840	1850	1860	1870	1880	1889
I.....	151	154	123	102	102	88	95	137	101	81
II.....	129	130	101	86	89	79	87	128	95	78
III.....	135	134	105	89	92	81	89	130	96	78
IV.....	135	136	107	91	93	81	89	131	97	79
V.....	134	132	104	88	91	81	88	129	95	78
VI.....	130	130	101	86	89	79	88	129	95	78

## SEASONAL VARIATION

The seasonal variation in the different groups for the period 1876 to 1891 is given in table 88. Several of the groups show slightly higher prices for the earlier part of the year.

The weighted average index with uniform weighting varied from 98 in June and July to 102 in January, February, and March. Apparently a change of 4 points in the index from January to July in this period should be looked upon as a normal change rather than a change in the general price level. Some of this (less than 1 point) is due to the downward trend of prices.

There is practically no seasonal variation in the index numbers published by the Bureau of Labor Statistics.

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TABLE 88. SEASONAL VARIATION IN INDEX NUMBERS OF WHOLESALE PRICES (1876-91 = 100)

Group	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Farm products.....	102	103	103	103	101	98	99	98	99	98	97	99	100
Food.....	103	103	101	101	99	96	97	98	99	100	101	102	100
Hides and leather.....	103	100	100	100	100	98	98	98	99	100	102	102	100
Textiles.....	101	100	100	100	100	100	100	100	100	100	100	99	100
Fuel and lighting.....	104	103	101	99	99	98	98	99	99	100	100	100	100
Metals and metal products.....	103	103	102	101	100	99	99	98	98	99	99	99	100
Building materials.....	100	101	101	101	101	100	100	99	99	99	99	100	100
Drugs and chemicals.....	103	103	102	101	100	100	99	99	98	98	98	99	100
House-furnishing goods.....	102	101	101	101	100	100	100	99	99	99	99	99	100
Spirits.....	100	100	100	100	99	100	100	100	100	100	100	101	100
Miscellaneous.....	100	100	100	101	101	101	100	100	99	99	99	100	100
All-commodity index:													
With constant group weights.....	102	102	102	101	100	98	98	99	99	99	100	100	100
With variable group weights.....	102	102	102	101	100	98	98	99	99	99	100	100	100
Basic index.....	103	103	102	101	100	98	98	98	99	99	100	100	100

A COMPARISON OF INDEX NUMBERS FOR THE PERIOD 1840 TO 1890

The most commonly used index number of wholesale prices for the period 1840 to 1890 is the Aldrich simple-average index.<sup>20</sup> This is for January only, and therefore does not show the course of prices when they changed violently in the Civil War period. It is a simple average of 223 commodities. The number of commodities in each group, and hence the weightings by groups, are as shown in table 89.

TABLE 89. WEIGHTING BY GROUPS OF COMMODITIES IN THE ALDRICH SIMPLE-AVERAGE INDEX\*

	Number of items	Per cent
Farm products.....	0	0.0
Food.....	53	23.8
Cloths and clothing.....	28	12.5
Fuel and lighting.....	10	4.5
Metals and implements.....	54	24.2
Lumber and building materials.....	35	15.7
Drugs and chemicals.....	18	8.1
House furnishings.....	15	6.7
Miscellaneous.....	10	4.5
	223	100.0

\* Wholesale prices, wages, and transportation. Report by Mr. Aldrich from the Committee on Finance, 52d Congress, 2d Session. Report 1394, Part I, p. 53-55. March 3, 1893.

<sup>20</sup> Wholesale prices, wages, and transportation. Report by Mr. Aldrich from the Committee on Finance, 52d Congress, 2d Session. Report 1394, Part I. March 3, 1893.

This index number gives very high weights to many minor items. For example, it includes 25 series for pocketknives, so that pocketknives have a weight of 11 per cent in the final index. Window glass, plate glass, and glassware occur 14 times, and tubs and pails 7 times, but brick occurs only once. This results in giving pocketknives, glass, tubs, and pails a weight of 21 per cent in the final index, with  $\frac{1}{2}$  of 1 per cent for brick, and no weight for farm products. This index number is widely used.<sup>21</sup>

Another index number published in the Aldrich report assumes 31.4 per cent of the prices to be absolutely constant throughout the entire period. This is, of course, unsuitable for any kind of use.

Still another index number is weighted, and is assumed to represent wholesale prices of 68.6 per cent of the items in the cost of living. The method of computation results in the weights given in table 90.

TABLE 90. WEIGHTING BY GROUPS OF THE ALDRICH INDEX WEIGHTED ACCORDING TO IMPORTANCE OF 68.6 PER CENT OF ESTIMATED EXPENDITURES\*

	Weight	Per cent
Farm products.....	0	0
Food.....	4,103	59.8
Fuel.....	500	7.3
Lighting.....	90	1.3
Clothing.....	1,531	22.3
House furnishings.....	253	3.7
All else.....	343	5.6
	.....	100.0

\* Wholesale prices, wages, and transportation. Report by Mr. Aldrich from the Committee on Finance, 52d Congress, 2d Session. Report 1394, Part I, p. 85-86. March 3, 1893.

This is undoubtedly the best index number in the Aldrich report, but it includes no farm products and is for January only.

No attempt was made in the Aldrich report to compute an index number of wholesale prices of all commodities. The aim was to make an index number of the cost of living by using wholesale prices. This explains the omission of all farm products that were not ready for consumers' use.

<sup>21</sup> Roelse, Harold V. Wholesale prices in the United States, 1791-1801. Amer. Statis. Assn. Pubs., vol. 15 (1916-17), p. 840. 1918.

Warren, G. F. Prices of farm products in the United States. U. S. Agr. Dept. Bul. 999, p. 2. August 26, 1921.

Warren, G. F. Prices of farm products in New York. Cornell Univ. Agr. Exp. Sta. Bul. 416, p. 4. January, 1923.

Warren, G. F., and Pearson, F. A. The general price level. Farm economics, no. 45, p. 697. June, 1927.

Peterson, Arthur G. Historical study of prices received by producers of farm products in Virginia, 1801-1927. Virginia Agr. Exp. Sta. Tech. bul. 37, p. 199. March, 1929.

The following statement is included in the report (pages 63 and 64):

In the second place it might be objected that since the prices with which we are here concerned are wholesale prices and not those paid by the consumer, that it is incorrect to bring these prices into relation with the consumption of articles bought at retail as ascertained by the budgets. However, this objection is valid only in case there has been a different movement of retail prices since the beginning of the period than of wholesale prices. If, on the other hand, it is believed that the wholesale and retail prices have borne a more or less fixed relation during this entire period, it must be evident that the course of wholesale prices is indicative of the course of retail prices. As we are dealing exclusively with relative prices it would make absolutely no difference in the latter case whether the prices upon which our calculations were based were retail or wholesale. There can be no doubt that for the purpose of these comparisons retail prices would have been less open to question than wholesale prices. But the probable error arising from the use of wholesale prices in this connection is not large enough to seriously affect the accuracy and validity of the results which may be reached. It need only be said that the ascertainment of wholesale instead of retail prices for this report was an absolute necessity, as the records of retail sales are not accessible.

It is now known that retail prices fluctuate much less than do wholesale prices; so that, even if the general course of prices were similar, the retail- and wholesale-price index numbers would be different in short periods of time. The Aldrich index, therefore, is not a good cost-of-living index; nor is it a good index of wholesale prices of all commodities, which it made no attempt to be.

Snider<sup>22</sup> prepared a weighted quarterly index of wholesale prices of 39 commodities from 1866 to 1891. In this index, for 1879-80, farm products had a weight of 56, textiles 4, and lumber and building materials 3. This gives too heavy a weighting to farm products for a general index. Farm products and food represented 75 per cent of the weights.

Carl Snyder, of the Federal Reserve Bank of New York, published a monthly index number of wholesale prices of 14 commodities from 1875 to 1926.<sup>23</sup> The commodities included were wheat, corn, hogs, steers, sugar, hides, wool, pig iron, copper, lead, coal, petroleum, sulfuric acid, and tobacco. Unpublished monthly index numbers for the same commodities from 1860 to 1875 were made available through the courtesy of Mr. Snyder. This series is given in table 91. Since these are all basic commodities, this index number fluctuates more violently than would a general index.

<sup>22</sup> Snider, Joseph L. Wholesale prices in the United States, 1866-91. Rev. econ. statistics, vol. 6, p. 112. April, 1924.

<sup>23</sup> Snyder, Carl. Business cycles and business measurements, p. 288. 1927.



TABLE 91. SNYDER'S INDEX NUMBERS OF WHOLESALE PRICES OF 14 BASIC COMMODITIES, 1860 TO 1926\*

(1913 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1860....	109	108	105	104	103	102	100	96	95	96	93	86	100
1861....	86	85	84	85	84	78	75	77	78	80	82	84	82
1862....	90	92	91	90	89	92	96	105	104	113	121	123	101
1863....	123	134	140	135	135	129	131	122	129	139	135	156	134
1864....	157	162	162	174	180	184	230	236	234	215	220	214	198
1865....	211	207	200	163	154	145	145	154	168	169	167	160	170
1866....	156	150	144	140	147	148	146	150	153	153	150	143	148
1867....	144	144	142	147	150	145	136	142	143	145	139	136	143
1868....	134	136	138	139	141	140	137	140	138	136	134	135	137
1869....	139	140	137	132	134	135	140	144	141	136	133	131	137
1870....	128	127	124	123	126	127	126	126	120	118	113	112	122
1871....	111	118	118	117	113	112	114	113	114	114	114	115	114
1872....	116	115	118	127	129	130	125	127	124	121	121	120	123
1873....	118	121	122	123	120	116	117	116	115	110	107	111	113
1874....	113	112	113	114	113	111	116	117	119	117	117	117	116
1875....	115	114	115	117	116	114	115	116	113	109	108	107	115
1876....	106	106	107	105	103	99	103	102	101	100	100	103	103
1877....	105	103	101	102	104	101	99	94	93	92	89	88	99
1878....	89	88	87	87	82	79	80	81	79	76	77	76	82
1879....	75	78	78	74	76	78	80	78	80	90	94	99	84
1880....	104	104	103	100	96	93	92	94	95	95	97	97	98
1881....	98	99	99	99	99	100	102	105	108	112	109	109	103
1882....	108	108	109	113	114	114	115	120	110	108	105	102	111
1883....	104	105	105	103	104	101	98	98	97	96	95	96	100
1884....	97	98	97	94	94	92	93	93	95	91	87	84	93
1885....	84	84	84	84	75	84	85	85	85	75	74	84	82
1886....	82	80	87	81	79	80	87	87	80	79	79	80	80
1887....	79	80	80	79	79	80	80	80	81	81	84	88	81
1888....	87	86	87	86	86	85	86	87	93	90	88	86	87
1889....	84	82	82	80	79	78	79	78	78	77	80	78	80
1890....	82	82	82	82	81	81	80	81	82	83	82	81	82
1891....	80	80	80	80	80	79	78	78	78	78	78	78	79
1892....	77	77	77	76	76	76	76	76	76	76	76	77	76
1893....	78	78	78	77	77	77	76	75	75	75	74	73	76
1894....	72	72	71	70	70	70	70	70	70	70	70	69	70
1895....	68	68	68	68	68	68	68	68	69	70	70	69	69
1896....	68	68	67	66	66	65	65	65	66	66	66	66	66
1897....	66	66	66	65	65	64	64	65	66	67	67	67	66
1898....	67	67	67	67	67	67	67	67	67	67	69	69	67
1899....	70	71	72	73	73	74	75	76	77	78	79	80	75
1900....	82	83	84	84	82	82	81	80	80	80	81	81	82
1901....	80	80	80	80	80	79	79	80	81	81	81	81	80
1902....	82	82	82	83	84	84	84	83	83	85	85	85	84
1903....	86	86	86	85	84	84	84	83	84	83	83	83	84
1904....	84	85	85	84	84	84	83	83	83	83	83	84	84
1905....	84	85	85	85	84	84	85	86	86	87	88	89	86
1906....	89	90	90	90	90	90	90	90	90	91	91	93	91
1907....	95	95	96	95	96	96	96	96	97	97	95	93	96
1908....	93	92	92	92	91	90	90	90	90	90	90	91	91
1909....	92	92	92	92	93	93	93	93	95	95	97	98	94
1910....	98	98	99	99	98	97	97	97	97	97	96	96	97
1911....	95	95	95	95	95	95	95	95	96	96	96	96	95
1912....	97	97	98	100	100	99	99	99	100	100	100	100	99
1913....	100	100	100	100	99	99	100	100	102	101	100	99	100
1914....	98	99	98	98	97	97	97	101	102	97	97	97	98
1915....	98	99	99	99	100	99	100	100	100	102	104	108	101
1916....	113	115	119	121	122	123	123	126	130	136	146	149	127

\*The index numbers from 1875 to 1926 were taken from *Business Cycles and Business Measurements*, by Carl Snyder, p. 288, 1927. The unpublished data prior to 1875 were furnished through the courtesy of Mr. Snyder.

TABLE 91 (concluded)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1917....	153	157	162	173	183	185	188	189	187	183	183	182	177
1918....	144	146	147	190	190	191	196	200	204	202	203	202	195
1919....	199	193	196	199	202	203	212	216	210	211	217	223	207
1920....	233	232	234	245	247	243	241	231	226	211	196	179	227
1921....	170	160	155	148	145	142	141	142	141	142	141	140	147
1922....	138	141	142	143	148	150	155	155	153	154	156	156	149
1923....	158	157	159	159	156	153	151	150	154	153	152	151	154
1924....	151	152	150	148	147	145	147	150	149	152	153	157	150
1925....	160	161	161	156	155	157	160	160	160	158	158	156	159
1926....	156	155	152	151	152	....	....	....	....	....	....	....	....

Mitchell published a quarterly index number of medians of prices of 92 commodities from 1860 to 1880.<sup>24</sup>

McNeil, of the United States Bureau of Labor Statistics, calculated an annual index number of wholesale prices based on prices for the four months January, April, July, and October.<sup>25</sup> This index number included varying numbers of commodities. Some of the commodities that were very high in price in the Civil War period were given high weights. For example, drugs and chemicals had a weight of 6 in 1860, and house furnishings had a weight of 7, but farm products had a weight of only 9. This method of weighting made prices appear to rise in the Civil War period more than is indicated by other index numbers.

The weightings for different groups varied from year to year as more or less commodities were included. For example, textiles had a weight of 14 in 1860, but, because more quotations were included, they had a weight of 28 in 1891, at which time farm products had a weight of only 6.

The weightings of the Bureau of Labor Statistics for 1909, 1916, and 1924 average approximately as follows:<sup>26</sup> farm products, 28; food, 27; cloths and clothing, 11; fuel and lighting, 9; metals and metal products, 6; lumber and building materials, 11; drugs and chemicals, 1; house furnishings, 1; miscellaneous, 6.

Cole<sup>27</sup> published an unweighted monthly index of prices of 33 commodities from 1843 to 1862 (table 92). Index numbers prepared by Hurlin<sup>28</sup> and by *Dun's Review*,<sup>29</sup> and one calculated by the United States Treasury Department, are given in table 108 (page 193).

<sup>24</sup> Mitchell, W. C. Gold, prices, and wages under the greenback standard. Univ. California pub. in econ., vol. 1, p. 23. 1908.

<sup>25</sup> Wholesale prices in the United States, 1890-1914. U. S. Labor Statistics Bur. Bul. 181, Appendix III, p. 286. October, 1915.

<sup>26</sup> Wholesale prices, 1890 to 1916. U. S. Labor Statistics Bur. Bul. 226, p. 262-275, December, 1917; Bul. 390, p. 227-231. 1925.

<sup>27</sup> Cole, Arthur H. Wholesale commodity prices in the United States, 1843-62. Rev. econ. statistics, vol. 11, p. 31. February, 1929.

<sup>28</sup> Hurlin, Ralph G. The long time trend of prices in the United States. *Annalist*, vol. 18, p. 3-4. July 4, 1921.

<sup>29</sup> Commodity prices. A record covering a period of over a century. *Dun's review*, January, 1921.

TABLE 92. COLE'S INDEX OF WHOLESALE PRICES OF 33 COMMODITIES IN THE UNITED STATES, 1843 TO 1862\*  
(1848-58 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1843.....	74	72	72	73	74	73	74	74	77	77	79	79	75
1844.....	79	80	80	80	79	78	77	78	78	78	79	80	79
1845.....	78	77	78	82	83	80	80	82	83	84	88	90	82
1846.....	87	87	86	86	84	81	79	78	78	83	84	84	83
1847.....	83	89	92	93	94	96	88	88	92	91	93	89	91
1848.....	87	86	87	85	82	79	76	76	78	79	77	78	81
1849.....	79	80	82	80	78	75	75	78	81	84	84	86	80
1850.....	85	87	88	86	85	86	85	86	87	88	90	90	87
1851.....	91	91	90	89	88	86	84	83	83	83	82	82	86
1852.....	83	84	86	88	92	91	89	89	93	95	98	98	91
1853.....	101	104	103	102	101	98	97	100	103	107	111	111	103
1854.....	111	118	117	115	116	114	110	109	112	112	113	115	114
1855.....	114	112	113	116	119	120	119	117	119	121	123	125	118
1856.....	121	120	119	119	117	113	115	117	118	122	123	123	119
1857.....	124	126	128	129	131	130	129	128	126	114	109	108	124
1858.....	97	93	97	99	100	97	96	99	102	103	99	99	99
1859.....	100	105	104	105	104	104	100	98	96	98	98	98	101
1860.....	101	100	100	98	98	97	95	95	97	98	97	93	97
1861.....	92	90	90	90	94	91	88	88	105	110	114	120	99
1862.....	126	130	121	122	129	130	135	163	161	168	183	186	146

\* Cole, Arthur H. Wholesale commodity prices in the United States, 1843-62. Rev. econ. statistics, vol. 11, p. 31. February, 1929.

TABLE 93. COLE'S INDEX OF WHOLESALE PRICES OF 38 COMMODITIES IN THE UNITED STATES, 1825 TO 1845\*  
(1834-42 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1825.....	97	96	96	102	104	104	101	99	101	104	103	101
1826.....	99	100	96	95	94	94	95	93	92	94	96	96
1827.....	98	98	98	97	95	94	92	93	95	94	95	99
1828.....	94	92	90	90	89	90	88	88	90	94	93	97
1829.....	97	95	95	93	90	89	84	85	85	86	86	85
1830.....	85	85	85	82	84	83	83	84	87	89	89	90
1831.....	87	90	92	93	92	92	89	90	93	96	98	96
1832.....	101	96	96	92	92	92	92	92	94	97	98	98
1833.....	99	94	93	94	95	95	94	97	100	102	100	100
1834.....	95	92	88	84	85	86	86	88	89	90	91	92
1835.....	95	95	98	100	104	108	113	113	111	109	111	116
1836.....	119	117	122	128	123	116	113	118	122	127	132	130
1837.....	131	135	132	128	107	105	105	106	102	105	111	114
1838.....	113	108	105	103	103	104	104	104	109	115	115	117
1839.....	116	121	121	119	117	115	112	109	108	105	101	96
1840.....	91	91	89	85	84	83	81	83	87	90	91	88
1841.....	87	88	87	85	85	82	82	85	90	90	88	68
1842.....	87	82	80	75	75	74	73	71	71	71	70	72
1843.....	71	69	68	69	71	71	73	73	75	73	75	74
1844.....	75	76	76	76	75	74	74	75	76	76	77	77
1845.....	74	74	76	82	82	78	78	80	82	81	86	89

\* Cole, Arthur H. Wholesale prices in the United States, 1825-45. Rev. econ. statistics, vol. 8, p. 76. April, 1926.

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Cole<sup>30</sup> prepared a monthly index number of wholesale prices of 38 commodities (table 93). It was based on wholesale prices for the twenty-one years from 1825 to 1845 at New York City, Boston, and Philadelphia. It is a simple unweighted index.

Smith<sup>31</sup> prepared a monthly index number of wholesale prices at Boston from 1795 to 1824 (table 94). It is an unweighted geometric mean for 33 commodities.

