

Striking Points Revealed

Two rather striking points are brought out by the table presented on Page 3. First, it is clear that prices of commodities used by the wealthy have not fluctuated as much as have those consumed by the poorer classes of the population. Second, in most of the period since 1921, the indexes for farmers and agricultural laborers have been running much lower than have the index numbers for urban residents. The reason for this latter difference is largely that a considerable proportion of the living of rural inhabitants is produced on the farm where it is consumed, and, during the last few years, the relatively low prices of agricultural products have caused this fraction of the farmers' living cost to remain at a low level with the result that the entire index has been pulled down. Low-priced farm products have tended also to bring about cheap board for agricultural employees, and hence the index number for this class has likewise been kept at a low level.

The divergence from the United States Bureau of Labor Statistics "cost of living" index of the index series representing expenditures of the wealthier classes is mainly due to the fact that the index numbers for the classes having higher incomes weight more heavily such items as tuition, room and board at college, hotel bills, furs, diamonds, railway passenger fares, servants' wages, theatre seats, pianos, and expensive automobiles, and these items have advanced in price to a lesser extent than have every day necessities.

Retail Price Level

Since many persons will desire to have one index number representing the retail price level for the country as a whole, the five index numbers here given have been averaged to obtain one index number for all classes of consumers. The figures represent average prices for the years to which they apply. In making up this average, the weights used have been as follows:

Agricultural laborers	1
Farmers	2
Families spending \$5,000 per year on consumption goods	2
Families spending \$25,000 per year on consumption goods	1
Urban employees	4

The averages thus obtained are:

Year	Index	Year	Index
1909	.953	1919	1.757
1910	.976	1920	1.980
1911	.970	1921	1.693
1912	.981	1922	1.583
1913	1.000	1923	1.598
1914	1.008	1924	1.602
1915	1.007	1925	1.652
1916	1.091	1926	1.662
1917	1.286	1927	1.620*
1918	1.517		

*Preliminary estimate

Wholesale and Retail Trends Compared

The reader will observe that, in 1920, the retail price level did not rise to anything like the height reached by the wholesale price index numbers, and hence it did not decline as far in 1921. It is interesting to note that the averages have moved very slowly during the last six years, the total increase between 1922 and 1927 being approximately 3.7 per cent. It would seem therefore, that the trend of the general level of retail prices has been increasing at the rate of about 0.75 per cent a year and that, as yet, there is little evidence to indicate the long continued downward trend of the general price level which the decline in wholesale prices during 1926 and 1927 led many persons to predict. True, the indexes for all classes of consumers fell between January 1, 1926 and July 1, 1927 but, only in the case of goods used by farmers, was the decline at all marked. During the last half of 1927, three out of the five indexes moved upward, thus indicating that the decline during the previous eighteen months was probably merely cyclical in nature.

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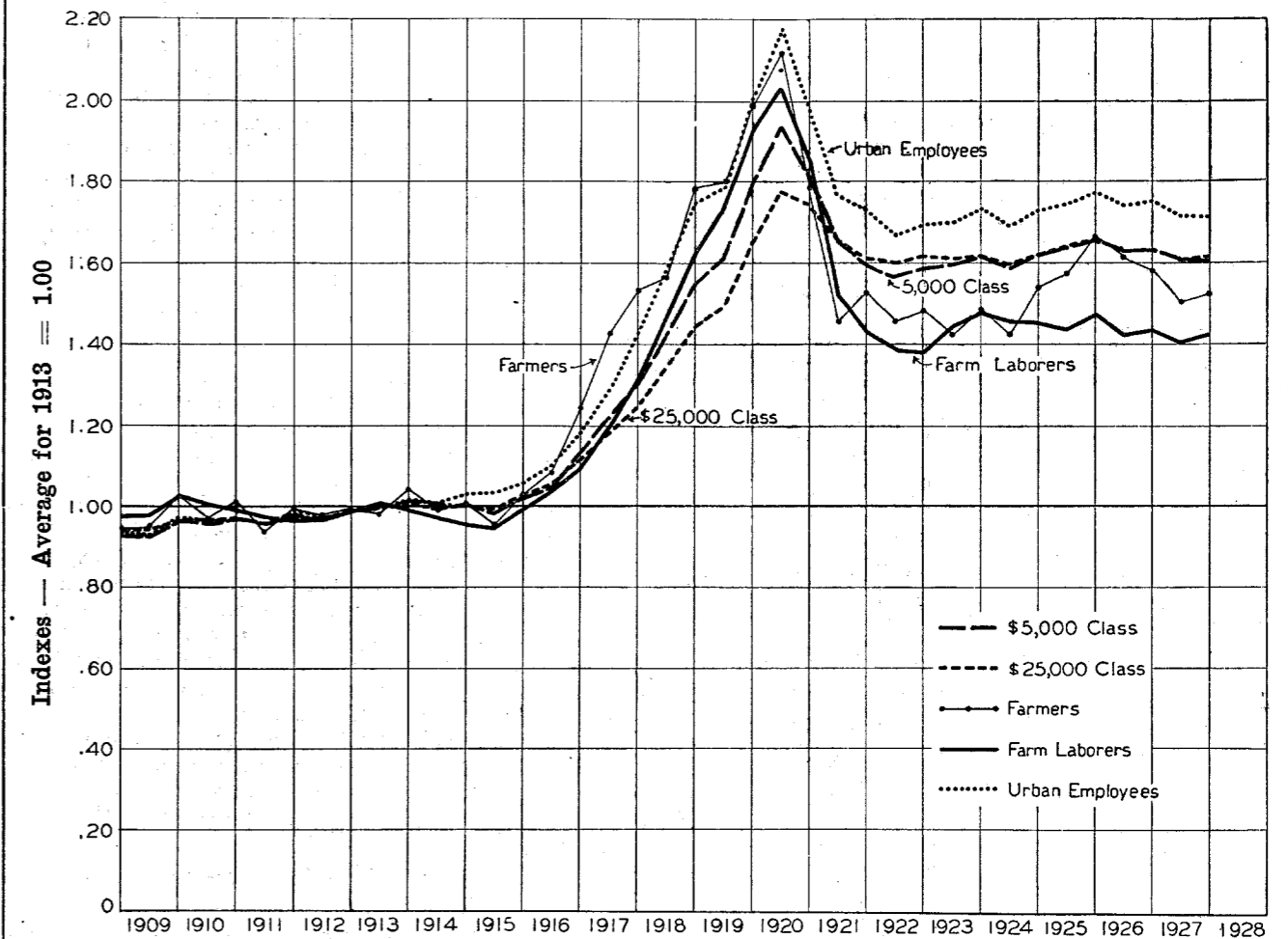
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Changes in the "Cost of Living" 1909-1928