TABLE 94. SMITH'S INDEX OF WHOLESALE PRICES OF 33 COMMODITIES IN BOSTON, 1795 TO 1824\*  
(July-December, 1802 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1795....	....	....	....	....	....	....	....	....	113	115	117	115	115
1796....	116	117	117	116	115	115	114	113	114	119	118	118	116
1797....	116	116	114	113	114	114	111	110	111	109	107	105	112
1798....	107	107	105	105	104	106	106	106	106	106	104	105	106
1799....	109	108	107	107	106	105	109	109	108	106	110	110	108
1800....	110	108	105	105	107	105	108	110	111	114	119	117	110
1801....	119	122	123	122	121	121	123	118	116	117	118	110	119
1802....	108	105	104	103	102	101	99	98	99	99	101	102	102
1803....	103	103	102	103	105	103	106	110	110	111	113	113	107
1804....	112	113	113	113	111	110	110	108	110	113	115	115	112
1805....	116	117	117	116	117	116	115	115	115	116	117	117	116
1806....	116	117	115	113	115	114	113	114	114	114	114	115	114
1807....	116	116	116	113	112	112	110	109	108	106	107	108	111
1808....	108	106	105	103	103	103	104	106	106	110	111	121	107
1809....	119	121	126	123	121	118	112	112	112	111	113	116	117
1810....	116	117	116	116	114	114	114	114	113	113	114	113	114
1811....	113	112	110	109	109	109	109	110	107	110	112	112	110
1812....	114	114	114	112	111	111	120	121	121	122	122	123	117
1813....	128	129	129	133	140	138	139	142	142	148	154	163	140
1814....	....	167	163	162	156	158	159	162	166	172	....	165	163
1815....	....	161	140	137	134	132	130	126	126	126	125	120	121
1816....	122	122	122	118	114	110	105	103	103	105	107	108	112
1817....	110	110	109	112	110	106	104	105	105	106	108	113	108
1818....	116	117	116	115	111	111	110	111	113	114	115	111	113
1819....	110	108	108	104	102	100	99	97	97	97	98	97	101
1820....	95	93	90	89	90	89	90	89	89	89	90	90	90
1821....	90	91	89	86	88	88	89	89	90	93	95	93	90
1822....	93	94	94	94	94	93	91	90	88	89	88	87	91
1823....	88	87	86	87	87	86	87	86	84	85	85	85	86
1824....	86	85	83	82	82	81	81	82	82	82	83	83	83

\* Smith, W. B. Wholesale commodity prices in the United States, 1795-1824. Rev. econ. statistics, vol. 9, p. 183. October, 1927.

In 1917 Roelse<sup>32</sup> published a yearly index number of wholesale prices from 1791 to 1801 (table 95). The number of commodities varied from 56 to 68.

<sup>30</sup> Cole, Arthur H. Wholesale prices in the United States, 1825-45. Rev. econ. statistics, vol. 8, p. 76. April, 1926.

<sup>31</sup> Smith, W. B. Wholesale commodity prices in the United States, 1795-1824. Rev. econ. statistics, vol. 9, p. 183. October, 1927.

<sup>32</sup> Roelse, Harold V. Wholesale prices in the United States, 1791-1801. Amer. Statist. Assn. Pubs., vol. 15 (1916-17), p. 846. 1918.

TABLE 95. ROELSE'S INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES, 1791 TO 1801\*

(1800 = 100)

Year	Index
1791.....	115.9
1792.....	122.4
1793.....	129.5
1794.....	.....
1795.....	171.2
1796.....	.....
1797.....	183.9
1798.....	181.4
1799.....	174.0
1800.....	.....
1801.....	184.7

\* Roelse, Harold V. Wholesale prices in the United States, 1791-1801. Amer. Statis. Assn. Pubs., vol. 15 (1916-17), p. 846. 1918.

Hansen<sup>33</sup> prepared an annual index number of wholesale prices from 1801 to 1840. The simple unweighted index number is based on 79 commodities at Boston from 1801 to 1825, and on 63 commodities at New York from 1825 to 1840. The numbers of commodities included, and the resulting weights, are given in table 103 (pages 189-190).

In 1911, Juergens<sup>34</sup> published a yearly simple and weighted index number of wholesale prices from 1825 to 1863 (table 108, pages 195-196). The index is based on wholesale prices of 74 commodities at New York City taken from the report of the Secretary of the Treasury for 1863. Farm and food products represent 76 per cent of the weighted index (table 103, pages 187-188).

Owing to the importance of monthly index numbers of prices, and the fact that no monthly index was available previous to 1890, the writers made a number of attempts to obtain quarterly or monthly index numbers from previously available data. All this work is now superseded by the index numbers based on prices tabulated from original sources. The various index numbers are presented because of their value in making comparisons between various methods of procedure.

The writers calculated an unweighted quarterly index number of prices of 20 commodities from 1843 to 1891. The commodities included were corn, cornstarch, winter wheat, crackers, butter, cheese, mess beef, hogs, lard, cotton, leather, lime, pine boards, rope, anthracite

<sup>33</sup> Hansen, Alvin H. Wholesale prices in the United States, 1801-1840. In Wholesale prices, 1890 to 1923. U. S. Labor Statistics Bur. Bul. 267, p. 236. January, 1923.

<sup>34</sup> Juergens, C. H. Movement of wholesale prices in New York City, 1825-1863. Amer. Statis. Assn. Pubs., vol. 12, p. 544. June, 1911.

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coal, lead, copper, sulfur, linseed oil, and wool.<sup>25</sup> This index number is given in table 96.

TABLE 96. PRICES OF 20 COMMODITIES, 1843 TO 1891  
(1856-60 = 100)

Year	Jan.	Apr.	July	Oct.	Ave.	Year	Jan.	Apr.	July	Oct.	Ave.
1843	76.0	74.4	76.8	69.4	74.2	1848	150.9	141.6	157.6	157.5	156.9
1844	74.6	76.9	78.4	71.8	75.4	1849	158.0	153.0	154.1	145.0	152.5
1845	73.0	75.2	78.8	78.7	76.4	1870	145.3	133.8	135.6	128.7	135.8
1846	82.7	79.0	81.3	79.4	80.6	1871	129.8	123.9	125.6	125.2	126.1
1847	84.5	93.3	94.3	89.2	90.3	1872	125.0	132.5	124.8	118.6	125.2
1848	84.4	82.4	83.7	82.2	83.2	1873	127.0	126.5	124.9	117.1	123.9
1849	78.6	81.3	84.4	85.4	82.4	1874	117.3	121.7	120.8	122.9	120.7
1850	84.9	85.3	88.9	84.1	86.3	1875	124.1	120.5	121.9	115.4	120.5
1851	88.7	87.3	85.1	85.1	86.6	1876	112.8	114.1	107.1	101.5	108.9
1852	85.7	86.7	90.0	93.7	89.0	1877	108.8	99.9	101.4	96.3	101.1
1853	100.0	93.4	95.4	99.0	97.0	1878	95.1	91.2	84.2	83.5	88.5
1854	103.6	107.0	109.9	102.7	105.8	1879	83.5	80.6	85.0	90.0	84.8
1855	106.4	106.4	109.0	107.1	105.8	1880	104.4	103.1	99.1	99.0	100.7
1856	109.6	107.6	106.1	111.5	108.7	1881	99.6	97.3	98.9	104.7	100.1
1857	112.1	116.3	117.2	104.8	112.6	1882	106.9	104.8	107.6	102.6	105.5
1858	90.5	95.1	95.5	95.0	94.0	1883	104.5	101.0	99.2	95.8	100.1
1859	99.2	100.0	100.7	96.6	99.1	1884	98.6	97.6	91.9	91.3	94.9
1860	99.7	96.3	98.6	97.8	98.1	1885	90.8	86.6	86.2	85.4	87.3
1861	97.4	92.2	87.0	93.0	92.6	1886	87.1	84.2	83.4	84.3	84.8
1862	112.3	102.1	105.8	118.8	109.7	1887	85.3	87.3	84.2	83.8	85.2
1863	142.0	156.6	149.5	158.4	151.6	1888	90.4	88.6	86.4	88.8	88.6
1864	177.7	182.8	246.9	224.8	207.8	1889	89.7	83.4	84.7	83.4	86.1
1865	248.6	182.4	162.9	189.3	195.8	1890	81.9	81.0	83.4	85.2	82.9
1866	186.4	172.8	182.9	173.3	178.9	1891	85.2	87.1	85.8	83.7	85.5
1867	165.7	155.4	157.4	152.0	157.6						

A weighted quarterly index for the period from 1840 to 1891, which is comparable with the present Bureau of Labor index number, was calculated by the writers, based on prices of 37 commodities (table 97). The commodities selected were those for which fairly complete quotations were available. The different groups were weighted approximately in accordance with the weightings used by the United States Bureau of Labor Statistics. Within the group, commodities were weighted approximately in accordance with the importance of the class of commodities which the single quotation represents. For example, iron butts and iron screws are given a weight representative of iron.

Owing to the small amount of cotton which entered into trade, the weight for cotton and cotton products was reduced from October, 1861, to July, 1874, inclusive. The weight for October, 1861, to July, 1862, inclusive was 55 per cent of the normal weight. Weights for successive years are given on page 129.

<sup>25</sup> The prices of wool were obtained from *Wool Growing and the Tariff*, by C. W. Wright, p. 347 (1910). All other prices were obtained from *Wholesale Prices, Wages, and Transportation* (Report by Mr. Aldrich from the Committee on Finance, 52d Congress, 2d Session, Report 1394, Part II, March 3, 1893).

TABLE 97. WEIGHTED QUARTERLY INDEX NUMBERS OF WHOLESALE PRICES OF 37 COMMODITIES, 1840 TO 1891\*

Year	(1857-61 = 100)				(1910-14 = 100)			
	Jan.	Apr.	July	Oct.	Jan.	Apr.	July	Oct.
1840	96	92	95	92	95	92	94	91
1841	90	88	92	92	89	88	91	92
1842	88	83	85	76	87	82	84	76
1843	79	78	83	80	79	78	83	79
1844	77	78	80	76	77	77	79	75
1845	77	81	82	82	76	78	82	82
1846	88	85	84	86	87	85	83	86
1847	90	97	99	97	90	96	98	97
1848	91	90	89	88	91	90	88	88
1849	88	87	82	88	88	86	82	88
1850	90	88	86	89	89	88	86	88
1851	90	89	82	86	89	88	81	85
1852	87	89	92	95	86	88	92	94
1853	102	97	99	106	101	96	98	105
1854	109	113	111	108	109	112	110	107
1855	106	110	113	113	106	109	112	112
1856	108	106	108	108	107	105	107	107
1857	113	115	118	108	112	115	115	107
1858	95	96	95	94	94	95	94	93
1859	97	99	101	95	97	98	100	95
1860	98	97	98	98	97	96	97	97
1861	97	93	91	94	97	93	91	93
1862	103	102	104	113	103	102	103	112
1863	127	140	136	135	126	139	135	134
1864	155	162	225	205	153	161	224	204
1865	218	187	168	198	217	185	167	196
1866	194	183	192	188	193	181	190	186
1867	174	167	165	158	173	166	164	157
1868	156	163	159	156	155	162	158	155
1869	158	159	155	147	157	158	154	146
1870	146	138	139	132	145	137	138	131
1871	130	127	127	127	129	126	126	126
1872	127	131	131	130	126	130	130	129
1873	132	134	132	128	131	133	131	127
1874	125	126	127	126	124	125	126	125
1875	124	120	122	117	124	119	122	116
1876	113	115	106	102	113	114	105	101
1877	107	101	101	96	106	100	100	96
1878	93	89	87	84	93	88	87	83
1879	82	82	86	90	82	81	86	89
1880	103	103	98	99	103	103	99	99
1881	100	98	101	105	99	97	101	105
1882	107	108	114	108	107	108	113	108

\* Prices of wool from 1840 to 1891 were taken from *Wool Growing and the Tariff*, by C. W. Wright, p. 347 (1910).

Prices of wheat, flour, and bituminous coal for the years not given in the Aldrich report were taken from the report of the Secretary of the Treasury, 35th Congress, 1st Session, Senate Executive Document, p. 312-356 (1863).

All other prices were taken from the Aldrich report. The list of commodities and weights used are given in table 98.

In the earlier years a few quotations were lacking and a corresponding proportional increase in weight was given to all other commodities.

From 1840 to 1845 there was a slight tendency for the high-priced articles to be omitted. Therefore the index numbers for a few of the earlier years appear to be lowered by about 3 per cent by this method.

The index numbers were calculated with the corresponding months for the five years 1857-61 taken as 100. They were then converted to the 1910-14 base. The Bureau of Labor Statistics for January, April, July, and October, 1890 and 1891, averaged 81.8. The quarterly index of 37 commodities for the same months averaged 82.36. The quarterly index numbers were multiplied by 0.993 to convert them to the 1910-14 base.

TABLE 97 (concluded)

Year	(1857-61 = 100)				(1910-14 = 100)			
	Jan.	Apr.	July	Oct.	Jan.	Apr.	July	Oct.
1883	106	104	102	97	105	103	101	96
1884	97	96	93	91	96	96	93	90
1885	87	85	84	81	87	84	83	80
1886	84	83	82	82	83	82	82	82
1887	84	86	85	84	83	85	85	83
1888	85	86	86	85	83	85	85	87
1889	87	82	83	81	87	81	82	80
1890	80	80	82	82	80	80	82	82
1891	82	84	85	83	82	83	84	82

TABLE 98. WEIGHTS USED IN THE QUARTERLY INDEX NUMBERS OF WHOLESALE PRICES OF 37 COMMODITIES, 1840 TO 1891

Product	Weight	Product	Weight
<b>Farm products:</b>		<b>Metals and metal products:</b>	
Hogs	6.0	Lead	0.6
Corn	2.0	Copper	2.0
Wool	2.0	Iron, butts	3.5
Wheat	5.0	screws	4.0
Cotton	5.0	<b>Total metals and metal products</b>	<b>10.0</b>
Cattle	5.0	<b>Building materials:</b>	
<b>Total farm products</b>	<b>25.0</b>	Cement	0.3
<b>Foods:</b>		Brick	1.2
Eggs	1.0	Hemlock	2.0
Cheese	1.0	Pine	5.5
Butter	3.0	Lime	1.0
Lard	1.5	<b>Total building materials</b>	<b>10.0</b>
Salt pork	6.0	<b>Drugs and chemicals:</b>	
Salt beef	6.0	Sulfur	0.7
Crackers	1.0	Linseed oil	1.3
Cornstarch	0.5	<b>Total drugs and chemicals</b>	<b>2.0</b>
Wheat flour	5.0	<b>House furnishings:</b>	
<b>Total foods</b>	<b>25.0</b>	Chairs	1.3
<b>Hides and leather:</b>		Pails	0.7
Leather	4.0	<b>Total house furnishings</b>	<b>2.0</b>
<b>Textiles:</b>		<b>Miscellaneous:</b>	
Sheeting	2.5	Rubber	0.4
Calico	2.5	Powder	1.6
Ingrain carpet	5.0	<b>Total miscellaneous</b>	<b>2.0</b>
<b>Total textiles</b>	<b>10.0</b>	<b>Total</b>	<b>100.0</b>
<b>Fuel and lighting:</b>			
Candles	1.5		
Coal, bituminous	5.0		
anthracite	3.5		
<b>Total fuel and lighting</b>	<b>10.0</b>		

A January index number comparable with the present Bureau of Labor index number was calculated from the price relatives for 147 commodities, as reported by the Aldrich report. These were weighted as shown in table 99.



TABLE 99. WEIGHTS USED IN THE JANUARY INDEX NUMBER OF WHOLESALE PRICES OF 147 COMMODITIES, 1840 TO 1891\*

Product	Weight expressed as per cent of commodities in group	Weight expressed as per cent of all commodities	Product	Weight expressed as per cent of commodities in group	Weight expressed as per cent of all commodities
<b>Farm products:</b>					
Barley.....	0.6	0.15	Hides and leather:		
Clover seed.....	0.1	0.02	Hides.....	30 0	1.20
Corn.....	6.0	1.50	Sole leather.....	30 0	1.20
Cotton.....	14.0	3.50	Harness leather.....	40 0	1.60
Flaxseed.....	1.0	0.25	<b>Total hides and leather.....</b>	<b>100 0</b>	<b>4.00</b>
Hemp.....	0.1	0.03			
Cattle.....	16.0	4.00	<b>Textiles:</b>		
Hogs.....	16.0	4.00	Horse blankets.....	2 0	0.20
Sheep.....	2.0	0.50	Cotton goods:		
Oats.....	2.0	0.50	Calico.....	10 0	1.00
Rye.....	0.6	0.15	Denims.....	10 0	1.00
Timothy seed.....	0.1	0.02	Drillings.....	10 0	1.00
Tobacco.....	4.0	1.00	Print cloths.....	15 0	1.50
Wheat.....	16.0	4.00	Shirtings.....	5 0	0.50
Eggs.....	4.0	1.00	Woolen goods:		
Beans.....	0.6	0.15	Broadcloths.....	17 0	1.70
Butter.....	6.5	1.63	Cassimeres.....	10 0	1.00
Potatoes.....	5.0	1.25	Checks.....	10 0	1.00
Rice.....	0.4	0.10	Shawls.....	10 0	1.00
Wool.....	5.0	1.25	Manila rope.....	1 0	0.10
<b>Total farm products.....</b>	<b>100.0</b>	<b>25.00</b>	<b>Total textiles.....</b>	<b>100 0</b>	<b>10.00</b>
<b>Foods:</b>					
Beans.....	1.0	0.25	<b>Fuel and lighting:</b>		
Breads, A shipbread.....	0.714	0.18	Coal, anthracite:		
B shipbread.....	0.714	0.18	Egg.....	12 0	1.20
Boston crackers.....	0.714	0.18	Grate.....	10 0	1.00
navy shipbread.....	0.714	0.18	Stove.....	12 0	1.20
oyster crackers.....	0.714	0.18	bituminous.....	50 0	5.00
soda crackers.....	0.714	0.18	Candles.....	15 0	1.50
ship biscuit.....	0.714	0.18	Matches.....	1 0	0.10
Butter.....	8.0	2.00	<b>Total fuel and lighting.....</b>	<b>100 0</b>	<b>10.00</b>
Cheese.....	2.0	0.50			
Coffee.....	3.0	0.75	<b>Metals and metal products:</b>		
Eggs.....	3.0	0.75	Anvils.....	2 0	0.20
Cod.....	0.5	0.13	Bar iron.....	10 0	1.00
Mackerel, No. 2.....	0.5	0.12	Butts.....	2 0	0.20
Flour, wheat.....	14.0	3.50	Iron rails.....	7 0	0.70
rye.....	0.5	0.12	Iron rods.....	10 0	1.00
Fruit, apples.....	3.0	0.75	Nails.....	10 0	1.00
currants.....	0.1	0.03	Pig iron.....	10 0	1.00
raisins.....	0.4	0.10	Pocketknives (2).....	4 0	0.40
Cornmeal.....	2.0	0.50	Scythes.....	5 0	0.50
Lard.....	4.0	1.00	Shovels.....	5 0	0.50
Bacon.....	3.0	0.75	Wood screws.....	5 0	0.50
Ham.....	4.0	1.00	Copper, ingot.....	15 0	1.50
Salt pork.....	8.0	2.00	sheet.....	5 0	0.50
Tallow.....	1.0	0.25	Lead, drop shot.....	1 0	0.10
Salt beef.....	7.0	1.75	pig.....	2 0	0.20
Beef ribs.....	3.5	0.88	pipe.....	1 0	0.10
Beef loins.....	3.5	0.87	Quicksilver.....	1 0	0.10
Mutton.....	1.0	0.25	Zinc.....	5 0	0.50
Lamb.....	1.0	0.25	<b>Total metals and metal products.....</b>	<b>100 0</b>	<b>10.00</b>
Milk.....	3.4	0.85			
Molasses.....	1.0	0.25			
Rice.....	0.5	0.12			
Salt.....	1.0	0.25			
Pepper.....	0.1	0.02			
Cornstarch.....	1.0	0.25			
Sugar.....	8.0	2.00			
Potatoes.....	6.0	1.50			
<b>Total foods.....</b>	<b>100.0</b>	<b>25.00</b>			

\* Wholesale prices, wages, and transportation. Report by Mr. Aldrich from the Committee on Finance, 52d Congress, 2d Session. Report 1394, Part I. March 3, 1893.

TABLE 99 (concluded)

Product	Weight expressed as per cent of commodities in group	Weight expressed as per cent of all commodities	Product	Weight expressed as per cent of commodities in group	Weight expressed as per cent of all commodities
<b>Building materials:</b>			Calomel . . . . .	1.0	0.02
Lumber:			Copperas . . . . .	1.0	0.02
Doors . . . . .	5.0	0.50	Flaxseed . . . . .	10.0	0.20
Hemlock boards . . . . .	15.0	1.50	Glycerine . . . . .	3.0	0.06
Pine boards, 1 inch . . . . .	10.0	1.00	Muriatic acid . . . . .	1.0	0.02
Pine boards, 1 inch, extra . . . . .	10.0	1.00	Opium . . . . .	1.0	0.02
Pine boards, 1 inch, common . . . . .	10.0	1.00	Quinine . . . . .	1.0	0.02
Pine flooring . . . . .	10.0	1.00	Soda ash . . . . .	8.0	0.16
Shingles . . . . .	5.0	0.50	Sulfuric acid . . . . .	10.0	0.20
Shingles, extra . . . . .	5.0	0.50	<b>Total drugs and chemicals</b>	<b>100.0</b>	<b>2.00</b>
Spruce . . . . .	5.0	0.50	<b>House furnishings:</b>		
Brick . . . . .	10.0	1.00	Kitchen tables . . . . .	20.0	0.40
Carbonate of lead . . . . .	2.0	0.20	Kitchen chairs . . . . .	20.0	0.40
Cement . . . . .	2.0	0.20	Pails, 2 hoops . . . . .	10.0	0.20
Lime . . . . .	5.0	0.50	Wooden tubs . . . . .	10.0	0.20
Window glass . . . . .	3.0	0.30	Carpets, ingrain . . . . .	15.0	0.30
Tar . . . . .	0.5	0.05	Ticking . . . . .	5.0	0.10
Turpentine . . . . .	1.0	0.10	Sheeting . . . . .	20.0	0.40
Zinc oxide . . . . .	1.0	0.10	<b>Total house furnishings</b>	<b>100.0</b>	<b>2.00</b>
Putty . . . . .	0.5	0.05	<b>Miscellaneous:</b>		
<b>Total building materials</b>	<b>100.0</b>	<b>10.00</b>	Rifle powder . . . . .	40.0	0.80
<b>Drugs and chemicals:</b>			Rubber, para . . . . .	10.0	0.20
Alcohol . . . . .	56.0	1.12	Soap, castile . . . . .	40.0	0.80
Alum . . . . .	1.0	0.02	Starch, pearl . . . . .	10.0	0.20
Bichromate of potash . . . . .	1.0	0.02	<b>Total miscellaneous</b>	<b>100.0</b>	<b>2.00</b>
Blue vitriol . . . . .	1.0	0.02			
Sulfur, crude . . . . .	5.0	0.10			

Quotations for anthracite and bituminous coal, candles, wheat flour, and cod, for some of the earlier years, were not available in the Aldrich report, and were taken from the report of the Secretary of the Treasury for 1863.<sup>36</sup>

In the earlier years, where any commodity was omitted, corresponding proportional increases in weights were given to the other commodities. The commodities included in 1840 represented 76 per cent of the total weights for the years when all prices were reported.

In order to test the effect of this method of calculation, an index number for 1861 was calculated omitting all the commodities that were omitted in 1840. This changed the index number by less than 1 per cent.

From 1862 to 1874 inclusive, the weights given to cotton and cotton products were reduced. The reductions for January, 1862 to 1866,

<sup>36</sup> Report of the Secretary of the Treasury on the state of finances for the year ending June 30, 1863. 38th Congress, 1st Session, Senate Executive Document, p. 314-361. 1863.

were based on consumption for the previous year.<sup>27</sup> After the Civil War closed, the whole crop was assumed to be available and the weights were adjusted in accordance with the production the previous year.<sup>28</sup> For January, 1862, cotton was given a weight of 55 per cent of normal for 1863, 35; for 1864, 30; for 1865, 20; for 1866, 35; for 1867, 40 for 1868, 50; for 1869, 55; for 1870, 65; for 1871, 70; for 1872, 80 for 1873, 85; for 1874, 90.

Before computing the index, price relatives for each commodity were changed from the 1860 base to the 1876-91 base, in order to prevent a high or a low price in 1860 from changing the weight from that intended.

The Bureau of Labor Statistics index number on the 1910-14 base averaged 81.0 for January, 1890 and 1891. The January index numbers on the 1876-91 base averaged 90.9 for the corresponding Januaries. To convert to the 1910-14 base, all index numbers were therefore multiplied by 0.89.

TABLE 100. INDEX NUMBERS OF WHOLESALE PRICES OF 147 COMMODITIES, FOR JANUARY, 1840 TO 1930  
(January 1910-14 = 100)

Year	Farm products	Foods	Textiles	Fuel and lighting	Metals and metal products	Building materials	Drugs and chemicals	House furnishings	Miscellaneous	All-commodity index
1840....	72	107	167	193	174	83	94	136	.....	100
1841....	72	92	164	186	161	84	95	130	.....	94
1842....	71	86	145	202	146	82	90	130	.....	91
1843....	61	75	151	145	145	80	85	109	.....	81
1844....	63	78	150	166	148	79	79	112	.....	84
1845....	72	73	142	179	152	81	81	116	.....	86
1846....	79	93	135	145	151	82	80	117	96	88
1847....	88	94	137	148	151	80	79	117	106	91
1848....	79	86	121	158	142	80	79	114	116	86
1849....	78	91	113	153	131	79	74	108	101	85
1850....	90	86	124	165	121	80	83	113	99	87
1851....	86	89	126	143	120	80	81	118	96	85
1852....	92	96	121	131	120	81	77	104	91	86
1853....	100	107	129	139	159	83	77	111	99	96
1854....	101	114	122	140	168	86	80	117	108	100
1855....	113	117	122	154	148	84	109	111	105	102
1856....	112	117	124	165	148	85	114	110	117	104
1857....	113	122	128	160	148	88	103	113	101	106
1858....	94	96	127	153	128	84	98	109	108	93
1859....	100	105	126	132	132	82	84	105	101	93
1860....	99	98	126	135	127	82	85	105	92	92
1861....	97	90	119	144	122	91	84	104	98	90
1862....	126	98	148	131	152	105	96	123	126	104
1863....	145	116	207	174	198	137	110	150	138	129
1864....	216	144	303	233	275	159	145	178	164	175
1865....	187	211	254	310	274	153	258	228	220	189
1866....	164	176	245	287	244	161	243	221	185	170
1867....	166	160	191	226	213	155	203	192	161	152
1868....	171	162	170	227	190	156	185	162	148	150
1869....	157	157	168	211	187	144	138	163	147	142

<sup>27</sup> Watkins, J. L. Production and price of cotton for one hundred years. U. S. Agr. Dept., Statistics Div. Bul. 9, p. 11. 1895. The index number is given in table 101.

TABLE 100 (concluded)

Year	Farm products	Foods	Textiles	Fuel and lighting	Metals and metal products	Building materials	Drugs and chemicals	House furnishings	Miscellaneous	All-commodity index
1870.....	133	147	161	201	170	139	129	168	131	130
1871.....	128	134	161	185	168	148	117	152	117	125
1872.....	128	121	167	161	198	153	111	155	118	125
1873.....	126	120	162	164	201	156	118	154	114	123
1874.....	131	120	145	181	166	143	123	142	109	120
1875.....	124	123	139	178	152	131	116	129	100	115
1876.....	108	122	118	159	132	126	111	120	94	105
1877.....	105	118	117	131	116	115	114	110	99	99
1878.....	96	104	107	108	107	107	105	106	91	89
1879.....	90	88	112	114	111	109	98	95	89	85
1880.....	106	101	119	118	131	116	105	117	98	96
1881.....	119	105	115	129	124	123	101	108	107	100
1882.....	126	111	114	129	128	130	105	111	105	104
1883.....	105	110	111	131	113	124	101	108	108	97
1884.....	102	101	106	118	98	120	98	103	90	91
1885.....	89	88	99	99	85	119	96	97	83	82
1886.....	90	85	100	99	90	124	92	96	83	82
1887.....	93	87	99	94	90	123	91	95	79	82
1888.....	97	89	105	100	97	118	90	96	78	85
1889.....	92	93	104	98	97	121	94	96	76	84
1890.....	63	85	102	75	127	83	92	91	65	69
1891.....	74	90	98	68	112	84	86	93	87	82
1892.....	70	82	96	65	98	75	93	90	76	77
1893.....	81	91	99	65	94	76	98	88	80	83
1894.....	66	77	85	65	78	74	84	85	81	72
1895.....	60	75	76	64	73	72	80	79	82	69
1896.....	59	72	80	76	80	70	81	81	82	70
1897.....	58	71	73	66	78	69	91	78	84	68
1898.....	64	76	80	58	74	72	90	80	82	70
1899.....	63	74	77	68	81	73	99	80	67	71
1900.....	69	78	98	93	123	86	102	91	97	83
1901.....	74	79	87	81	103	80	102	91	86	81
1902.....	82	83	86	80	99	80	111	90	86	83
1903.....	78	85	91	141	104	84	103	92	90	91
1904.....	82	82	95	109	92	84	105	94	91	87
1905.....	79	92	92	94	101	82	103	92	104	69
1906.....	80	82	103	96	114	94	95	93	110	69
1907.....	83	86	109	97	135	102	96	96	105	98
1908.....	84	91	104	101	102	97	97	101	86	91
1909.....	91	93	97	98	101	96	99	94	103	94
1910.....	107	103	105	91	104	99	101	99	131	104
1911.....	97	96	101	87	95	101	102	100	108	97
1912.....	96	104	93	86	95	99	100	95	93	96
1913.....	97	98	102	121	112	104	99	103	91	103
1914.....	102	99	99	113	95	97	98	104	82	100
1915.....	100	102	89	96	90	92	108	101	86	99
1916.....	108	104	110	124	118	112	205	107	88	112
1917.....	145	133	148	199	155	139	187	125	109	149
1918.....	205	177	215	190	152	167	231	154	115	153
1919.....	216	197	224	200	156	184	204	182	133	196
1920.....	238	223	330	217	162	281	201	246	140	230
1921.....	142	160	179	243	151	204	161	227	129	167
1922.....	123	128	172	174	119	166	125	192	86	134
1923.....	139	142	194	200	121	194	125	201	93	149
1924.....	142	141	198	173	124	191	124	196	99	145
1925.....	159	153	192	169	123	188	127	192	89	150
1926.....	150	158	188	182	115	186	125	186	108	151
1927.....	135	149	166	180	114	177	121	180	84	141
1928.....	146	152	170	150	113	165	118	181	81	141
1929.....	148	152	170	152	119	175	118	178	74	142
1930.....	141	149	158	147	117	175	115	179	73	136

TABLE 101. INDEX NUMBERS OF WHOLESALE PRICES OF 147 COMMODITIES FOR JANUARY, 1840 TO 1891

Year	Index with cotton omitted (1876-91 = 100)	Index with cotton at full weight (1876-91 = 100)	Index with cotton at reduced weight (1876-91 = 100)	Index with cotton at reduced weight (1860 = 100)	Index with cotton at reduced weight (1856-60 = 100)	Index with cotton at reduced weight (1910-14 = 100)
1840		112		109	102	100
1841		106		102	96	94
1842		102		99	93	91
1843		91		88	83	81
1844		94		91	86	84
1845		97		93	88	86
1846		99		96	90	88
1847		102		99	93	91
1848		97		93	88	86
1849		95		92	87	85
1850		98		95	89	87
1851		96		92	87	85
1852		97		93	88	86
1853		108		104	98	96
1854		112		109	102	100
1855		116		112	106	103
1856		117		113	107	104
1857		119		115	109	106
1858		104		101	95	93
1859		105		101	95	93
1860		103		100	94	92
1861		101		98	92	90
1862	105	124	117	113	107	104
1863	131	185	145	140	132	129
1864	175	231	197	190	179	175
1865	203	235	212	205	194	189
1866	181	202	191	185	174	170
1867	166	175	171	165	156	152
1868	163	171	168	163	154	150
1869	153	162	159	154	145	142
1870	143	147	146	141	133	130
1871	135	141	140	136	128	125
1872	136	141	140	136	128	125
1873	134	139	138	134	126	123
1874	132	135	135	130	123	120
1875	129	115	129	125	118	115
1876		118		114	108	105
1877		111		108	101	99
1878		100		97	91	89
1879		96		92	87	85
1880		108		104	98	96
1881		112		109	102	100
1882		117		113	107	104
1883		109		105	99	97
1884		102		99	93	91
1885		92		89	84	82
1886		92		89	84	82
1887		92		89	84	82
1888		95		92	87	85
1889		94		91	86	84
1890		90		87	82	80
1891		91		88	83	81

In the Hansen index all commodities were given an equal weight. Therefore raisins, nutmeg, pepper, pimento, lemons, ginger, currants, cinnamon, cloves, and figs, had a total weight of 13.5 per cent, which is ten times the weight given to cotton in the Boston quotation. It is, of course, impossible to give an absolutely accurate weighting for any period, but even a rough approximation to the correct weighting is better than a simple average. It should be remembered that there is no such thing as an unweighted index. A simple average is a weighted index; that is, every commodity is given an equal weight.

The writers assigned weights to the price relatives published by Hansen. The resulting yearly average index numbers are shown in table 102. The weights for the different groups are such as to approximately correspond with the weightings for the 147-commodity index (table 99, page 178). Thus the series is approximately consistent for 135 years. Generally, the difference between a perfectly weighted index and an index made with any reasonable weighting is not great, but the contrast with an unweighted index is often important.

TABLE 102. HANSEN'S INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES, AND A WEIGHTED INDEX CALCULATED FROM HANSEN'S DATA, 1801 TO 1840\*

(1825 = 100)

Year	Arith- metic mean	Geo- metric mean	Median	Weight- ed by groupe	Year	Arith- metic mean	Geo- metric mean	Median	Weight- ed by groupe
1801.....	156	144	146	149	1821.....	102	100	100	98
1802.....	128	121	120	119	1822.....	105	104	103	105
1803.....	131	124	128	124	1823.....	100	99	100	98
1804.....	141	133	139	135	1824.....	99	97	96	95
1805.....	145	138	136	148	1825.....	100	100	100	100
1806.....	142	135	136	140	1826.....	99	98	98	98
1807.....	134	128	127	134	1827.....	100	98	99	98
1808.....	131	123	123	122	1828.....	95	93	97	97
1809.....	137	130	132	127	1829.....	94	91	93	97
1810.....	150	138	136	138	1830.....	91	89	93	92
1811.....	146	134	135	135	1831.....	98	94	97	95
1812.....	148	134	130	133	1832.....	99	96	99	99
1813.....	172	161	150	169	1833.....	93	94	99	96
1814.....	215	196	187	202	1834.....	91	88	94	91
1815.....	169	158	161	154	1835.....	104	100	101	104
1816.....	144	135	132	148	1836.....	116	110	115	123
1817.....	145	136	138	137	1837.....	115	106	110	124
1818.....	142	134	137	146	1838.....	111	103	105	119
1819.....	125	122	123	126	1839.....	116	109	116	117
1820.....	107	104	108	107	1840.....	99	92	94	94

\*Hansen, Alvin H. Wholesale prices in the United States, 1801-1840. In Wholesale prices, 1890 to 1923. U. S. Labor Statistics Bur. Bul. 367, p. 236. January, 1925. The weighted index was calculated by the writers.

Using the weights given on page 177 and the McNeil index numbers for the different groups, the writers calculated a weighted index number. This does not weight the commodities within the groups, but

it prevents minor groups from having an undue weight in the index. This weighted index is shown in table 108 (page 193). It agrees fairly closely with the Aldrich weighted index.

On page 91 of the Aldrich report, index numbers are given for groups of commodities. The writers also prepared a weighted index number from these groups, using the above weights but assigning the farm-products and food weights all to food. This index also is given in table 108.

By using the 147-commodity index for January and the 37-commodity quarterly index, and interpolating by various other index numbers, a monthly index of all commodities was prepared. The monthly index numbers are not published, but the yearly averages are given in table 108.

#### COMPARATIVE WEIGHTINGS OF VARIOUS INDEX NUMBERS

The United States Bureau of Labor Statistics now calculates its index numbers on an aggregative basis: that is, the quantity of the material entering into commerce is multiplied by the price. The effect of any one commodity on the index is therefore dependent on the quantity used and on the price. The resulting influence which the product has is shown in table 103. The quantities have been changed from time to time.

The quantities used have generally resulted in giving farm products a weight of a little above 25 (table 103). The quantities of foods have generally resulted in a weight of nearly 25. Hides and leather have usually been between 2 and 3, and textiles about 10. The weights for the other groups have been rather variable. Fuel and lighting in the earlier years was about 10, but in recent years it has increased. Metals and metal products have varied from 6 to 13, and lumber from 5 to 13.

In view of the fact that the aggregatives by the Bureau of Labor Statistics are believed to be reasonably near accuracy, and because the writers desired to make monthly index numbers to connect with the Bureau of Labor Statistics indices, the following weights were chosen for 1889 for the index with variable group weights, and for the entire period before 1890 for the index with constant group weights (tables 1 and 28, pages 6 and 69).

Farm products .....	25	Building materials .....	10
Foods .....	25	Drugs and chemicals.....	1
Hides and leather.....	4	House-furnishing goods ...	1
Textiles .....	10	Spirits .....	3
Fuel and lighting.....	10	Miscellaneous .....	1
Metals and metal products.	10		
		Total .....	100

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Few of the other index numbers have attempted to weight the products in proportion to the total transactions in the country.

The Aldrich index numbers attempted to get the cost of living, and therefore left out farm products except as they occurred in textiles or food. One of them gave each product an equal weight, which resulted in a total weight of 25 for food and farm products but gave pocketknives a weight of 11. This has been the most widely used index number for the period 1840 to 1890. The Aldrich weighted index gave food a weight of 60.

The other weights in table 103 show almost every conceivable combination. Farm products vary from 6 to 56; foods, from 7 to 49; metals and metal products, from 3 to 21; and lumber, from 2.7 to 16.

TABLE 103. RELATIVE WEIGHTINGS OF VARIOUS INDEX NUMBERS

	Aldrich		United States Bureau of Labor Statistics									
	Un-weighted <sup>a</sup>	Weighted <sup>a</sup>	Unweighted <sup>b</sup>		Weighted <sup>b</sup>							
			1902	1912	1908	1909	1915	1916	1919	1920	1922	1923
<b>Farm products:</b>												
Corn	0	0	0.38	0.39	2.06	2.11	2.04	1.88	2.06	1.62	0.82	1.04
Cotton	0.45	0.05	0.38	0.39	4.43	4.50	3.24	3.84	4.33	4.52	3.80	5.13
Cattle	0	0	0.76	0.78	5.71	5.77	6.77	6.12	6.33	4.66	4.37	4.36
Hogs	0	0	0.76	0.78	3.85	3.89	3.55	3.61	3.98	2.80	4.07	3.18
Wheat	0	0	0.38	0.78	5.57	5.64	5.39	4.63	4.79	4.33	3.26	2.80
Eggs	0	0	0	0	0	0	0	0	0	0	1.06	1.07
Milk	0	0	0	0	0	0	0	0	0	0	1.74	2.25
Wool	0.90	0.09	0.76	0.78	0.85	0.85	0.71	0.69	0.88	0.70	1.38	1.41
Other	0	0	3.28	4.79	4.88	4.94	4.69	4.15	4.22	3.91	5.03	5.12
<b>Total</b>	<b>1.35</b>	<b>0.14</b>	<b>6.70</b>	<b>8.69</b>	<b>27.40</b>	<b>27.70</b>	<b>26.19</b>	<b>24.92</b>	<b>27.21</b>	<b>22.54</b>	<b>25.35</b>	<b>26.45</b>
<b>Food products:</b>												
Beef and beef products	1.79	9.34	1.52	1.95	3.06	3.08	3.71	3.26	3.07	2.61	2.75	2.76
Pork and lard	2.24	5.12	1.90	1.95	2.97	3.00	2.50	2.76	3.10	2.09	3.57	3.02
Eggs	0.45	1.89	0.38	0.39	1.98	2.00	1.38	1.28	1.63	1.25	0	0
Milk	0.45	3.42	0.38	0.39	1.78	1.80	1.73	1.49	1.65	1.49	0.67	0.75
Butter	0.45	6.62	1.14	1.17	2.00	2.02	1.76	1.70	1.71	1.51	1.42	1.62
Coffee	0.45	3.18	0.38	0.39	0.53	0.56	0.47	0.48	0.53	0.31	0.41	0.45
Sugar	1.79	3.80	1.14	0.78	4.10	4.15	4.29	4.26	3.22	4.92	2.58	2.62
Flour and meal	1.35	6.11	2.28	2.34	4.81	4.87	4.63	4.17	4.09	3.67	2.16	2.78
Bread and crackers	3.59	2.61	1.90	1.56	0	0	0	0	0	0	2.19	2.09
Fruit	1.35	1.99	1.90	1.56	0.18	0.18	1.25	1.11	1.25	1.23	1.99	1.48
Potatoes	0.90	2.72	0.38	0.39	1.85	1.87	1.10	2.20	2.61	2.60	0.43	0.36
Other	8.95	13.10	7.40	8.69	3.96	3.18	3.22	3.63	2.89	3.52	3.56	3.06
<b>Total</b>	<b>23.76</b>	<b>59.90</b>	<b>26.76</b>	<b>21.56</b>	<b>26.34</b>	<b>26.71</b>	<b>26.04</b>	<b>25.84</b>	<b>24.75</b>	<b>24.40</b>	<b>22.62</b>	<b>22.61</b>
<b>Hides and leather:</b>												
<b>Total</b>	<b>1.34</b>		<b>1.90</b>	<b>1.95</b>	<b>2.09</b>	<b>2.10</b>	<b>2.62</b>	<b>2.63</b>	<b>3.86</b>	<b>3.07</b>	<b>2.37</b>	<b>2.2</b>

<sup>a</sup> Wholesale prices, wages, and transportation. Report by Mr. Aldrich from the Committee on Finance, 52d Congress, 2d Session. Report 1394, Part I, p. 53-55, 65, 84-87, 93, 194. March 3, 1893.

<sup>b</sup> Course of wholesale prices 1890 to 1902. U. S. Labor Statistics Bur. Bul. 45, p. 297-326, March, 1903; Bul. 114, p. 93-145, April, 1913; Bul. 200, p. 277-285, July, 1916; Bul. 226, p. 268-275, December, 1917; Bul. 269, p. 182-191, July, 1920; Bul. 296, p. 225-233, June, 1922; Bul. 335, p. 203-211, June, 1923; Bul. 367, p. 207-215, January, 1925; Bul. 390, p. 223-231, July, 1925; Bul. 415, p. 225-233, October, 1926; Bul. 493, p. 225-236, August, 1929; Bul. 572, 1932.