Farm Hands' Dollar Nearest to 1913 Value—Families in \$5,000 a year Group benefit by Price Declines since 1926. Five Indexes Constructed by National Bureau Cover all Important Groups.

This Chart Shows Indexes of the Prices of those Goods Used Respectively by Five Classes of Consumers



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THE purchasing power of the dollar expended by the farm laborers has come closer to the 1913 value than has that of any other of five groups into which the American population has been divided for statistical purposes, according to a preliminary report just presented by Dr. Willford I. King, of the

Research Staff of the National Bureau of Economic Research, to the National Bureau's Executive Committee, and approved for publication today in the National Bureau's News-Bulletin.

Next nearest to the 1913 values are, in the following order, the dollars expended respectively

(Please turn the page)

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Changes in the "Cost of Living" 1909-1928

(Continued from Page 1)

by the Farmers, by Families Spending \$5,000 Annually, and by Families Spending \$25,000 Annually, and farthest away, are the dollars spent by the group designated as Urban Employees.

Continuation of Income Investigation

This study was made as a part of the continuing investigation of the amount and distribution of the National Income upon which Dr. King with his assistants, all under the general direction of Dr. Edwin F. Gay and Dr. Wesley C. Mitchell, Directors of Research of the National Bureau of Economic Research, has been engaged for the past year. The figures presented start with January 1, 1909 and run to and include January 1, 1928.

In response to the demand for one index number representing the retail price level for the country as a whole, Dr. King has averaged, with suitable weights, his five index numbers, producing one index number for all classes of consumers. This index shows that the retail price level rose far less than the wholesale price level during the inflation of 1920 and consequently did not decline as far in 1921.

During the last six years, the averages have moved very slowly, the total increase between 1922 and 1927 being approximately 3.7 per cent.

Text of Report on Price Indexes

The text of Dr. King's report follows:

Most of the price indexes currently published purport to record the movements of wholesale prices. It is often assumed that such index numbers represent the course of prices in general. As a matter of fact, this is far from being the case. Different classes of commodities have price fluctuations which are dominated by different forces and therefore behave in very different ways. Thus, for example, there is no close relationship between the movements of the index numbers representing respectively stock prices, wages, consumers' goods, and commodities at wholesale. Each pursues an independent course.

At first thought, it seems strange that index numbers of prices at wholesale rather than of prices of direct goods, should be the ones most commonly published, for but a limited number of persons are immediately interested in wholesale prices while the entire population are directly affected by the prices of consumers' goods.

Many Difficulties Surmounted

The greater abundance of indexes of wholesale prices appears to arise mainly from the fact that it is a simple matter to secure quotations on commodities at wholesale and hence it has been easy for statisticians to compile index numbers of that type. On the other hand, it is very difficult to obtain satisfactory data covering the field of direct goods, first, because the latter prices are not currently quoted in trade journals; and second, because so many important types of consumers' goods are not standardized.

This lack of standardization is well illustrated by automobiles and by radio receiving sets. Most automobile manufacturers change models every year. Radio equipment is continually being modified. It is, therefore, absolutely impossible to construct a thoroughly dependable index series representing the prices of such articles. A reasonably close approximation is the best that can be hoped for.

Why National Bureau Makes Own Indexes

In presenting estimates of the income of the people of the United States, the Directors of the National Bureau of Economic Research have felt it imperative to reduce nominal money income to terms of purchasing power in order to make possible year to year comparisons. Such a reduction evidently calls for the use of index numbers.