TABLE 103 (continued)

	Aldrich		United States Bureau of Labor Statistics											
	Un-weighted <sup>a</sup>	Weighted <sup>a</sup>	Unweighted <sup>b</sup>		Weighted <sup>b</sup>									
			1902	1912	1909	1909	1915	1916	1919	1920	1922	1923		
<b>Textiles:</b>														
Woolen goods.....	4.93		8.36	7.80	4.05	4.00	3.89	3.74	3.20	3.54	3.18	3.44		
Cotton goods.....	4.93		13.20	10.55	3.43	3.48	3.63	3.69	5.03	5.45	3.05	3.24		
Other.....	1.35		4.94	4.27	1.84	1.85	3.56	2.30	4.10	3.43	4.25	4.22		
<b>Total.....</b>	<b>11.21</b>	<b>22.40</b>	<b>26.60</b>	<b>22.62</b>	<b>9.32</b>	<b>9.42</b>	<b>9.66</b>	<b>9.73</b>	<b>11.33</b>	<b>12.42</b>	<b>9.48</b>	<b>10.00</b>		
<b>Fuel and lighting:</b>														
Coal and coke.....	3.59		3.04	3.12	6.93	6.14	6.27	6.49	6.18	7.59	11.04	9.03		
Other.....	0.90		2.14	2.06	3.39	3.42	3.31	3.85	3.52	2.95	6.33	5.25		
<b>Total.....</b>	<b>4.49</b>	<b>8.65</b>	<b>5.18</b>	<b>5.18</b>	<b>10.32</b>	<b>9.56</b>	<b>9.58</b>	<b>10.34</b>	<b>9.70</b>	<b>10.54</b>	<b>17.37</b>	<b>14.28</b>		
<b>Metals and metal products:</b>														
Pocketknives.....	11.21				0	0		0		0	0	0		
Iron and iron products.....	8.97		2.28	2.34	1.03	1.03	2.18	2.45	2.08	2.28	2.08	2.12		
Copper and copper products.....	0.90		1.14	1.17	1.44	1.46	1.70	2.23	0.89	0.74	1.01	1.06		
Lead and lead products.....	1.79		0.76	0.78	0.24	0.26	0.24	0.29	0.14	0.19	0.20	0.25		
Other.....			10.50	10.64	2.96	2.98	3.83	4.95	3.14	3.11	4.37	5.27		
<b>Total.....</b>	<b>22.87</b>	<b>2.41</b>	<b>14.68</b>	<b>14.93</b>	<b>5.67</b>	<b>5.73</b>	<b>7.95</b>	<b>9.92</b>	<b>6.20</b>	<b>6.31</b>	<b>7.61</b>	<b>8.70</b>		
<b>Building materials:</b>														
Lumber.....	6.73		4.56	4.68	9.21	9.42	8.24	7.16	7.40	11.23	3.50	3.80		
Brick.....	0.45		0.38	0.39	0.43	0.43	0.34	0.32	0.36	0.41	0.20	0.21		
Lime and cement.....	0.90		1.14	1.17	0.80	0.80	0.75	0.71	0.77	0.55	0.59	0.59		
Other.....	7.62		4.42	4.70	0.93	0.93	0.96	0.95	1.20	1.16	0.99	1.01		
<b>Total.....</b>	<b>15.70</b>	<b>1.56</b>	<b>10.50</b>	<b>11.03</b>	<b>11.47</b>	<b>11.58</b>	<b>10.29</b>	<b>9.14</b>	<b>9.73</b>	<b>13.35</b>	<b>5.28</b>	<b>5.61</b>		
<b>Drugs and chemicals:</b>														
<b>Total.....</b>	<b>8.07</b>	<b>0.80</b>	<b>3.42</b>	<b>3.51</b>	<b>1.24</b>	<b>1.26</b>	<b>1.28</b>	<b>1.32</b>	<b>1.13</b>	<b>1.19</b>	<b>1.67</b>	<b>1.74</b>		
<b>House furnishings:</b>														
<b>Total.....</b>	<b>6.73</b>	<b>3.69</b>	<b>5.32</b>	<b>5.46</b>	<b>0.42</b>	<b>0.15</b>	<b>0.13</b>	<b>0.12</b>	<b>0.51</b>	<b>0.74</b>	<b>3.35</b>	<b>3.37</b>		
<b>Miscellaneous:</b>														
<b>Total.....</b>	<b>4.48</b>	<b>0.45</b>	<b>4.94</b>	<b>5.07</b>	<b>5.72</b>	<b>5.80</b>	<b>6.12</b>	<b>6.06</b>	<b>6.87</b>	<b>5.44</b>	<b>4.90</b>	<b>5.01</b>		
<b>Total.....</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>99.99</b>	<b>100.01</b>	<b>99.98</b>	<b>100.02</b>	<b>100.29</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>		

<sup>a</sup> Wholesale prices, wages, and transportation. Report by Mr. Aldrich from the Committee on Finance, 52d Congress, 2d Session. Report 1394, Part 1, p. 53-55, 65, 84-87, 93, 194. March 3, 1893.

<sup>b</sup> Course of wholesale prices 1890 to 1902. U. S. Labor Statistics Bur. Bul. 45, p. 297-326, March, 1903; Bul. 114, p. 93-145, April, 1913; Bul. 200, p. 277-285, July, 1916; Bul. 226, p. 268-275, December, 1917; Bul. 269, p. 182-191, July, 1920; Bul. 296, p. 225-233, June, 1922; Bul. 335, p. 203-211, June, 1923; Bul. 367, p. 207-215, January, 1925; Bul. 390, p. 223-231, July, 1925; Bul. 415, p. 225-232, October, 1926; Bul. 493, p. 225-236, August, 1929; Bul. 572, 1932.

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TABLE 103 (continued)

	United States Bureau of Labor Statistics				Juergens, 74 commodities		McNeil, un-weighted <sup>d</sup>		Snider		Snyder, 14 commodities <sup>e</sup>
	Weighted <sup>b</sup>				Un-weighted	Weighted <sup>c</sup>	1860	1891	Weekly <sup>g</sup>	Quarterly <sup>f</sup>	
	1924	1925	1926	.....							
<b>Farm products:</b>											
Corn	1.27	1.28	0.90	0.73	1.35	2.0			1.7	6.50	
Cotton	5.18	4.02	2.55	2.06	1.35	5.1			8.5	11.98	7.14
Cattle	4.43	4.63	2.78	2.25					5.5	3.00	7.14
Hogs	3.58	4.91	3.60	2.92					7.3	6.42	7.14
Wheat	3.30	4.17	2.17	1.74	1.35	5.1			3.0	16.89	7.14
Eggs	1.17	1.20	0.99	0.79							
Milk	2.18	2.17	2.87	2.32							
Wool	1.44	0.98	0.50	0.41	4.05	4.5			2.8	5.31	7.14
Other	4.75	4.50	3.94	3.20	8.20	10.7			0.5	5.99	7.14
<b>Total</b>	<b>27.28</b>	<b>27.86</b>	<b>20.30</b>	<b>16.42</b>	<b>16.30</b>	<b>27.4</b>	<b>8.7</b>	<b>6.4</b>	<b>29.3</b>	<b>56.00</b>	<b>42.84</b>
<b>Food products:</b>											
<b>Beef and beef products:</b>											
Pork and lard	2.83	2.94	3.06	2.29	4.05	9.5			5.0		
Eggs	3.30	4.30	6.12	4.94	5.40	7.0			3.6	0.04	
Milk	0	0	0	0					0.9		
Butter	0.71	0.68	0.41	0.36					4.2	4.09	
Coffee	1.51	1.53	1.84	1.49	1.35	2.0			1.6	2.39	
Sugar	0.69	0.77	0.66	0.53	2.70	4.0			4.8	4.88	7.14
Flour and meal	3.25	2.25	2.44	1.97	4.05	4.5			1.6	2.39	
Bread and crackers	3.21	3.79	2.31	1.80	4.05	10.1			4.0	1.59	
Fruit	2.16	2.10	2.25	1.85	0				1.4		
Potatoes	1.47	1.66	0.69	0.56	1.35	0.5				3.74	
Other	0.40	0.52	0.95	0.78						1.99	
<b>Total</b>	<b>3.89</b>	<b>3.79</b>	<b>2.95</b>	<b>3.65</b>	<b>18.90</b>	<b>11.3</b>			<b>0.9</b>		
<b>Total</b>	<b>23.41</b>	<b>24.33</b>	<b>23.48</b>	<b>20.21</b>	<b>41.85</b>	<b>48.9</b>	<b>26.2</b>	<b>21.1</b>	<b>26.4</b>	<b>18.72</b>	<b>7.14</b>
<b>Hides and leather:</b>											
<b>Total</b>	<b>2.32</b>	<b>2.16</b>	<b>1.61</b>	<b>3.01</b>	<b>4.05</b>	<b>3.0</b>			<b>0.8</b>	<b>1.95</b>	<b>7.14</b>
<b>Textiles:</b>											
Woolen goods	2.44	2.34	2.50	1.92							
Cotton goods	3.36	2.92	3.44	2.65	2.70	1.0			3.1	3.31	
Other	4.00	3.85	4.72	5.33	2.70	1.0			4.8	0.58	
<b>Total</b>	<b>9.80</b>	<b>9.11</b>	<b>10.66</b>	<b>9.90</b>	<b>5.40</b>	<b>2.0</b>	<b>14.2</b>	<b>27.9</b>	<b>7.9</b>	<b>3.89</b>	
<b>Fuel and lighting:</b>											
Coal and coke	8.21	8.20	7.80	6.32	2.70	3.0			9.1	10.75	7.14
Other	5.37	5.35	8.38	8.41	6.75	4.0			7.9	0.86	7.14
<b>Total</b>	<b>13.58</b>	<b>13.55</b>	<b>16.18</b>	<b>14.73</b>	<b>9.45</b>	<b>7.0</b>	<b>5.5</b>	<b>5.2</b>	<b>17.0</b>	<b>11.61</b>	<b>14.28</b>

<sup>b</sup> Course of wholesale prices 1890 to 1902. U. S. Labor Statistics Bur. Bul. 45, p. 297-326, March, 1903; Bul. 114, p. 93-145, April, 1913; Bul. 200, p. 277-283, July, 1916; Bul. 226, p. 268-275, December, 1917; Bul. 269, p. 182-191, July, 1920; Bul. 296, p. 225-233, June, 1922; Bul. 335, p. 203-211, June, 1923; Bul. 367, p. 207-215, January, 1925; Bul. 390, p. 223-231, July, 1925; Bul. 415, p. 225-233, October, 1926; Bul. 493, p. 225-230, August, 1929; Bul. 572, 1932.

<sup>c</sup> Juergens, C. H. Movement of wholesale prices in New York City, 1825-1863. Amer. Statist. Assn. Pub. vol. 12, p. 544-548, June, 1911.

<sup>d</sup> Wholesale prices in the United States, 1890-1914. U. S. Labor Statistics Bur. Bul. 181, Appendix III, p. 266, October, 1915.

<sup>e</sup> Snider, Joseph L. A weekly commodity price index. Rev. econ. statistics, vol. 7, p. 249, October, 1925.

<sup>f</sup> Snider, Joseph L. Wholesale prices in the United States, 1866-91. Rev. econ. statistics, vol. 6, p. 111, April, 1924.

<sup>g</sup> Snyder, Carl. Business cycles and business measurements, p. 137, 288, 1927.

TABLE 103 (continued)

	United States Bureau of Labor Statistics				Juergens, 74 commodities		McNeil, un-weighted <sup>d</sup>		Snider		Snyder, 14 commodities <sup>e</sup>
	Weighted <sup>b</sup>				Un-weighted	Weighted <sup>a</sup>	1890	1891	Weekly <sup>c</sup>	Quarterly <sup>f</sup>	
	1924	1925	1926	....							
<b>Metals and metal products:</b>											
Pocketknives .....	0	0	0	0							
Iron and iron products .....	1.95	1.69	1.21	7.19	2.70	2.0			7.4		
Copper and copper products .....	0.99	1.00	0.93	0.84	1.35	0.5			1.5	4.22	7.14
Lead and lead products .....	0.29	0.30	0.29	0.24						0.33	7.14
Other .....	5.12	4.64	10.74	7.22	1.35	0.5			0.8	0.26	7.14
<b>Total .....</b>	<b>8.35</b>	<b>7.63</b>	<b>13.17</b>	<b>15.49</b>	<b>5.40</b>	<b>3.0</b>	<b>12.6</b>	<b>14.7</b>	<b>9.7</b>	<b>4.81</b>	<b>21.42</b>
<b>Building materials:</b>											
Lumber .....	3.49	3.34	2.61	2.50					3.0	2.83	
Brick .....	0.21	0.19	0.53	0.54							
Lime and cement .....	0.60	0.56	0.63	0.52					0.9		
Other .....	1.07	1.03	1.41	2.82	5.40	2.7				0.18	
<b>Total .....</b>	<b>5.37</b>	<b>5.12</b>	<b>5.18</b>	<b>6.38</b>	<b>5.40</b>	<b>2.7</b>	<b>15.7</b>	<b>10.4</b>	<b>3.9</b>	<b>2.71</b>	
<b>Drugs and chemicals:</b>											
<b>Total .....</b>	<b>1.82</b>	<b>1.72</b>	<b>1.76</b>	<b>1.62</b>	<b>9.45</b>	<b>5.0</b>	<b>6.3</b>	<b>3.6</b>	<b>1.9</b>	<b>0.23</b>	<b>7.14</b>
<b>House furnishings:</b>											
<b>Total .....</b>	<b>2.34</b>	<b>2.08</b>	<b>1.93</b>	<b>3.04</b>			<b>7.0</b>	<b>5.6</b>			
<b>Miscellaneous:</b>											
<b>Total .....</b>	<b>4.73</b>	<b>5.44</b>	<b>6.39</b>	<b>9.20</b>	<b>2.70</b>	<b>1.0</b>	<b>3.9</b>	<b>5.2</b>	<b>3.1</b>		
<b>Total .....</b>	<b>100.00</b>	<b>100.00</b>	<b>100.66</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.1</b>	<b>100.1</b>	<b>100.0</b>	<b>100.01</b>	<b>99.96</b>

<sup>b</sup> Course of wholesale prices 1890 to 1902. U. S. Labor Statistics Bur. Bul. 45, p. 207-326, March, 1903; Bul. 114, p. 93-145, April, 1913; Bul. 200, p. 277-285, July, 1914; Bul. 226, p. 268-275, December, 1917; Bul. 269, p. 182-191, July, 1920; Bul. 296, p. 225-233, June, 1922; Bul. 335, p. 203-211, June, 1923; Bul. 367, p. 207-215, January, 1925; Bul. 390, p. 223-231, July, 1925; Bul. 415, p. 225-233, October, 1926; Bul. 493, p. 225-236, August, 1929; Bul. 572, 1932.

<sup>c</sup> Juergens, C. H. Movement of wholesale prices in New York City, 1825-1863. Amer. Statist. Assn. Pub., vol. 12, p. 544-546. June, 1911.

<sup>d</sup> Wholesale prices in the United States, 1890-1914. U. S. Labor Statistics Bur. Bul. 181, Appendix III, p. 266. October, 1915.

<sup>e</sup> Snider, Joseph L. A weekly commodity price index. Rev. econ. statistics, vol. 7, p. 249, October, 1925.

<sup>f</sup> Snider, Joseph L. Wholesale prices in the United States, 1866-91. Rev. econ. statistics, vol. 6, p. 111, April, 1924.

<sup>g</sup> Snyder, Carl. Business cycles and business measurements, p. 137, 288. 1927.

WHOLESALE PRICES IN THE UNITED STATES, 1797 TO 1932

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TABLE 103 (continued)

	Cole		Hansen		Roelke, 68 com- modities, Phila- delphia <sup>k</sup>	Mitchell, 92 com- modities <sup>l</sup>	United States Treas- ury, 1886, 102 com- modities <sup>m</sup>	20 com- modities, quarterly <sup>n</sup>	37 com- modities, quarterly <sup>o</sup>	Warren and Pearson		
	1843- 1862 <sup>h</sup>	1825- 1845 <sup>i</sup>	79 com- modities, Boston <sup>j</sup>	63 com- modities, New York <sup>l</sup>						147 com- modities, January <sup>p</sup>	30 basic com- modities <sup>q</sup>	All com- modities <sup>r</sup>
<b>Farm products:</b>												
Corn.....	3.13	2.63	6.0	3.0		1.09	0.98	5.0	2.0	1.50	4.0	1.50
Cotton.....	3.12	2.63	10.8	6.0 <sup>4</sup>	1.46		0.98	5.0	5.0	3.50	8.0	3.50
Cattle.....						1.09			5.0	4.00		3.75
Hogs.....						1.09		5.0	6.0	4.00		3.75
Wheat.....	3.13	2.64		8.0	1.46	1.09	1.96	5.0	5.0	4.00	8.0	3.75
Eggs.....										1.00		
Milk.....												
Wool.....	3.12	5.26		2.9		1.09	2.94	5.0	2.0	1.25	4.0	1.25
Other.....	9.38	10.53	8.2	5.1	11.88	10.87	13.74			5.75	4.0	7.50
Total.....	21.89	23.69	25.0	25.0	14.80	16.32	20.60	25.0	25.0	25.00	29.0	25.00
<b>Food products:</b>												
<b>Beef and beef products:</b>												
Beef.....	3.12	5.26	5.0	6.0	2.92	2.17	3.92	5.0	6.0	3.75	8.0	3.75
Pork and lard.....	3.13	5.26	6.3	8.5	5.84	2.17	3.92	5.0		4.75	8.0	4.25
Eggs.....						1.09			7.5	0.75		6.75
Milk.....						1.09			1.0	0.85		0.85
Butter.....	3.12	2.84	3.0	2.0	1.46	1.09	0.98	5.0	3.0	2.00	4.0	2.00
Coffee.....		2.63	1.0	1.0	1.46		1.96			0.75	2.0	0.75
Sugar.....	3.13	2.63	3.0	2.0	2.92	1.09	2.94			2.00	4.0	2.00
Flour and meal.....		5.26	5.8	6.3	2.92	2.17	3.92		5.0	4.12		4.38
Bread and crackers.....			3.0		1.46	2.17		5.0	1.0	1.26		1.25
Fruit.....			0.04	0.07	1.46	2.17	3.92			0.89		1.07
Potatoes.....						1.09				1.50		1.50
Other.....	18.75	13.16	2.86	2.93	16.08	9.79	15.70	10.0	1.5	2.39	5.0	2.45
Total.....	31.25	36.94	30.0	28.8	36.50	26.09	37.26	30.0	25.0	25.00	31.0	25.00
<b>Hides and leather:</b>												
Total.....	6.25	0	4.00	4.00	2.92	2.17	2.94	5.0	4.0	4.00	8.0	4.00
<b>Textiles:</b>												
<b>Woolen goods:</b>												
Cotton goods.....		2.63	8.0	6.0	2.92	1.09			5.0	5.0	4.0	4.90
Other.....			2.0	1.0	0.26	1.08	1.96			0.3		4.10
Total.....		2.63	10.0	7.0	3.18	3.26	1.96		10.0	10.0	4.0	10.00

<sup>h</sup> Cole, Arthur H. Wholesale commodity prices in the United States, 1843-62. Rev. econ. statistics, vol. 11, p. 26-37. February, 1929.

<sup>i</sup> Cole, Arthur H. Wholesale prices in the United States, 1825-45. Rev. econ. statistics, vol. 8, p. 74. April, 1928.

<sup>j</sup> Hansen, Alvin H. Wholesale prices in the United States, 1801-1840. U. S. Labor Statistics Bur. Bul. 367, p. 235-248. January, 1925.

<sup>k</sup> Roelke, Harold V. Wholesale prices in the United States, 1701-1801. Amer. Statist. Assn. Pubs., vol. 15 (1916-17), p. 846. 1918.

<sup>l</sup> Mitchell, Wesley C. Gold, prices, and wages under the greenback standard. Univ. California pubs. in economics, vol. 1, p. 23-24. March 27, 1908.

<sup>m</sup> Prices of commodities. U. S. Treasury Dept., Statistics Bur. Statement 17, Quarterly report 3, Series 1885-86, p. 556-564. 1886.

<sup>n</sup> Table 96, page 175.

<sup>o</sup> Table 97, page 176.

<sup>p</sup> Table 100, page 180.

<sup>q</sup> Table 29, page 73.

<sup>r</sup> Table 28, page 69.

TABLE 103 (concluded)

	Cole		Hansen		Roese, 68 com- modities, Phila- delphia <sup>k</sup>	Mitchell, 92 com- modities <sup>l</sup>	United States Treasury, 1886, 102 com- modities <sup>m</sup>	90 com- modities, quarterly <sup>n</sup>	37 com- modities, quarterly <sup>o</sup>	Warren and Pearson		
	1843- 1862 <sup>h</sup>	1825- 1845 <sup>i</sup>	79 com- modities, Boston <sup>j</sup>	68 com- modities, New York <sup>j</sup>						147 com- modities, January <sup>p</sup>	30 basic com- modities <sup>q</sup>	All com- modities <sup>r</sup>
<b>Fuel and lighting:</b>												
Coal and coke.....	3.12	5.26	5.0	7.0	1.46	2.17	1.96	5.0	5.5	8.4	4.0	8.40
Other.....	6.25	2.63	2.0	5.0	1.72	2.17	6.89	.....	1.5	1.6	2.0	1.60
<b>Total.....</b>	<b>9.37</b>	<b>7.89</b>	<b>7.0</b>	<b>12.0</b>	<b>3.18</b>	<b>4.34</b>	<b>8.82</b>	<b>5.0</b>	<b>10.0</b>	<b>10.0</b>	<b>6.0</b>	<b>10.00</b>
<b>Metals and metal products:</b>												
Pocketknives.....	0	0	0	0	0	0	0	.....	.....	.....	.....	0
Iron and iron products.....	3.13	5.26	8.5	8.0	4.38	1.08	3.92	.....	.....	0.4	8.0	4.30
Copper and copper products.....	.....	.....	1.0	1.0	.....	2.17	2.94	5.0	7.5	6.6	2.0	1.50
Lead and lead products.....	.....	2.63	0.7	1.0	1.46	1.09	0.98	5.0	2.0	2.0	2.0	0.40
Other.....	3.12	2.63	.....	.....	5.84	4.35	1.98	.....	0.5	1.0	2.0	3.80
<b>Total.....</b>	<b>6.25</b>	<b>10.52</b>	<b>10.0</b>	<b>10.0</b>	<b>11.68</b>	<b>8.69</b>	<b>9.80</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>14.0</b>	<b>10.00</b>
<b>Building materials:</b>												
Lumber.....	3.13	2.64	8.5	.....	10.22	5.44	.....	5.0	7.5	7.5	.....	5.90
Brick.....	.....	.....	0.5	.....	.....	1.09	.....	.....	1.2	1.0	.....	0.50
Lime and cement.....	.....	.....	1.0	.....	.....	2.17	.....	.....	1.3	0.7	.....	0.70
Other.....	6.25	7.90	.....	7.0	5.84	6.52	5.88	5.0	.....	0.8	7.0	2.90
<b>Total.....</b>	<b>9.38</b>	<b>10.54</b>	<b>10.0</b>	<b>7.0</b>	<b>16.06</b>	<b>15.22</b>	<b>5.89</b>	<b>15.0</b>	<b>10.0</b>	<b>10.0</b>	<b>7.0</b>	<b>10.00</b>
<b>Drugs and chemicals:</b>												
<b>Total.....</b>	<b>12.5</b>	<b>5.26</b>	<b>2.0</b>	<b>4.0</b>	<b>7.30</b>	<b>13.04</b>	<b>7.84</b>	<b>5.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>4.0</b>
<b>Housefurnishings:</b>												
<b>Total.....</b>	.....	.....	.....	.....	.....	4.35	.....	.....	2.0	2.0	.....	1.0
<b>Miscellaneous:</b>												
<b>Total.....</b>	<b>3.12</b>	<b>2.63</b>	<b>2.0</b>	<b>2.2</b>	<b>4.38</b>	<b>5.44</b>	<b>4.90</b>	<b>5.0</b>	<b>2.0</b>	<b>2.0</b>	.....	<b>1.0</b>
<b>Total.....</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>98.92</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.0</b>	<b>100.0</b>

<sup>h</sup> Cole, Arthur H. Wholesale commodity prices in the United States, 1843-62. Rev. econ. statistics, vol. 11, p. 26-37. February, 1929.

<sup>i</sup> Cole, Arthur H. Wholesale prices in the United States, 1825-45. Rev. econ. statistics, vol. 8, p. 74. April, 1926.

<sup>j</sup> Hansen, Alvin H. Wholesale prices in the United States, 1801-1840. U. S. Labor Statistics Bur. Bul. 367, p. 235-248. January, 1925.

<sup>k</sup> Roelise, Harold V. Wholesale prices in the United States, 1791-1801. Amer. Statis. Assn. Pubs., vol. 15 (1916-17), p. 846. 1918.

<sup>l</sup> Mitchell, Wesley C. Gold, prices, and wages under the greenback standard. Univ. California pubs. in economics, vol. 1, p. 23-24. March 27, 1908.

<sup>m</sup> Prices of commodities. U. S. Treasury Dept., Statistics Bur. Statement 17, Quarterly report 3, Series 1885-86, p. 556-564. 1886.

<sup>n</sup> Table 96, page 175.

<sup>o</sup> Table 97, page 176.

<sup>p</sup> Table 100, page 180.

<sup>q</sup> Table 29, page 73.

<sup>r</sup> Table 28, page 69.

Mitchell's<sup>36</sup> estimates of the value of 1474 commodities in 1917 gave food, and farm products used as food, a weight of 45 (table 104); clothing, including hides and leather, cotton, and wool, 14; and metals, 18.

TABLE 104. MITCHELL'S ESTIMATED VALUE OF 1474 COMMODITIES IN 1917, EXPRESSED AS PER CENT OF THE TOTAL VALUE\*

Group	Per cent
Food.....	45.5
Clothing.....	13.7
Metals.....	18.2
Fuel.....	7.6
Building materials.....	4.2
Chemicals.....	5.6
Miscellaneous.....	5.2
Total.....	100.0

\* Mitchell, Wesley C. History of prices during the war. U. S. War Industries Board. Price bulletin 1, p. 24. 1919.

The Annalist weekly index<sup>30</sup> gave farm products a weight of 33 in 1926, food products 26, and fuels 15 (table 105).

TABLE 105. RELATIVE IMPORTANCE OF GROUPS OF COMMODITIES IN THE ANNALIST WEEKLY INDEX\*

Group	1926	1930
Farm products.....	32.8	29.2
Food products.....	26.3	29.8
Textile products.....	5.8	4.4
Fuels.....	14.7	14.5
Metals.....	9.3	10.8
Building materials.....	4.5	4.6
Chemicals.....	1.8	2.3
Miscellaneous.....	4.8	4.5
Total.....	100.0	100.0

\* The Annalist weekly index of commodity prices. Annalist, vol. 27, p. 538. April 16, 1926.

Annalist weekly index of wholesale commodity prices. A detailed description as of October 13, 1931.

According to Norton,<sup>40</sup> Dun's index was weighted as given in table 106. The weights adopted were an approximate expression of the so-called Engel's law. The Dun series of more than 350 commodities ceased publication in May, 1907, and Norton prepared the Gibson index, which was based on 50 commodities. The weights were similar to those used in Dun's index.

<sup>36</sup> Mitchell, Wesley C. History of prices during the war. U. S. War Industries Board. Price bulletin 1, p. 24. 1919.

<sup>30</sup> The Annalist weekly index of commodity prices. Annalist, vol. 27, p. 538. April 16, 1926.

<sup>40</sup> Norton, J. Pease. A revised index number for measuring the rise in prices. Quart. Journ. econ., vol. 24, p. 750. August, 1910.

TABLE 106. APPROXIMATE WEIGHTING OF DUN'S AND GIBSON'S INDEX, JANUARY, 1907\*

Group	Dun's index	Gibson's index
	(Per cent)	(Per cent)
Foods.....	50	43
Clothing.....	18	20
Minerals.....	16	19
Other commodities.....	16	18
Total.....	100	100

\* Norton, J. Pease. A revised index number for measuring the rise in prices. *Quart. Journ. econ.*, vol. 24, p. 750. August, 1910.

For 1907, Dun's index gave foods a weight of 50, and Gibson's index a weight of 43.

Fisher's<sup>41</sup> weekly index number resulted in giving food a weight of 50 in 1923, clothing 17, metals 10, and fuels 10 (table 107).

TABLE 107. RELATIVE IMPORTANCE OF GROUPS OF COMMODITIES IN FISHER'S WEEKLY INDEX\*

Group	Per cent of total in 1923
Food.....	50.8
Clothing and cloths.....	16.8
Metals.....	10.0
Fuels.....	10.3
Building materials.....	6.0
Chemicals.....	3.9
Miscellaneous.....	2.5
Total.....	100.0

\* Fisher, Irving. Revision of the weekly index number. *Amer. Statist. Assn. Journ.*, vol. 19, p. 344. September, 1924.

#### A COMPARISON OF DIFFERENT INDEX NUMBERS

A comparison of various index numbers, with 1860 taken as 100, is shown in table 108. The first four columns give index numbers for January only. If prices changed much within the year, these would not be expected to agree with the others, which are for the entire year. A comparison of the index for January and the yearly average is shown in tables 100 (page 180) and 108.

In spite of the extreme variations in the methods of construction of the many index numbers, there is considerable similarity in the results. The yearly index numbers for 1840 vary from 94 to 108 when 1860 is taken as 100. They all show a decline in prices in 1850, at which time the range was from 87 to 97. With the violent fluctuations in the Civil War period, different methods of weighting give very different results. In 1864 the range was from 110 to 248. In 1889 it was from 78 to 99.

<sup>41</sup> Fisher, Irving. Revision of the weekly index number. *Amer. Statist. Assn. Journ.*, vol. 19, p. 344. September, 1924.

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TABLE 108. INDEX NUMBERS OF WHOLESALE PRICES, 1840 TO 1891  
(1860 = 100)

Year	Aldrich un-weighted index* (January)	Aldrich weighted index* (January)	Aldrich index weighted by groups <sup>b</sup> (January)	147-commodity index* (January)	37-commodity quarterly index <sup>c</sup> (year)	McNeil un-weighted index* (year)	McNeil index weighted by groups <sup>d</sup> (year)	Mitchell median index, 92 commodities (year)	Dun's index <sup>e</sup> (July)	Snyder, 39-commodity index (1879-90 = 100) <sup>f</sup> (year)	Snyder, 14-commodity index (year)	Cole index <sup>g</sup> (year)
1840	116.8	97.7	132	109	.....	.....	.....	.....	.....	.....	.....	.....
1841	115.8	98.1	114	102	.....	.....	.....	.....	.....	.....	.....	.....
1842	107.8	90.1	107	99	.....	.....	.....	.....	.....	.....	.....	.....
1843	101.5	84.3	100	88	.....	.....	.....	.....	.....	.....	.....	77
1844	101.9	85.0	97	91	79	.....	.....	.....	.....	.....	.....	81
1845	102.6	89.2	106	93	79	.....	.....	.....	.....	.....	.....	85
1846	106.4	95.2	103	96	90	.....	.....	.....	.....	.....	.....	86
1847	106.5	95.2	102	99	92	.....	.....	.....	.....	.....	.....	94
1848	101.4	88.3	94	93	93	.....	.....	.....	.....	.....	.....	84
1849	98.7	83.5	89	92	90	.....	.....	.....	.....	.....	.....	82
1850	102.3	89.2	93	95	92	.....	.....	.....	.....	.....	.....	90
1851	105.9	98.6	95	92	92	.....	.....	.....	.....	.....	.....	89
1852	102.7	97.8	93	93	89	.....	.....	.....	.....	.....	.....	94
1853	109.1	105.0	103	104	104	.....	.....	.....	.....	.....	.....	106
1854	112.9	105.0	107	109	111	.....	.....	.....	.....	.....	.....	118
1855	113.1	109.2	111	112	108	.....	.....	.....	.....	.....	.....	122
1856	113.2	112.3	111	113	110	.....	.....	.....	.....	.....	.....	123
1857	112.5	114.0	114	115	115	.....	.....	.....	.....	.....	.....	128
1858	101.8	113.2	98	101	97	.....	.....	.....	.....	.....	.....	101
1859	100.2	102.9	99	101	99	.....	.....	.....	.....	.....	.....	104
1860	100.0	100.0	100	100	100	100	100	100	100	.....	100	100
1861	100.6	94.1	99	98	99	98	94	97	88	.....	82	102
1862	117.8	104.1	115	113	105	116	108	103	103	.....	101	151
1863	148.6	132.2	142	140	130	160	166	133	150	.....	134	.....
1864	190.5	173.1	194	190	158	226	238	180	242	.....	198	.....
1865	216.8	232.3	222	205	222	208	213	185	169	.....	170	.....

\* Wholesale prices, wages, and transportation. Report by Mr. Aldrich from the Committee on Finance, 52d Congress, 2d Session. Report 1394, Part I, p. 93. March 3, 1893. The following authors used the Aldrich unweighted index for the period from 1840 to 1859 and their index numbers are therefore not reprinted: Roelke, Harold V. (Wholesale prices in the United States, 1791-1801. Amer. Statis. Assn. Pub., vol. 15 (1916-17), p. 846, 1918). Warren, G. F. (Prices of farm products in the United States. U. S. Agr. Dept. Bul. 899, p. 2, August, 1921). Warren, G. F. (Prices of farm products in New York. Cornell Univ. Agr. Exp. Sta. Bul. 416, p. 4, January, 1923). Warren, G. F., and Pearson, F. A. (The general price level. Farm economics, no. 45, p. 697, June, 1927). Peterson, Arthur G. (Historical study of prices received by producers of farm products in Virginia, 1801-1927. Virginia Agr. Exp. Sta. Tech. bul. 37, p. 199, March, 1929).

<sup>b</sup> Prepared by the writers by weighting the group averages in the Aldrich report, pages 167 and 168.

<sup>c</sup> Table 100, page 180.

<sup>d</sup> Table 97, page 176.

<sup>e</sup> Wholesale prices in the United States, 1890-1914. U. S. Labor Statistics Bur. Bul. 181, Appendix III, p. 266, October, 1915.

<sup>f</sup> Prepared by the writers by weighting the McNeil groups.

<sup>g</sup> Mitchell, Wesley C. Gold, prices, and wages under the greenback standard. Univ. California pub. in economics, vol. 1, p. 23, March 27, 1908.

<sup>h</sup> Commodity prices. A record covering a period of over half a century. Dun's review, January, 1921.

<sup>i</sup> Snider, Joseph L. Wholesale prices in the United States, 1866-91. Rev. econ. statistics, vol. 6, p. 112, April, 1924.

<sup>j</sup> Snyder, Carl. Business cycles and business measurements, p. 137, 288, 1927. (The data from 1860 to 1875 were furnished by Mr. Snyder.)

<sup>k</sup> Cole, Arthur H. Wholesale commodity prices in the United States, 1843-62. Rev. econ. statistics, vol. 11, p. 31, February, 1929.



TABLE 108 (continued)

Year	Aldrich un-weighted index <sup>a</sup> (January)	Aldrich weighted index <sup>a</sup> (January)	Aldrich index weighted by groups <sup>b</sup> (January)	147-commodity index <sup>c</sup> (January)	37-commodity quarterly index <sup>d</sup> (year)	McNeil un-weighted index <sup>e</sup> (year)	McNeil index weighted by groups <sup>f</sup> (year)	Mitchell median index, 92 commodities <sup>g</sup> (year)	Dun's index <sup>h</sup> (July)	Snider, 39-commodity index (1879-80 = 100) <sup>i</sup> (year)	Snyder, 14-commodity index <sup>j</sup> (year)	Cole index <sup>k</sup> (year)
6	191.0	187.7	191	185	198	185	189	177	181	191	148	.....
7	172.2	165.8	170	165	178	166	175	162	164	178	143	.....
8	160.5	173.9	167	163	159	162	176	158	159	171	137	.....
9	153.5	152.3	164	154	161	158	168	157	143	164	137	.....
0	142.3	144.4	153	141	149	141	148	139	129	140	123	.....
1	136.0	136.1	156	136	133	130	137	131	132	135	114	.....
2	138.8	132.4	139	136	130	135	138	134	131	141	128	.....
3	137.5	129.0	136	134	135	134	137	133	124	135	116	.....
4	133.0	129.9	135	130	128	128	137	130	124	131	115	.....
5	127.6	128.9	132	125	127	120	130	123	117	126	113	.....
6	118.2	122.6	123	114	115	111	117	113	101	115	108	.....
7	110.9	113.6	116	108	109	109	112	106	95	114	99	.....
8	101.3	104.6	104	97	95	99	99	95	84	97	82	.....
9	96.6	95.0	98	92	84	84	94	88	84	93	82	.....
10	106.9	104.9	108	104	105	105	109	105	94	107	98	.....
11	105.7	108.4	111	109	102	102	111	.....	97	111	108	.....
12	108.5	109.1	115	113	109	104	115	.....	107	118	111	.....
13	106.0	106.6	115	105	108	98	106	.....	93	104	100	.....
14	99.4	102.6	106	99	99	89	98	.....	87	95	93	.....
15	93.0	93.3	98	89	89	83	90	.....	79	88	82	.....
16	91.9	93.4	98	89	86	81	87	.....	77	85	80	.....
17	92.6	94.5	100	89	86	81	88	.....	81	88	81	.....
18	94.2	96.2	103	92	90	84	94	.....	83	93	87	.....
19	94.2	98.5	104	91	89	81	89	.....	78	91	80	.....
20	92.3	93.7	100	87	82	80	86	.....	79	89	82	.....
21	92.2	94.4	100	88	84	80	89	.....	83	92	79	.....

<sup>a</sup> Wholesale prices, wages, and transportation. Report by Mr. Aldrich from the Committee on Finance, 52d Congress, 2d Session. Report 1394, Part 1, p. 93. March 3, 1893. The following authors used the Aldrich unweighted index for the period from 1840 to 189 and their index numbers are therefore not reprinted: Roelse, Harold V. (Wholesale prices in the United States, 1791-1801. Amer. Statist. Assn. Publ., vol. 15 [1916-17], 846. 1918.) Warren, G. F. (Prices of farm products in the United States. U. S. Agr. Dept. Bul. 999, p. 2. August, 1921.) Warren, G. F. (Prices of farm products in New York. Cornell Univ. Agr. Exp. Sta. Bul. 416, p. 4. January, 1923.) Warren, G. F. and Pearson, F. A. (The general price level. Farm economics, no. 45, p. 697. June, 1927.) Peterson, Arthur G. (Historical study of prices received by producers of farm products in Virginia, 1801-1927. Virginia Agr. Exp. Sta. Tech. bul. 37, p. 199. March, 1929.)

<sup>b</sup> Prepared by the writers by weighting the group averages in the Aldrich report, pages 7 and 168.

<sup>c</sup> Table 100, page 180.

<sup>d</sup> Table 97, page 176.

<sup>e</sup> Wholesale prices in the United States, 1890-1914. U. S. Labor Statistics Bur. Bul. 11, Appendix III, p. 266. October, 1915.

<sup>f</sup> Prepared by the writers by weighting the McNeil groups.

<sup>g</sup> Mitchell, Wesley C. Gold, prices, and wages under the greenback standard. Univ. California pub. in economics, vol. 1, p. 23. March 27, 1908.

<sup>h</sup> Commodity prices. A record covering a period of over half a century. Dun's review, January, 1921.

<sup>i</sup> Snider, Joseph L. Wholesale prices in the United States, 1866-91. Rev. econ. statistics, vol. 6, p. 112. April, 1924.

<sup>j</sup> Snyder, Carl. Business cycles and business measurements, p. 137, 288. 1927. (The data from 1860 to 1875 were furnished by Mr. Snyder.)

<sup>k</sup> Cole, Arthur H. Wholesale commodity prices in the United States, 1843-62. Rev. on. statistics, vol. 11, p. 31. February, 1929.

TABLE 108 (continued)

Year	Hurlin index <sup>1</sup>	Index based on 147-commodity and Cole index <sup>m</sup> (year)	Index based on 20-commodity, Snyder, and weighted Aldrich indexes <sup>n</sup> (year)	Index based on McNeil and Snyder indexes <sup>o</sup> (year)	Index based on weighted Aldrich and Snyder indexes <sup>p</sup> (year)	147-commodity index <sup>q</sup> (year)	Juergens 74-commodity un-weighted index <sup>r</sup> (year)	Juergens 74-commodity weighted index <sup>r</sup> (year)	30-basis-commodity index <sup>s</sup> (year)	All-commodity index, constant group weights <sup>t</sup> (year)	All-commodity index, variable group weights <sup>u</sup> (year)	United States Treasury Report, 1886 <sup>v</sup> (year)
1840	88	.....	.....	.....	98	108	105	107	94	107	102	85
1841	94	.....	.....	.....	98	104	100	97	93	104	99	93
1842	84	.....	.....	.....	91	92	91	94	80	93	88	81
1843	80	88	.....	.....	85	93	89	82	78	85	81	80
1844	84	92	.....	.....	85	95	89	82	81	87	83	83
1845	89	95	.....	.....	88	95	95	89	84	94	89	86
1846	90	95	.....	.....	95	95	96	92	85	94	89	86
1847	95	103	.....	.....	95	105	102	107	90	99	97	93
1848	83	90	.....	.....	88	93	88	94	81	92	88	83
1849	85	91	.....	.....	84	92	90	94	82	91	88	84
1850	90	92	.....	.....	90	94	95	97	87	93	90	89
1851	92	91	.....	.....	99	92	98	95	85	91	89	89
1852	93	98	.....	.....	98	99	96	98	89	96	95	92
1853	104	104	.....	.....	105	105	105	105	101	106	104	99
1854	112	111	.....	.....	105	116	113	118	110	118	116	107
1855	115	113	.....	.....	109	118	116	125	112	119	118	111
1856	113	111	.....	.....	113	113	114	122	112	114	113	112
1857	119	121	.....	.....	114	120	120	128	121	119	119	120
1858	100	101	.....	.....	113	101	100	105	102	101	100	100
1859	102	101	.....	.....	103	103	102	104	102	102	102	101
1860	100	100	100	100	100	100	100	100	100	100	100	100
1861	98	97	92	101	94	100	95	98	100	96	96	98
1862	116	.....	109	123	105	121	118	115	132	112	112	112
1863	169	.....	152	167	133	160	159	140	179	144	148	119
1864	228	.....	211	237	172	211	.....	.....	246	208	208	119
1865	208	.....	195	211	233	186	.....	.....	207	200	199	123
1866	185	.....	186	189	188	182	.....	.....	181	187	188	119
1867	166	.....	175	170	166	167	.....	.....	166	173	174	113
1868	162	.....	175	167	174	164	.....	.....	164	168	170	108
1869	158	.....	155	162	152	153	.....	.....	159	161	162	108

<sup>1</sup> Hurlin, Ralph G. The long time trend of prices in the United States. *Annalist*, vol. 18, p. 3-4, July 4, 1921.