Since the bulk of the income of individuals is spent for direct goods, it seems obvious that, to make the required correction for changes in the price level, it is necessary to employ index numbers of the prices of goods ready for consumption. The only published series of this type available are those prepared by the United States Bureau of Labor Statistics and by the National Industrial Conference Board, respectively.

For the period since 1913, the "cost of living" series prepared by the United States Bureau of Labor Statistics has been used in deflating the incomes of urban employees. That series of index numbers has been extended back by the National Bureau of Economic Research in order to cover the years 1909 to 1912.

While these index numbers typify the movements in the prices of goods used by the urban working classes, they are not necessarily representative of the budgets of other sections of the population, for since the classes having lower incomes spend a much larger percentage of their income for food and a smaller percentage for miscellaneous purposes and servant hire, and since the relative price changes of these different groups of commodities do not closely parallel each other, it follows that the price index representing the expenditures of a wealthy family may differ noticeably from that recording the expenditures of a poor family.

Divided Into Five Economic Groups

It has, therefore, appeared necessary to compute four other index series representing respectively the price changes applicable to the following sections of the population:

1. Agricultural laborers.
2. Farmers.
3. Families spending \$5,000 per year for consumption goods.
4. Families spending \$25,000 per year for consumption goods.

In the construction of the index series here recorded, the separate series for food, clothing, housing, and house furnishings compiled by the United States Bureau of Labor Statistics have been used whenever applicable, but weights have been assigned in accordance with the importance of these items in the budgets of the classes represented.

Table I
INDEXES OF THE PRICES OF CONSUMPTION GOODS
(Base 1913 = 1.00)

Date	Families Spending \$5,000 Annually	Families Spending \$25,000 Annually	Farmers	Farm Laborers	Urban Employees
1909 Jan. 1	.929	.944	.946	.976	.938
July 1	.927	.945	.951	.980	.933
1910 Jan. 1	.961	.969	1.024	1.022	.975
July 1	.959	.969	.971	1.006	.965
1911 Jan. 1	.970	.971	1.012	.991	.972
July 1	.958	.960	.939	.974	.957
1912 Jan. 1	.980	.975	1.000	.967	.991
July 1	.971	.971	.978	.967	.976
1913 Jan. 1	.992	.993	.992	.988	.988
July 1	.997	.999	.983	1.009	.999
1914 Jan. 1	1.013	1.008	1.042	.995	1.015
July 1	1.006	1.000	.993	.974	1.009
1915 Jan. 1	1.001	1.002	1.006	.960	1.030
July 1	.983	.995	.954	.949	1.031
1916 Jan. 1	1.019	1.029	1.024	.993	1.057
July 1	1.050	1.056	1.083	1.036	1.100
1917 Jan. 1	1.139	1.118	1.242	1.094	1.183
July 1	1.223	1.180	1.430	1.197	1.292
1918 Jan. 1	1.301	1.245	1.533	1.316	1.428
July 1	1.419	1.348	1.565	1.474	1.589
1919 Jan. 1	1.550	1.442	1.789	1.622	1.750
July 1	1.611	1.497	1.801	1.733	1.785
1920 Jan. 1	1.791	1.654	1.988	1.926	2.003
July 1	1.940	1.779	2.115	2.032	2.172
1921 Jan. 1	1.816	1.745	1.787	1.861	1.980
July 1	1.657	1.655	1.457	1.522	1.766
1922 Jan. 1	1.593	1.611	1.528	1.432	1.733
July 1	1.567	1.601	1.458	1.392	1.670
1923 Jan. 1	1.587	1.620	1.481	1.376	1.693
July 1	1.596	1.611	1.421	1.447	1.700
1924 Jan. 1	1.612	1.616	1.485	1.476	1.732
July 1	1.585	1.598	1.420	1.456	1.691
1925 Jan. 1	1.621	1.620	1.540	1.452	1.730
July 1	1.635	1.642	1.573	1.438	1.745
1926 Jan. 1	1.657	1.659	1.667	1.477	1.774
July 1	1.632	1.630	1.617	1.423	1.743
1927 Jan. 1	1.632	1.632	1.583	1.437	1.751
July 1	1.605	1.608	1.501	1.403	1.718
1928 Jan. 1	1.602*	1.618*	1.525*	1.422*	1.715

* Preliminary estimates.

Procedure Described in Bureau's Earlier Work

The system of weighting used is described in Table D, p. 26 of *Income in the Various States*. For such goods as books, periodicals, automobiles, automobile tires, gasoline, railroad fare, hotel bills, furs, jewelry, musical instruments, college board and tuition, and servants' wages, it has been necessary to collect price data and construct original series of indexes. The securing of information concerning the wages of servants has proved a task of especial difficulty. At present, data of this type are being obtained from correspondents in all sections of the country.

The five index series are presented in Table I above and in the Chart on Page 1. Because of the difficulties in securing data which are strictly comparable at different dates, the trends of these indexes must be thought of as approximations only. It is, however, believed that the trends are roughly correct and that the short-time fluctuations are recorded with reasonable accuracy.