<sup>m</sup> Index number calculated by the writers, based on 147 commodities for January index, and other months interpolated from Cole's index.

<sup>n</sup> Index number calculated by the writers from the Aldrich January index, with monthly data interpolated from the 20-commodity quarterly index and from Snyder's monthly index.

<sup>o</sup> Index number calculated by the writers, based on McNeil's with Snyder's monthly data interpolated.

<sup>p</sup> Index calculated by the writers, based on the Aldrich weighted index with Snyder's monthly data interpolated.

<sup>q</sup> The method of construction of the 147-commodity index is described on pages 179 to 180.

<sup>r</sup> Juergens, C. H. Movement of wholesale prices in New York City, 1825-1863. *Amer. Statis. Assn. Pubs.*, vol. 12, p. 546, 556. June, 1911.

<sup>s</sup> Table 29, page 73.

<sup>t</sup> Table 28, page 69.

<sup>u</sup> Table 1, page 6.

<sup>v</sup> Prices of commodities. U. S. Treasury Dept., Statistics Bur. Statements nos. 17 to 25, Quart. rept. 3, Series 1885-86. Document 847, p. 563, 1886. (The index numbers are on a gold basis.)

TABLE 108 (concluded)

Year	Hurlin index <sup>1</sup>	Index based on 147-commodity and Cole indexes <sup>m</sup> (year)	Index based on 20-commodity, Snyder, and weighted Aldrich indexes <sup>n</sup> (year)	Index based on McNeil and Snyder indexes <sup>o</sup> (year)	Index based on weighted Aldrich and Snyder indexes <sup>p</sup> (year)	147-commodity index <sup>q</sup> (year)	Juergens 74-commodity un-weighted index <sup>r</sup> (year)	Juergens 74-commodity weighted index <sup>s</sup> (year)	30-basic commodity index <sup>t</sup> (year)	All-commodity index, constant group weight <sup>u</sup> (year)	All-commodity index, variable group weight <sup>u</sup> (year)	United States Treasury Report, 1886 <sup>v</sup> (year)
1870	141	.....	143	143	144	140	.....	.....	140	144	145	118
1871	130	.....	138	134	136	137	.....	.....	132	140	140	108
1872	135	.....	136	139	133	138	.....	.....	142	145	146	113
1873	134	.....	135	137	128	139	.....	.....	138	143	143	108
1874	128	.....	135	131	130	141	.....	.....	129	134	135	107
1875	120	.....	132	122	129	122	.....	.....	121	126	127	98
1876	111	.....	121	114	123	110	.....	.....	110	117	118	94
1877	109	.....	112	109	114	103	.....	.....	108	113	114	98
1878	98	.....	102	99	105	95	.....	.....	91	98	98	88
1879	94	.....	97	99	95	94	.....	.....	91	95	97	95
1880	105	.....	109	107	105	107	.....	.....	102	106	108	90
1881	102	.....	111	105	108	110	.....	.....	104	108	111	.....
1882	104	.....	112	106	109	114	.....	.....	110	115	116	.....
1883	98	.....	107	100	107	104	.....	.....	100	106	109	.....
1884	89	.....	102	90	102	97	.....	.....	93	98	100	.....
1885	83	.....	95	85	93	89	.....	.....	84	89	91	.....
1886	81	.....	96	82	93	89	.....	.....	81	86	88	.....
1887	81	.....	98	84	94	92	.....	.....	83	89	91	.....
1888	84	.....	100	86	97	93	.....	.....	85	91	92	.....
1889	81	.....	98	83	99	89	.....	.....	81	85	87	.....
1890	80	.....	98	.....	.....	89	.....	.....	.....	.....	.....	.....
1891	80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

<sup>1</sup> Hurlin, Ralph G. The long time trend of prices in the United States. *Annalist*, vol. 18, p. 3-4. July 4, 1921.

<sup>m</sup> Index number calculated by the writers, based on 147 commodities for January index, and other months interpolated from Cole's index.

<sup>n</sup> Index number calculated by the writers from the Aldrich January index, with monthly data interpolated from the 20-commodity quarterly index and from Snyder's monthly index.

<sup>o</sup> Index number calculated by the writers, based on McNeil's with Snyder's monthly data interpolated.

<sup>p</sup> Index calculated by the writers, based on the Aldrich weighted index with Snyder's monthly data interpolated.

<sup>q</sup> The method of construction of the 147-commodity index is described on pages 170 to 180.

<sup>r</sup> Juergens, C. H. Movement of wholesale prices in New York City, 1825-1863. *Amer. Statist. Assn. Pubs.*, vol. 12, p. 546, 556. June, 1911.

<sup>s</sup> Table 29, page 73.

<sup>t</sup> Table 28, page 69.

<sup>u</sup> Table 1, page 6.

<sup>v</sup> Prices of commodities. U. S. Treasury Dept., Statistics Bur. Statements nos. 17 to 25, Quart. rept. 3. Series 1885-86. Document 847, p. 565, 1886. (The index numbers are on a gold basis.)

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## PART II. WHOLESALE PRICES AT NEW YORK CITY, 1720 TO 1800

HERMAN M. STOKER <sup>42</sup>

### THE TREND OF PRICES AT NEW YORK CITY FROM 1720 TO 1800

The outstanding feature of the movement of prices during the last eighty years of the eighteenth century is its rising trend. Prices definitely started upward about the middle of the forties, and continued to advance until the end of the century (figures 38 and 39, and table 1,

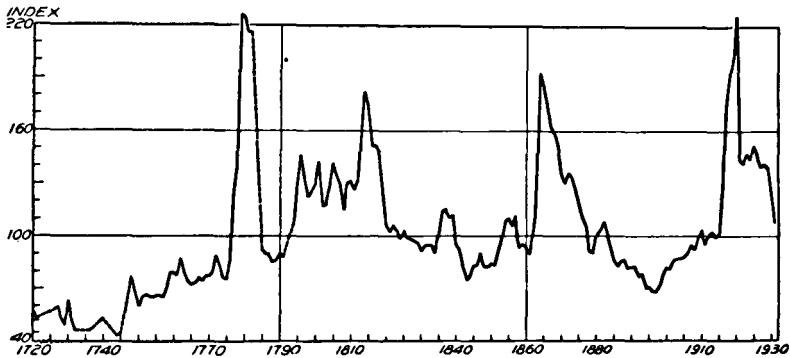


FIGURE 38. INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES FOR 213 YEARS, 1720 TO 1931  
(1910-14 = 100)

page 6). From 1720 to 1745, prices were probably about 50 per cent of those prevailing from 1910 to 1914.

It appears that during the fifteen-year period 1731 to 1745, prices were at the lowest level of the century. It was not until after 1745 that a decided upward trend took place,<sup>43</sup> resulting in a period of prosperity which culminated toward the end of 1748.

<sup>42</sup> The author acknowledges the assistance given by the following institutions and persons: the New York Public Library, the New York Historical Society, the Jewish Historical Society, and the Columbia University Library, in New York City; the John Carter Brown Library, in Providence, Rhode Island; the Widener Library, at Harvard University, Cambridge, Massachusetts; the Library of Congress, in Washington, D. C.; Miss Anne Bezanon, of the Wharton School of Commerce and Finance, University of Pennsylvania; and Arthur H. Cole, of Harvard University.

<sup>43</sup> In *The Iconography of Manhattan Island*, by I. N. Phelps Stokes (vol. 4, p. 598, 1922), it is stated for June, 1746: "Several bakers of the city petition that they may not be ordered to sell brown bread at 11 shillings per hundred weight, 'considering the present Price and Scarcity of Cornell.'"



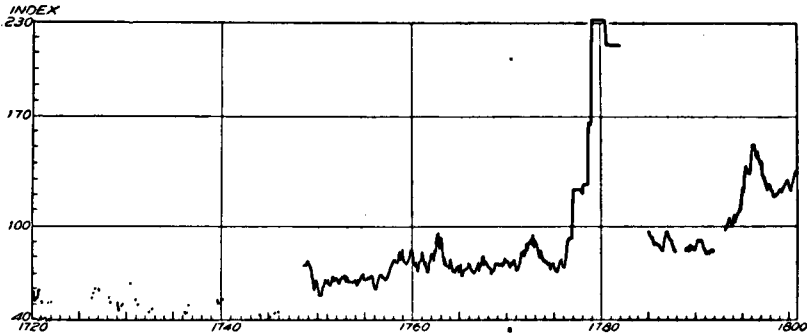


FIGURE 39. MONTHLY INDEX NUMBERS OF THE WHOLESALE PRICES OF ALL COM-MODITIES AT NEW YORK CITY, 1720 TO 1800  
(1910-14 = 100)

Prior to the Revolutionary War, there was a slow and gradual increase in prices. During that war, prices rose to three times the pre-war level. Following the war, there were several years of very low prices and stagnant trade which consolidated public opinion in favor of a strong central government. Fortunately, the rise of the new republic was accompanied by rising prices

In December, 1748, the index stood at 78 per cent when 1910-1914 is taken as 100. Prices fell rapidly in 1749 and 1750, and the index for the latter year was 60.

From 1720 to 1739 the world was at peace, but in 1740 war broke out between England, France, and Spain, and lasted for eight years. The struggle was concluded by the Peace of Aix-la-Chapelle in 1748. In this case, as previously in 1713, prices rose at the conclusion of the war. In the former instance, however, they rose much higher. Although the trade of the American colonies was not seriously disturbed while war was in progress, nevertheless some risk was involved in exporting and importing goods to and from overseas. There was a tendency for prices of imported products to be high as compared with those of domestic products in the home market. At the conclusion of the war this disparity decreased.

The period of lowest prices in New York City (1740 to 1748) was coincident with that in England, during which wheat was the cheapest in the whole term of 105 years from 1688 to 1792.<sup>44</sup> Tooke asserts that this was owing largely to the extraordinary proportion of good seasons for the period. He admits that there must have been some general cause for the low prices of wheat in the 50 years preceding 1765, and

<sup>44</sup> Tooke, T. *Thoughts and details on high and low prices of the last thirty years*, vol. 2, part 3, section 2, p. 9-48. 1823.

states that in France corn also was cheap during this period. He questions the contention of Adam Smith, that the low prices were due to the changes in the value of precious metal. It is worthy of note that the low prices during that period appeared to have been a world-wide phenomenon, which indicates that Adam Smith was right.

The French and Indian War, which lasted from 1754 to 1763, did not materially influence prices until the middle of 1758. The index number of prices at New York City increased from 68 in June, 1758, to 86 in January, 1760. From August, 1761, to the autumn of 1762 there was a sharp increase in prices. Thereafter, prices fell more or less continuously until the beginning of 1765, which was the low point of the post-war depression. At the beginning of this war, prices of imported products rose much faster than did prices of domestic products. Prices of foreign products reached their peak in 1759, and declined rather sharply thereafter until the autumn of 1765. Prices of domestic products, however, continued to rise until 1762, and declined sharply during the next two years.

During this war, the Colonies carried on a lucrative trade with the enemies of England. By the Peace of Paris in 1763, France and Spain lost their foothold in North America. But the war cost victorious England more than £82,000,000 sterling.<sup>45</sup> In order to obtain additional revenue to meet her heavy obligations, she attempted to shift a part of the burden to the Colonies by a stringent application of the Navigation Acts and by levying increased duties on the Colonies. This policy was strongly opposed by the colonists. During the period from 1700 to 1763, the Navigation Acts had not been enforced and the Colonies had carried on a very lucrative trade with the French, the Spanish, and the Dutch. The Colonies had been treated with "salutary neglect," owing partly to the continual conflict between England and France.<sup>46</sup> Naturally, there was violent opposition on the part of the colonists when, after 1763, England reorganized her colonial policy.

Prices for all commodities remained relatively low until January, 1771, when the index was 72. During the next eighteen months, prices advanced, and the index number reached 92 in July, 1772. From 1773 to 1775, the price level for the year receded from 84 to 75.

The rise in the all-commodity index from 1750 to about 1775 was due to the comparatively rapid advance in prices of domestic products, which for this period increased about one-third (figure 39).

As a result of the passage of the Sugar Act, the Currency Act, and particularly the Stamp Act of 1765, by the English Parliament, the

<sup>45</sup> Carman, H. J., and McKee, S. *History of the United States*, vol. 1, p. 207. 1930.  
<sup>46</sup> Stokes, I. N. Phelps. *The Iconography of Manhattan Island*, vol. 1, p. 303. 1915.

Colonies arose in opposition and resorted to the boycotting of English goods by means of non-importation and non-consumption agreements. After the repeal of the Stamp Act in 1766, trade between England and the Colonies continued with less restraint. The commercial boycott was renewed in 1767 as a result of the Townshend Acts, which increased the duties on certain classes of imported articles. The non-importation agreements of the Colonies were exceedingly well enforced in New York.

Much of the opposition and dissatisfaction in the Colonies previous to 1770 was due to the depression which prevailed from 1764 to 1770. The recovery in 1770, following the French and Indian War and the repeal of the Townshend Acts, were probably important factors in delaying the American Revolution. This period of prosperity, however, was relatively short-lived, and prices began to fall in the closing months of 1772, continuing to fall until the outbreak of the American Revolution in 1775.

The post-war depression, with a generally low level of prices, lasted for about eight years. The index of prices stood at 92 in 1785 and at 85 in 1791.

The British commercial policy, which prohibited trade between the United States and the West Indies, and the shipment of certain commodities even in British vessels, tended to prolong the depression. The much-needed specie and bills of exchange, with which to pay for British goods, were difficult to obtain. This policy probably influenced the course of prices of domestic products and those of West Indies products from 1789 to 1791.

It was not until about the latter part of 1792 that a definite recovery in prices was noticeable. Prices increased from an index of 85 in 1791 to about 102 in 1793. The latter year marked the beginning of a very rapid rise in prices which continued for most of the following seven years.

In 1793, England declared war against France. Trade was stimulated, and prices rose somewhat despite the handicap which the British trade policy placed on the United States.<sup>47</sup> The total value of exports from the United States from 1790 to 1792 was about \$20,000,000 per annum, and for the last three years of the decade it increased to an average of about \$70,000,000 per annum.<sup>48</sup>

This period constituted a new era of commerce and trade. The continental wars created a demand for exports of domestic and foreign products. Not only did the domestic shipping trade receive a great

<sup>47</sup> Johnson, E. B. *History of domestic and foreign commerce of the United States*, vol. 2, p. 3. 1915.

<sup>48</sup> Seybert, A. *Statistical annals of the United States of America*, p. 93. 1818.

stimulus, but the United States became a direct buyer and seller of goods produced in French, Spanish, and Dutch colonies. The highly lucrative returns from the export trade tended to retard the development of domestic manufactures.<sup>49</sup> The index of prices rose from 98 in April, 1793, to 152 in May, 1796, but declined thereafter to a level of 120 in July, 1798. Subsequently, prices increased until the end of the century, so that the index for December, 1800, stood at 134.

#### MATERIALS AND METHODS USED

##### SOURCE OF DATA

Monthly wholesale prices of commodities at New York City, for the greater part of the eighteenth century, were obtained from newspapers reporting quotations current at New York City.<sup>50</sup> The first list of commodity prices for the New York market was published during the first nine months of 1720, and for certain months in 1721, in the *American Weekly Mercury*, a Philadelphia newspaper. The first newspaper published in New York City, the *New York Gazette*, issued weekly, appeared in 1725. It was followed by the *New York Weekly Journal* in November, 1733.

From 1721 to about 1750, quoted prices were very irregular and fragmentary, and it was not until the latter date that a continuous monthly series of commodity prices became available.

##### NUMBER OF COMMODITIES

The list of the more important commodities for which monthly prices were available remained practically unchanged up to the time of the American Revolution, suggesting that no important changes had occurred during the greater part of the eighteenth century, either in the basic production of the Colony or in the commodities imported. Corn, wheat, flour, bread, beef, and pork were the principal domestic products of the Colony, and were the main articles of trade and commerce. Sugar, rum, molasses, salt, and tea constituted the chief imported commodities. The number of commodities included in this list, however, was relatively small as compared with the price list available during the last decade of the eighteenth century. From the middle of the eighteenth century to 1782, the prices of a varying number of different commodities, ranging from 11 to 16, were available. Additional commodities, if quoted with sufficient regularity over a fairly long period of time, were incorporated in the index.

<sup>49</sup> Seybert, A. *Statistical annals of the United States of America*, p. 59. 1818.

<sup>50</sup> Miss Marion E. Murphy tabulated the prices from the New York City newspapers.

No quotations were available from March, 1782, to December, 1784. From November, 1786, to May, 1796, the commodities for which monthly prices were quoted at New York increased in number to about four or five times the former amount, and were largely non-food products. Prices for about 71 series were available during this period, representing 52 different commodities.

From 1786 to 1796 there were a few serious gaps. The monthly index of wholesale prices prepared by Warren and Pearson begins with October of 1797 and includes 115 commodities (tables 1 and 51, pages 3 and 121).

An important source of difficulty in the preparation of this index was the change in the number of commodities in the index.

The reliability of newspaper prices during the eighteenth century has been commented upon by various authors.<sup>51</sup> Sudden changes in the prices quoted in early newspapers were perhaps due to the difficulty in obtaining accurate quotations and the expense to the printers in changing the published quotations. It was inevitable, therefore, that there should be delay in the corrected quotations. The frequency and extent of such "irregularities" can be surmised only by examining the respective series. These would necessarily affect the variability of the monthly index of prices, but would have little or no effect on the trend.

#### TABULATION OF DATA

Monthly prices of commodities were tabulated from all available sources. Price quotations nearest the middle of each month were tabulated from newspapers. In a number of instances, particularly during the earlier years, only one quotation per month was available. The average of the high and the low price of any one commodity when quoted, was taken to represent the monthly price of that commodity. The longest and most continuous series of quotations of the various commodities obtainable from one source was finally tabulated. The gaps, occasioned by missing quotations for one month or more, were filled in from other newspapers at New York City.

In addition to newspaper quotations, prices were obtained from the account books of eighteenth-century merchants. Quotations nearest the 5th, the 15th, and the 25th of each month were copied from the account books, and the arithmetic mean of the three quotations was taken to represent the monthly price. These series were, on the whole, rather unsatisfactory, and no attempt was made to construct an index.

<sup>51</sup> Taylor, G. R. Wholesale commodity prices at Charleston, South Carolina. *Journal of Economic and Business History*, vol. 4, no. 2, February, 1932.  
Channing, E. *History of the United States*, vol. 2, p. 520. 1910.

Many of the account books covered only a few years, and a number of them were from merchants outside of New York City. Except in a few isolated cases, it was not practicable to fill in the missing newspaper quotations from account books. In general, satisfactory quotations from account books were not available for the periods during which newspaper quotations were not available.

#### THE BASE PERIOD

The 36-month period from January, 1798, to December, 1800, was adopted as the most suitable upon which to base the index. Subsequently, the index numbers have been converted to the 1910-14 base to conform to the base used in the Warren and Pearson index from 1797 to 1932 presented in table 1.

Various factors influenced the choice of the three years 1798 to 1800 as the base: (1) Prices during this period were relatively stable. (2) The index of wholesale prices increased from 122 in 1798 to 126 in 1799 and to 129 in 1800, when 1910-1914 is taken as 100. (3) The relatively large number of commodities, as well as the variety of commodities, for which prices were published regularly during the last decade of the eighteenth century, made it possible to construct group index numbers for the eleven years 1787 to 1797. (4) In addition an important consideration in the choice of the base period was the satisfactory linking of this index with the Warren and Pearson index of the 1910-14 base.

#### GROUP INDEXES FROM NOVEMBER, 1786, TO DECEMBER, 1800

Because of the relatively large number of commodities from November, 1786, to the end of the century, and the small number during and prior to the American Revolution, group indexes were prepared for the later period before attention was given to the earlier period. Monthly quotations of wholesale prices for 71 series, representing 53 different commodities, were available during the greater part of this period.

No prices current at New York City were available for the following periods: January, February, and April to November, 1788; January, 1792, to March, 1793; June, 1796, to September, 1797. No attempt was made to bridge these gaps by interpolation or by quotations from other cities, except for the last-named period. From May 1796, to September, 1797, wholesale prices current at Philadelphia were used.<sup>52</sup> The degree of similarity between the number and type of commodities quoted in both cities, during the latter part of the eighteenth

<sup>52</sup> The prices current at Philadelphia during this period were supplied by Miss Ann Bezanson, to whom the author is gratefully indebted.

century, makes the substitution practicable. A careful study of the prices quoted for each commodity in the two cities was made for overlapping years. In some cases there was practically no difference between the prices quoted at New York and those at Philadelphia, and in these instances the prices current at Philadelphia were used. In other cases it was found necessary to make an adjustment because the quotations were consistently higher or lower in one market as compared with the other.

The method employed by Warren and Pearson in constructing the group indexes and the all-commodity index was adopted, so far as was feasible, for the period from November, 1786, to December, 1800. Warren and Pearson used the same groups as did the United States Bureau of Labor Statistics, and included 11 groups. For November, 1786, to September, 1797, it was possible to construct index numbers for 7 of the 11 groups (tables 35 to 45, pages 84 to 109).

Each group index was constructed separately on the 1798-1800 base, and the monthly price indexes for the different groups were converted to the 1910-14 base. The annual averages were obtained by calculating the arithmetic mean of the twelve monthly indexes.

A comparison of the Warren and Pearson index, with respect to the number of commodities used in each group and their relative importance in 1800, is shown in table 109.

In the farm-products group, only 7 commodities are represented in the earlier period as compared with 19 in the later period, but they are

TABLE 109. NUMBER AND WEIGHTS OF COMMODITIES USED IN THE WARREN AND PEARSON INDEX FROM 1798 TO 1800 AND IN THE 71-COMMODITY INDEX FROM 1787 TO 1800

	Warren and Pearson index		71-commodity index		Per cent of total value of commodities in the Warren and Pearson index included in the index from 1787 to 1800
	Number of different commodities	Total commodities	Number of different commodities	Total commodities	
Farm products.....	15	19	7	7	62
Food.....	23	38	17	24	58
Hides and leather.....	1	1	.....	.....	.....
Textiles.....	11	14	.....	.....	.....
Fuel and lighting.....	3	6	2	4	40
Metals and metal products.....	5	11	5	9	80
Building materials.....	12	17	7	9	20
Drugs and chemicals.....	5	5	.....	.....	.....
Spirits.....	5	8	5	6	100
Miscellaneous.....	5	6	9	12	65
Total.....	85	125	52	71	.....

the more important commodities, constituting 62 per cent of the index from 1787 to 1800. Moreover, if the Warren and Pearson index is adjusted for the number and the weights of commodities that have been included in both the farm-products and the foods group—that is, the number of duplicate commodities—then more than 75 per cent of the commodities by weight are continued in the earlier index. The farm-products group from 1787 to 1800 is, therefore, representative of the group subsequent to 1800.

The foods group is represented by 24 commodities as compared with 38 in the later index, and, if differences in grade of the same commodities are ignored, 58 per cent of the final index is continued in the index from 1787 to 1800. The large number of commodities comprising this group adds to the stability of this index.

The fuel-and-lighting group does not include coal, which has a weight of 50 per cent in the Warren and Pearson index. The movement of prices of this index with and without coal was much the same from 1798 to 1800.

The commodities comprising the metals-and-metal-products group are representative of the group in the earlier index.

Since the lumber quotations available were for pipe staves and hog-head staves, they were used to represent lumber in the building-materials index. This group, nevertheless, exhibited a price movement from 1798 to 1800 similar to that of the group on the broader commodity base.

The commodities included in the spirits index are representative of the group from 1787 onward.

Of the commodities by weight in the miscellaneous-group index, 65 per cent are included in the index from 1787 to 1800. A few commodities were added to this group—namely, furs, indigo, and feathers. This addition did not affect the price movements of the group to any great extent, but account is taken of this fact by giving the group a relatively small weight in the final index.

The Warren and Pearson basis of weighting the individual commodities in the various group indexes was adhered to from 1787 to 1800. As far as was feasible, the same weights were used for this period. The commodities comprising each group index, and the weights used from November, 1786, to December, 1800, are given in table 110. A comparison of the group indexes for 1798, 1799, and 1800, as calculated by the author and by Warren and Pearson, is shown in table 111.

The 71-commodity index is similar to the Warren and Pearson index on the 1910-14 base.



TABLE 110. WEIGHTS OF INDIVIDUAL COMMODITIES, 1786 TO 1800

Commodity	1786-1787	1788-1800	1786-1800	Commodity	1786-1787	1788-1800	1786-1800
<b>arm products:</b>				<b>Metals and metal products:</b>			
Corn.....			25.0	Iron, pig.....	25.0	18.0	.....
Oats.....			6.0	country bar, refined.....	25.0	15.0	.....
Rye.....			6.0	Russia.....		10.0	.....
Wheat.....			30.0	Swedes.....		10.0	.....
Tobacco.....			20.0	Shot.....	10.0	10.0	.....
Flaxseed.....			3.0	Steel, German.....	20.0	15.0	.....
Cotton.....			10.0	Nails, American, 10d to 20d.....		7.0	.....
<b>Total.....</b>			<b>100.0</b>	Nail rods.....	10.0	8.0	.....
				Lead, in bars.....	10.0	10.0	.....
<b>oods:</b>				<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>	.....
Bread, ship.....	7.0	7.0	.....	<b>Building materials:</b>			
Butter.....	8.0	8.0	.....	Staves, white oak hoghead.....	30.0	25.0	.....
Cheese, English.....	4.0	4.0	.....	white oak pipe.....	30.0	25.0	.....
Coffee.....	4.0	4.0	.....	Oil, linseed.....	10.0	10.0	.....
Cocoa.....	0.3	0.3	.....	Lead, white.....	15.0	8.0	.....
Fish, herring.....	3.0	3.0	.....	white in oil.....		10.0	.....
masakerel.....	3.0	3.0	.....	Glass, American, 8 x 10.....		10.0	.....
Flour, superfine.....	14.0	11.0	.....	Tar.....	5.0	5.0	.....
common.....	14.0	11.0	.....	Pitch.....	5.0	5.0	.....
rye.....		1.0	.....	Turpentine.....	5.0	5.0	.....
Hams, saltpeter.....	5.0	5.0	.....	<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>	.....
Beef, prime.....	10.0	15.0	.....	<b>Spirits:</b>			
Fork, mess.....	16.0	8.0	.....	Brandy, French.....			10.0
cargo.....		8.0	.....	Rum, Windward Island.....			25.0
Molasses.....	2.0	2.0	.....	Gin, Holland.....			20.0
Salt, Liverpool.....	1.3	1.0	.....	Spirits, Jamaica.....			25.0
Pepper.....		0.3	.....	Wine, port.....			10.0
Pimento.....	0.2	0.2	.....	Madeira.....			10.0
Nutmeg.....	0.2	0.2	.....	<b>Total.....</b>			<b>100.0</b>
Sugar, loaf.....	2.5	2.5	.....	<b>Miscellaneous:</b>			
muscovado.....	2.5	2.5	.....	Soap, castile.....	20.0	20.0	.....
lump.....	2.0	2.0	.....	common.....	5.0	5.0	.....
Tea, bohea.....	0.5	0.5	.....	Ashes, pearl.....		20.0	.....
Hyson.....	0.5	0.5	.....	pot.....	40.0	30.0	.....
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>	.....	Beeswax.....	3.0	3.0	.....
<b>uel and lighting:</b>				Indigo, French.....	5.0	5.0	.....
Candles, sperm.....			30.0	Carolina.....	5.0	5.0	.....
mold.....			30.0	Beaver.....	5.0	5.0	.....
dipped.....			30.0	Otter.....	5.0	5.0	.....
Oil, whale.....			10.0	Muskat.....	4.0	4.0	.....
<b>Total.....</b>			<b>100.0</b>	Marten.....	5.0	5.0	.....
				Feathers.....	3.0	3.0	.....
				<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>	.....

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TABLE 111. COMPARISON OF THE INDEX NUMBERS CALCULATED BY THE AUTHOR AND BY WARREN AND PEARSON FROM 1798 TO 1800 (1910-14 = 100)

	1798		1799		1800	
	Warren and Pearson index	71-commodity index	Warren and Pearson index	71-commodity index	Warren and Pearson index	71-commodity index
Farm products.....	93	90	98	99	99	100
Foods.....	145	147	147	148	157	154
Hides and leather.....	65	.....	62	.....	62	.....
Textiles.....	226	.....	227	.....	225	.....
Fuel and lighting.....	131	138	150	149	159	153
Metals and metal products.....	304	307	310	311	322	317
Building materials.....	51	46	51	50	51	56
Drugs and chemicals.....	442	.....	523	.....	427	.....
Spirits.....	26	26	24	24	25	25
Miscellaneous.....	177	177	206	197	194	195
Weighted wholesale index...	122	122	126	126	129	130

THE 7 -COMMODITY INDEX NUMBERS OF WHOLESALE PRICES FROM NOVEMBER, 1786, TO DECEMBER, 1800

The group weights used in constructing the index of wholesale prices from 1786 to 1800, and those used by Warren and Pearson, are shown in table 112.

TABLE 112. COMPARISON OF THE GROUP WEIGHTS USED IN THE WARREN AND PEARSON AND THE 71-COMMODITY INDEX

	Group weights, Warren and Pearson, 1800*	Group weights from December, 1788, to December, 1800	Group weights from November, 1786, to December, 1787
Farm products.....	35	30	30
Foods.....	27	40	40
Hides and leather.....	5	.....	.....
Textiles.....	8	.....	.....
Fuel and lighting.....	4	6	6
Metals and metal products.....	4	6	5
Building materials.....	10	8	8
Drugs and chemicals.....	0.5	.....	.....
Spirits.....	5	8	10
Miscellaneous.....	1.5	2	1
Total.....	100	100	100

\* Table 83, page 164.

In weighting the various group indexes, due consideration was given to a number of factors, the more important of which were: (1) the weights assigned to these groups for 1800 in the Warren and Pearson index; (2) the probable trend in the relative importance of these groups during the last fourteen years of the eighteenth century; (3) the type of commodities which make up the index before the American

Revolution; (4) the number and type of commodities included in the various groups, and their completeness and stability.

It is evident that a relatively cheap product should be given a greater weight than a product which is scarce and relatively high-priced. This is based on the fact that there is a greater general use of inexpensive products, and they play a more important rôle in commerce and trade than do high-priced products. Spirits and lumber were very cheap in the eighteenth century as compared with metals and metal products.

THE 15-COMMODITY INDEX NUMBERS OF WHOLESALE PRICES FROM  
1720 TO 1786

For the period from 1720 to 1786 it was not possible to construct group indexes, because prices were available for only a few commodities. The number of commodities decreased very rapidly in the earlier years, varying from about 11 for the first years to about 16 during the American Revolution period. New commodities were added, and others discontinued, at varying intervals during this period; but whenever such an addition or omission in the index occurred, care was taken that the index was not disturbed. The index is based largely on foods (table 113).

TABLE 113. WEIGHTS USED IN 15-COMMODITY INDEX, 1720 TO 1787\*

	1720	1730	1740	1750	1760	1770	1780	1787
Corn.....	10	.....	10	10	.....	10	10	10
Wheat.....	20	30	20	20	20	20	20	20
Flour.....	10	10	10	10	10	10	10	10
Bread, brown.....	9	9	9	8	10	10	10	10
middling.....	1	1	1	1	.....	.....	.....	.....
milk.....	.....	.....	.....	1	.....	.....	.....	.....
white.....	1	1	1	1	.....	.....	.....	.....
Beef.....	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Pork.....	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Chocolate.....	.....	.....	.....	.....	1	1	1	.....
Coffee.....	.....	.....	.....	.....	.....	.....	6	4
Salt.....	.....	.....	.....	.....	1	0.5	.....	.....
Salt, fine.....	2	.....	2	2	1	1.0	1.5	2
coarse.....	.....	.....	.....	.....	.....	0.5	0.5	.....
Sugar, muscovado.....	8	8	8	8	3	3	4	3
single, refined.....	.....	.....	.....	.....	3	3	3	3
Tea, bohea.....	.....	.....	1	2	2	2	.....	2
Molasses.....	5	7	4	3	2	2	3	4
Rum, West India.....	.....	.....	.....	.....	3	3	3	6
New England.....	9	9	9	5	4	4	3	.....
Beeswax.....	.....	.....	.....	.....	1	1	.....	1
Oakwood.....	.....	.....	.....	.....	2	2	.....	.....
Nutwood.....	.....	.....	.....	.....	2	2	.....	.....
Total.....	100	100	100	100	100	100	100	100

\* The weights given are those for the beginning of every decade.

Since the information relative to the importance of the various commodities that entered into the domestic and the international trade of

the Colony was rather fragmentary, the weights assigned to these commodities were in many cases arbitrary. The locally produced products, particularly corn, wheat and its products, beef, and pork, undoubtedly constituted the main produce of the Colony; they have accordingly been given a weight of about 75 per cent in the index, and the imported commodities a weight of about 25 per cent.<sup>53</sup>

Using a 14-months overlap, November, 1786, to December, 1787, it was possible to convert the 15-commodity index to the 71-commodity index. In 1787 both indexes were at the same level, 90, when 1910-1914 is taken as 100. The trustworthiness of the 15-commodity index is indicated by the fact that when this index is projected to 1800 it is substantially the same as the 71-commodity index from 1787 to 1800.<sup>54</sup>

#### PRICE FLUCTUATIONS FROM 1700 TO 1720

The early history of New York City and New York Colony indicates that there was considerable interest in cereal production at that time. In 1680 a measure was passed by the Governor and Council to the effect that no flour was to be bolted and packed for export except under inspection at New York City. This measure tended to raise the quality of exported flour.<sup>55</sup> The monopoly came to an end in 1694, with the repeal of the Bolting Act. As a result, the quality of the flour deteriorated, and the price of New York flour at Barbados and the Sugar Islands of the West Indies was reported to be lower than the price of flour from Pennsylvania and other sources.<sup>56</sup>

A scarcity of bread occurred in 1696, and the Governor and Council prohibited the export of corn.<sup>56</sup> The development of New York City was retarded as a result of the repeal of the Bolting Act in 1694, and even as late as July, 1708, the effects of the repeal were still felt.<sup>56</sup>

Prices of flour and bread appear to have been high during the latter part of the seventeenth century and for certain years during the first

<sup>53</sup> An unweighted relative index also was prepared. The price fluctuations of the two indexes were similar. The unweighted index fluctuated on a higher level than did the weighted index. The unweighted index was discarded, since the proportionate weighting of certain commodities—for example, tea, which was relatively high in price during the eighteenth century—as well as the discontinuance or the addition of certain commodities at irregular intervals, made this index less satisfactory. Moreover, the important commodities should be assigned a greater weight. Monthly quotations for these commodities are available over a long period of time. The stability of the weighted index is thereby materially affected.

<sup>54</sup> An index number of the domestic products was constructed for the period from 1720 to 1791. This index number includes the following six groups and their weights: corn, 15; wheat, 25; flour, 15; brown bread, 15; beef, 15; pork, 15. The weight of wheat was increased by the weight assigned to corn when no quotations for corn were available.

An index number of imported products also was constructed for the period from 1720 to 1791, including the following four commodities with their weights: muscovado sugar, 40; West India rum, 30; molasses, 20; salt, 10. Prior to 1745, New England rum was substituted for West India rum. In both indexes, constant weights were used throughout.

<sup>55</sup> Stokes, I. N. Phelps. *The Iconography of Manhattan Island*, vol. 1, p. 173, and vol. 4, p. 384. 1915, 1922.

<sup>56</sup> Stokes, I. N. Phelps. *The Iconography of Manhattan Island*, vol. 4, p. 395, 462, 468. 1922.

decade of the eighteenth century.<sup>56</sup> Data obtained from the account books of New York City merchants indicate that the prices of flour and bread were high in 1699 and low in 1701. In 1706, prices were again low, but they increased toward the end of the year and were definitely higher in 1707. In 1708 and 1709, prices were probably the lowest during this decade. Thereafter the advance in prices was relatively slow, and it was not until the second half of 1713 that prices increased rapidly. They reached a peak in December, 1713, and were relatively high in 1714.

The account-book prices of other commodities indicate a downward trend from about 1700 to about 1708 and a subsequent rise from 1708 to 1714. Prices of rum, sugar, molasses, cocoa, and wine followed the general movement of flour and bread prices.

Queen Anne's War, between England and France from 1702 to 1713, was concluded by the Peace of Utrecht in 1713. The relatively high prices in 1714 were due in part to the exports of commodities immediately following the cessation of hostilities.<sup>57</sup>

The value of trade between New York and Great Britain more than doubled from 1713 to 1714, and remained relatively high until 1718.<sup>58</sup> The wars in Europe and their repercussions on the American Colonies from 1700 to 1775, however, appear to have had little effect on the industrial welfare of the Colonies,<sup>59</sup> and production and trade were not greatly hampered.<sup>60</sup>

It is not possible to form a definite idea of the movement of prices for the six years from 1715 to 1720. The small amount of suggestive information that can be obtained from the account books, however, tends to indicate that prices fell during this period, and were relatively low for certain commodities such as corn, peas, butter, iron, nails, and osnaburg linen. Prices of otter, molasses, and rum advanced during the period. It may have been possible that prices on the whole were somewhat higher in the early part of the decade as compared with the latter part, the highest period being that immediately following the conclusion of peace in 1714.

<sup>56</sup> Stokes, I. N. Phelps. *The Iconography of Manhattan Island*, vol. 4, p. 395, 462, 468. 1922.

<sup>57</sup> In *Historical View of the Domestic Economy of Great Britain and Ireland*, by G. Chalmers, p. 324, it is stated: "It has been shown that the year of profound peace which immediately succeeds the conclusion of a lengthened war, always exhibits a great exportation, because every merchant makes haste to get rich: Thus 1698, 1714, 1749, 1785, and 1802 form epochs of great relative traffic."

<sup>58</sup> Johnson, E. R. *History of domestic and foreign commerce of the United States*, vol. 1, p. 120. 1915.

<sup>59</sup> Johnson, E. R. *History of domestic and foreign commerce of the United States*, vol. 1, p. 85. 1915.

<sup>60</sup> Tooke, Thomas. *Thoughts and details on high and low prices of the last thirty years*, part 2, section 2, p. 13, and part 3, section 2, p. 9-20. 1823. Tooke discounts the effect of wars as causing a rise of prices of agricultural products, particularly wheat, in England, and lays emphasis on the effect of seasons and cycles of relatively high and low production. He states that the period from 1692 to 1713 was one of relatively low wheat production in England, and consequent high prices.

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COMPARISON OF PRICES AT NEW YORK CITY, CHARLESTON, PHILADELPHIA, AND BOSTON

From 1750 to 1774, the movement of prices at New York City was fairly similar to that at Philadelphia, as reported by Warren and Pearson (table 114). Prices rose about 25 to 30 per cent.

TABLE 114. INDEX NUMBERS OF WHOLESALE PRICES AT NEW YORK CITY, AT CHARLESTON, SOUTH CAROLINA, AT PHILADELPHIA, PENNSYLVANIA, AND AT BOSTON, MASSACHUSETTS, FROM 1720 TO 1800

(The index is an unweighted index of relatives. Indexes in parenthesis are based on data for part of the year only)

	New York		Charleston †	Philadelphia		Boston ¶
	Variable commodity index*	10-commodity index †		Warren and Pearson §	Roelise	
Base .....	1910-14	1910-14	1762-1774	1720-29	1791	July-Dec., 1802
1720.....	(55)	(59)	.....	97	.....	.....
1721.....	(52)	(55)	.....	87	.....	.....
1722.....	.....	.....	.....	90	.....	.....
1723.....	.....	.....	.....	82	.....	.....
1724.....	.....	.....	.....	100	.....	.....
1725.....	.....	.....	.....	117	.....	.....
1726.....	.....	.....	.....	108	.....	.....
1727.....	.....	.....	.....	108	.....	.....
1728.....	.....	.....	.....	110	.....	.....
1729.....	.....	.....	.....	103	.....	.....
1730.....	.....	.....	.....	.....	.....	.....
1731.....	.....	.....	.....	96	.....	.....
1732.....	.....	.....	79	93	.....	.....
1733.....	.....	.....	80	97	.....	.....
1734.....	.....	.....	108	103	.....	.....
1735.....	.....	.....	105	101	.....	.....
1736.....	.....	.....	96	98	.....	.....
1737.....	.....	.....	117	107	.....	.....
1738.....	.....	.....	(125)	107	.....	.....
1739.....	.....	.....	84	100	.....	.....
1740.....	.....	.....	77	99	.....	.....
1741.....	.....	.....	97	120	.....	.....
1742.....	.....	.....	85	121	.....	.....
1743.....	.....	.....	70	117	.....	.....
1744.....	.....	.....	64	113	.....	.....
1745.....	.....	.....	46	113	.....	.....
1746.....	.....	.....	45	113	.....	.....
1747.....	.....	.....	69	126	.....	.....
1748.....	.....	.....	88	148	.....	.....
1749.....	.....	.....	96	134	.....	.....
1750.....	(68)	(72)	100	134	.....	.....
1751.....	60	62	100	134	.....	.....
1751.....	65	65	83	142	.....	.....
1752.....	66	66	97	143	.....	.....

\* This index includes from 11 to 17 commodities from 1720 to 1786, 71 commodities from 1787 to 1797, and 115 commodities from 1798 to 1800 (table 1, page 6).

† The weighted index includes 10 commodities.

‡ Taylor, G. R. Wholesale commodity prices at Charleston, South Carolina. Journ. economic and business history, vol. 4, no. 2, p. 376. February, 1932.

§ Warren, G. F., and Pearson, F. A. Farm economics, no. 73, November, 1931, p. 1631. (This index is an unweighted average of relative prices.)

|| Roelise, Harold V. Wholesale prices in the United States, 1791-1801. Amer. Statist. Assn. Pubs., vol. 15 (1916-17), p. 845. 1918.

¶ Smith, W. B. Wholesale commodity prices in the United States, 1795-1824. Rev. econ. statist., vol. 9, p. 183. October, 1927.

TABLE 114 (concluded)

	New York		Charleston †	Philadelphia		Boston ‡
	Variable commodity index*	10-commodity index †		Warren and Pearson §	Roelke ‖	
Base.....	1910-14	1910-14	1762-1774	1720-29	1791	July-Dec., 1802
1753.....	65	66	112	137		
1754.....	65	65	86	132		
1755.....	66	67	86	128		
1756.....	66	67	77	129		
1757.....	65	66	78	132		
1758.....	70	70	86	144		
1759.....	79	82	112	159		
1760.....	79	82	92	163		
1761.....	77	77	80	162		
1762.....	87	87	77	178		
1763.....	79	81	92	177		
1764.....	74	71	86	149		
1765.....	72	70	87	146		
1766.....	73	76	100	161		
1767.....	77	78	94	163		
1768.....	74	76	102	162		
1769.....	77	77	104	164		
1770.....	77	77	93	167		
1771.....	79	79	105	178		
1772.....	89	89	137	168		
1773.....	84	84	116	176		
1774.....	76	78	104	176		
1775.....	75	75	(102)	161		
1776.....	88	94				
1777.....	123	131				
1778.....	140	147				
1779.....	226	235				
1780.....	225	233	(137)			
1781.....	216	223	170			
1782.....			(250)			
1783.....						
1784.....			150			
1785.....	92	94	135			
1786.....	90	90	142			
1787.....	90	90	142			
1788.....		78	128			
1789.....	86	85	113			
1790.....	90	98	119			
1791.....	85	88	110			
1792.....					106	
1793.....	(102)				112	
1794.....	108					
1795.....	131				148	115
1796.....	146					116
1797.....	131				159	112
1798.....	122				156	106
1799.....	126				150	108
1800.....	129					110

\* This index includes from 11 to 17 commodities from 1720 to 1786, 71 commodities from 1787 to 1797, and 115 commodities from 1798 to 1800 (table 1, page 6).

† The weighted index includes 10 commodities.

‡ Taylor, G. R. Wholesale commodity prices at Charleston, South Carolina. Journ. economic and business history, vol. 4, no. 2, p. 376. February, 1932.

§ Warren, G. F., and Pearson, F. A. Farm economics, no. 73, November, 1931, p. 1631. (This index is an unweighted average of relative prices.)

|| Roelke, Harold V. Wholesale prices in the United States, 1791-1801. Amer. Statis. Assn. Pub., vol. 15 (1916-17), p. 845. 1918.

¶ Smith, W. B. Wholesale commodity prices in the United States, 1795-1824. Rev. econ. statis., vol. 9, p. 183. October, 1927.

The movement of prices at Charleston, South Carolina, as reported by Taylor, was fairly similar, although the fluctuations were more erratic than at New York City. From about 1745 there was a decided tendency for prices to rise.

The fluctuations in prices at Philadelphia as reported by Roelse, and at Boston as reported by Smith, from 1795 to 1800 were fairly similar to those at New York City.

From 1782 to 1800, the movement of prices in the United States was fairly similar to that in Great Britain (table 5, page 17).

#### CURRENCY

Beginning with January, 1796, quotations were in dollars and cents. Before that date, they were in shillings. When the change was made, 8 shillings were equal to 1 dollar. The index number for December, 1795, was 134; for January, 1796, after shifting to dollars, it was 141; and for March it was 152. Apparently the difference was due to rising prices and not to a shift in the currency.

During the American Revolution there was depreciated paper money, but quotations were not made in this money. Depreciation of the currency gives some indication of what prices were in New York money would have been. In April, 1775, the financial situation of the Colonies was critical. At the outbreak of the war, there was about \$22,000,000 of paper money and from \$6,000,000 to \$12,000,000 of specie in the country.<sup>61</sup> As the Continental Congress had no power to tax the various Colonies, it was not possible to obtain revenue by this method. In the early years of the war, it was impossible to borrow from foreign countries. The only expedient, therefore, was to raise revenue by the issue of paper money. The issues of paper were relatively slow at first, but they increased with the advance of the war. In 1775 Congress issued \$6,000,000, and by 1779 it had issued more than \$90,000,000, of paper money (table 115). The total issue from 1775 to 1779 amounted to \$181,552,380. The various Colonies likewise printed paper money, the total issue of which exceeded that issued by the Continental Congress. The New York Provincial Congress soon abandoned the project of raising funds by taxation and voted an issue of paper money.<sup>62</sup>

During the early years of the war, frantic efforts were made to maintain the value of colonial and congressional paper money, but the huge issues resulted in an inevitable depreciation and in a final repudiation in May, 1781, when paper money ceased to circulate as cash.

<sup>61</sup> Harlow, R. V. Aspects of revolutionary finance, 1775-1783. Amer. historical rev., vol. 35, no. 1, p. 47-68. October, 1929. (Much of what is said in the text on the finances during the American Revolution has been taken directly from this article.)

<sup>62</sup> Harlow, R. V. Aspects of revolutionary finance, 1775-1783. Amer. historical rev., vol. 35, no. 1, p. 128. October, 1929.



TABLE 115. EMISSIONS OF PAPER MONEY BY THE CONTINENTAL CONGRESS AND THE VARIOUS COLONIES DURING THE REVOLUTIONARY WAR, 1775 TO 1783\*

Year	New York	All other Colonies†	Continental Congress	Total emissions
1775.....	\$123,000	\$ 4,617,000	\$ 6,000,000	\$ 10,740,000
1776.....	639,000	11,439,000	19,000,000	31,078,000
1777.....	.....	9,573,000	12,000,000	22,573,000
1778.....	.....	11,518,000	63,500,000	65,018,000
1779.....	.....	17,614,000	90,052,000	107,666,000
1780.....	76,000	66,059,000	.....	66,135,000
1781.....	411,000	123,377,000	.....	123,788,000
1782.....	.....	172,000	.....	172,000
1783.....	.....	1,633,000	.....	1,633,000
Total.....	\$1,249,000	\$246,002,000	\$181,552,000	\$428,803,000

\* Compiled from *Aspects of Revolutionary Finance, 1775-1783*, by R. V. Harlow (Amer. historical rev., vol. 35, no. 1, p. 47-68, October, 1929). The emissions include bills of credit, treasury notes bearing interest, new emissions, and paper issued for refunding old certificates. The emissions in the various Colonies have all been converted from pounds to dollars on the basis of the following valuation of the dollar in the various Colonies: New England and Virginia, 6 shillings; New York and North Carolina, 8 shillings; Georgia, 5 shillings; and elsewhere, 7 shillings and sixpence.

† These are New Hampshire, Massachusetts, Rhode Island, Connecticut, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia.

It is difficult to say when the depreciation actually began in New York, but, because of the restricted output of paper, it probably occurred at a much later date than it did in other Colonies. When the depreciation did begin, the legal-tender acts were of no avail toward the end of 1777, New York passed laws fixing the prices of certain commodities.<sup>62</sup>

As the depreciation of the currency progressed, each Colony set up a so-called table, or scale, which reported the specie value of continental and colonial bills. These tables varied with the different Colonies on the basis of the value assigned to the paper at different times. The date set for the beginning of the depreciation was January, 1777, but there is clear evidence of depreciation in some Colonies as early as 1775. These scales of depreciation lagged behind the true exchange value as shown by merchants' account books in the Colonies of Pennsylvania and Virginia.

By March, 1780, the scale of depreciation for continental money stood

<sup>62</sup> In December, 1777, it was ordered that no more than the following prices should be paid for farm produce: "a bushel of wheat, weighing 55 pounds, 12 shillings; a bushel of rye or Indian corn, 7 shillings; merchantable wheat flour, 35 shillings per hundred weight; rye flour, 20 shillings per hundred weight; Indian meal, 17 shillings per hundred weight."

"To encourage farmers to bring their hay, &c. to New York," the prices offered in December, 1778, for good upland hay were 8 shillings per hundredweight; for Indian corn, 10 shillings per bushel; and for oats, 7 shillings per bushel.

In July, 1779, the price of a two-pound loaf of bread was regulated at 14 coppers, but it was increased on February 18, 1780, from 14 to 15 coppers, which was still below the market price. In March, 1780, it was again fixed at 14 coppers per two-pound loaf, and in November, 1780, it was raised to 16 coppers. In January, 1782, a somewhat different policy was adopted, for in that month a loaf of bread had to weigh 2½ pounds and sell for 14 coppers. In May, 1783, the weight of the loaf was ordered to be 3 pounds, but the price remained the same.

(Stoker, I. N. Phelps. The Iconography of Manhattan Island, vol. 5, p. 1059, 1079-1080, 1089, 1103, 1104, 1123, 1142, 1162. 1926.)

at 40:1, and the rate was not changed until May of the following year, when continental bills were practically worthless. In Pennsylvania, by the act of the Assembly, the rate was fixed in March, 1780, at 61.5:1 and was increased to 75:1 by May of the following year. The actual depreciation, however, as shown by a Philadelphia merchant's account book, was much greater. The rate of depreciation increased from 2.5:1 to 200-500:1 for the same period, and for Virginia from 50:1 to 150:1.<sup>64</sup>

Depreciation of New York Colony bills was much slower than that of Pennsylvania bills, which probably suffered a much greater depreciation than did New York bills owing to the greater amount of paper printed in Philadelphia. In February, 1781, the rate for New York Colony bills stood at 40:1, and by November of that year it was 128:1.<sup>65</sup> After the continental money ceased to pass as currency on May 31, 1781, it was merely an article of speculation, selling for 500-1000:1.

#### AGRICULTURAL DEVELOPMENT AND TRADE OF COLONIAL NEW YORK

New York Colony had attained some commercial significance by approximately the middle of the seventeenth century, when it was still in possession of the Dutch. The great interest of the Dutch, however, was in the fur trade, which was the most important branch of trade in New York at that time.<sup>66</sup>

Cereal production, particularly the production of wheat, was the main agricultural enterprise in New York, and developed rapidly from 1700 to 1800. The commercial and agricultural development of New York was therefore closely associated with the production of and the trade in wheat and its products.

New York City constituted practically the only outlet for the produce of the Colony, and for much of the produce grown in the adjacent territory. It ranked second only to Philadelphia as a shipping point for grain, flour, and breadstuffs. New York and Pennsylvania in particular were commonly referred to as the "bread colonies."<sup>67</sup>

The trade of New York at the beginning of the eighteenth century was not limited to the export of bread and flour to the West Indies. The Colony produced also beef, pork, and bacon for export to the West Indies, and received in return rum, sugar, molasses, cocoa, indigo, cochineal, logwood, and "pieces of eight," or Spanish dollars. To England she sent skins of all sorts, whale oil, and bone; and to a lesser

<sup>64</sup> Webster, P. *Political essays*. Preface, p. iv. 1791.

<sup>65</sup> Harlow, R. V. *Aspects of revolutionary finance, 1775-1783*. *Amer. historical rev.*, vol. 35, no. 1, p. 47-68. October, 1929. (Citing laws of the State of New York, vol. 1, p. 328, 406-407.)

<sup>66</sup> Jernegan, M. W. *The American Colonies, 1492-1750*, p. 216. 1929.

<sup>67</sup> Johnson, E. R. *History of domestic and foreign commerce of the United States*, vol. 1, p. 71. 1915.

<sup>68</sup> Johnson, E. R. *History of domestic and foreign commerce of the United States*, vol. 1, p. 78, 87. 1915.

extent, naval stores (including pitch, tar, rosin, turpentine, masts, and lumber), flax, and hemp.<sup>68</sup>

The development of New York Colony, however, was slow, and lagged behind that of other Colonies. This was owing primarily to the great interest of the Dutch in the fur trade, the monopolistic system of private landholding by a few great landholders, and the restrictions on trade which were continued for some time after the English had taken

TABLE 116. ESTIMATED POPULATION OF NEW YORK CITY AND COUNTY, NEW YORK COLONY,\* AND THE THIRTEEN COLONIES,† FROM 1664 TO 1800

Year	New York City and County	New York Colony	The thirteen Colonies
1664.....		7,000 <sup>a</sup>	
1689.....		16,000 <sup>b</sup>	220,000 <sup>b</sup>
1700.....			175,000 <sup>c</sup>
1703.....	4,436 <sup>d</sup>		
1712.....	5,840 <sup>d</sup>		
1720.....			435,000 <sup>e</sup>
1723.....	7,240 <sup>f</sup>		
1731.....	8,622 <sup>f</sup>		
1746.....	11,717 <sup>f</sup>		
1754.....			1,000,000 <sup>g</sup>
1760.....			1,596,000 <sup>g</sup>
1771.....	21,863 <sup>h</sup>		
1775.....		250,000 <sup>i</sup>	2,026,674 <sup>j</sup>
1783.....	23,614 <sup>k</sup>		2,389,000 <sup>l</sup>
1790.....	33,131 <sup>m</sup>	340,120 <sup>n</sup>	3,929,214 <sup>n</sup>
1800.....	60,515 <sup>m</sup>	589,051 <sup>n</sup>	5,308,483 <sup>n</sup>

\* New York State after the Revolutionary War.

† The Colonies are New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia.

<sup>a</sup> Jernegan, M. W. *The American Colonies, 1492-1750*, p. 216. 1929. (In 1664, when the Dutch lost their colony. In 1689, white population.)

<sup>b</sup> Jernegan, M. W. *The American Colonies, 1492-1750*, p. 239. 1929. (Total English [white] population.)

<sup>c</sup> Johnson, E. R. *History of domestic and foreign commerce of the United States*, vol. 1, p. 67. 1915. (Total black and white population between 250,000 and 300,000.)

<sup>d</sup> Stokes, I. N. Phelps. *The iconography of Manhattan Island*, vol. 1, p. 190. 1915.

<sup>e</sup> Johnson, E. R. *History of domestic and foreign commerce of the United States*, vol. 1, p. 86. 1915. (Citing Doyle, J. A., *English Colonies in America*, vol. 5, p. 484, 339,000 white and 96,000 black.)

<sup>f</sup> Stokes, I. N. Phelps. *The iconography of Manhattan Island*, vol. 1, p. 191, 193, 196-197. 1915.

<sup>g</sup> Jernegan, M. W. *The American Colonies, 1492-1750*, p. 300. 1929.

<sup>h</sup> Channing, E. *History of the United States*, vol. 2, p. 491-492. 1910. (1,210,000 were white.)

<sup>i</sup> Stokes, I. N. Phelps. *The iconography of Manhattan Island*, vol. 1, p. 331. 1915. (The author states that New York City had been a haven of refuge to Tories [Loyalists] who went into voluntary exile at the end of the war. This largely accounts for the small increase in population from 1771 to 1783.)

<sup>j</sup> MacPherson, D. *Annals of commerce*, vol. 3, p. 559. 1805. (Estimated by Congress in 1775. The author states that this estimate has been considerably exaggerated, and that a more reliable estimate gave the total population at 2,141,307. It is not probable that the number of persons in the American Colonies was less at the conclusion than before the beginning of the war, he states.)

<sup>k</sup> Stokes, I. N. Phelps. *The iconography of Manhattan Island*, vol. 1, p. 331. 1915.

<sup>l</sup> MacPherson, D. *Annals of commerce*, vol. 3, p. 559. 1805. (The population of Georgia is not included in this estimate. Only about 1,700,000 white.)

<sup>m</sup> Stokes, I. N. Phelps. *The iconography of Manhattan Island*, vol. 1, p. 372. 1915.

<sup>n</sup> Statistical abstract of the United States. United States Department of Commerce, 1926, 49th number, p. 6. 1927.

<sup>68</sup> Stokes, I. N. Phelps. *The iconography of Manhattan Island*, vol. 4, p. 453, 462. 1922. (Quoting Lord Cornbury in a letter to the Lords of Trade.)

possession of the Colony.<sup>69</sup> Even up to the middle of the eighteenth century, the development was slow as compared with that which took place from about 1750 to 1775, and particularly with that from 1790 to 1800 (table 116).

The rate of increase in the population of New York City and County from 1703 to 1723 was approximately the same as the rate of increase in the thirteen Colonies from 1700 to 1720. From 1703 to 1746, the population of New York City increased at a compound rate of about 2.2 per cent per annum. From 1746 to 1771, the rate of increase was 2.4 per cent per annum, and from 1771 to the end of the century the annual rate of increase was 3.4 per cent. The most striking increases in population, however, occurred during the last decade of the eighteenth century. From 1790 to 1800, the population of New York City increased at a compound rate of 5.6 per cent per annum, of New York State 5.1 per cent per annum, and of the United States 2.8 per cent per annum.

From 1700 to 1800, the trade of the American Colonies with Great Britain increased, the greatest increase occurring after 1750 (table 117). In this period there was considerable illicit trade.

TABLE 117. VALUE OF EXPORTS AND IMPORTS OF NEW YORK AND THE THIRTEEN COLONIES TO AND FROM GREAT BRITAIN, 1701 TO 1780

Ten-year period	Exports to Great Britain from		Imports from Great Britain by	
	New York*	The thirteen Colonies*	New York*	The thirteen Colonies†
1701-1710.....	£100,000	£ 2,900,000	£ 284,000	£ 267,000
1711-1720.....	200,000	3,800,000	448,000	386,000
1721-1730.....	225,000	5,188,000	658,000	471,000
1731-1740.....	162,000	6,670,000	929,000	660,000
1741-1750.....	174,000	7,059,000	1,518,295	813,000
1751-1760.....	279,000	8,091,000	3,070,585	1,577,000
1761-1770.....	629,000	10,426,000	3,497,000	1,763,000
1771-1780.....	571,000‡	7,436,000‡	2,656,000‡	1,331,000

\* Johnson, E. R. History of domestic and foreign commerce of the United States, vol. 1, p. 120-121. 1915. (Citing Hazard, S., United States commercial and statistical register, vol. 1, p. 4-5. 1840-1842. Ten-year averages computed by the author.)

† Sheffield, J. Observations on the commerce of the American States, App. 9, p. 24. 1784. (The values of exports and imports are from Christmas to Christmas for each ten-year period.)

‡ MacPherson, D. Annals of commerce, vol. 3, p. 518-673. 1805. (The values of exports and imports are from Christmas to Christmas for each ten-year period. No figures for exports from Great Britain to New York for 1775-1776.)

During the first half of the eighteenth century, there was little increase in the value of goods exported from New York to Great Britain. New York had always been an important importing point. After 1750

<sup>69</sup> Jernegan, M. W. The American Colonies, 1492-1750, p. 216. 1929.  
Johnson, E. R. History of domestic and foreign commerce of the United States, vol. 1, p. 77. 1915.

it became a relatively important export point. An unfavorable balance of trade existed continually between New York and Great Britain. A part of the imports from Great Britain to the American Colonies was paid for in slaves, the value of which is not included in the imports from Great Britain.<sup>70</sup> A part was paid for by the triangular trade between the American Colonies, the West Indies, and England. The unfavorable balance of trade with England was paid for by the favorable balance of trade with the West Indies. Remittances to England were made in silver, in bills of credit, or in rum, in this order. Silver which was obtained from the trade with the West Indies was in demand in all the Colonies.

The exports of commodities from New York during the period from July 5, 1765, to July 6, 1766, indicate that wheat, animal products, and lumber were relatively the most important commodities.<sup>71</sup> From the Revolutionary War to 1800, manufacturing increased but did not yet develop to any great extent, and agriculture was still the most important industry.

<sup>70</sup> Sheffield, J. Observations on the commerce of the American States, p. 226. 1784.

<sup>71</sup> New York mercury, March 30, 1767. (The most important commodities listed are: naval stores, 5187 hundredweight; pig and bar iron, 1032 tons; potash and pearl ash, 102 tons; cases, bundles, etc., of furs and skins, 172; copper ore, 80 tons; logwood, fustick, and Nicaragua wood, 22,787 hundredweight; tons of bread and flour, 5519; casks of fish, 3730; barrels of beef and pork, 2941; bushels of grain, 108,666; firkins of butter, 1198; casks of cheese, 80; boxes of soap and candles, 2398; casks of rice, 116; casks of lard, 617; hogsheads of flaxseed, 11,037; also tallow, beeswax, sarsaparilla, ginseng, beer, and starch.)

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