

# Postwar Economic Perspectives

## 1. Experience After World War I

By W. S. Woytinsky\*

*Postwar trends in national income, business conditions, and employment will establish the setting for planning in every aspect of social security—social insurance as well as public assistance. This article is one of several summarizing the results of a study of such trends, undertaken as an aid in evaluating social security measures. The study makes three approaches to the topic, of which this article, analyzing experience after World War I, represents the first. Following articles will consider possible trends in the light of the economic situation just before World War II and of the wartime economy. As in all BULLETIN articles, the opinions expressed are those of the author and do not necessarily reflect official views of the Social Security Board.*

IN MANY of the economic problems of wartime—such as price control, allocation of strategic materials, renegotiation and cancellation of war contracts, disposition of surplus materials, and the like—study of experience from 1918 to 1920 has furnished valuable guidance. A similar but wider approach is needed in examining present perspectives of postwar employment. Economic dislocations after the earlier major wars are handwriting on the wall, warnings of dangers which this country again confronts.

### The Timing of Postwar Dislocations

In reading these writings, a first clue appears in the timing of postwar economic troubles.

The simplest over-all measure of these troubles is the price index. In the past century, wars have had a profound influence on prices in the United States. Twice the smooth long-range trend of prices has been interrupted by outbursts of inflation—during the Civil War and World War I.<sup>1</sup> Both times the course was similar: prices more than doubled within 3 or 4 years, declined abruptly, halted briefly much above the prewar level, then resumed the downward course, returning to the trend line many years later (chart 1).

The similarity of price variations in the two postwar periods is amazing. In both, an inflationary price rise developed immediately after the war, ended in a brief but violent fall of prices and an economic set-back (in 1867 and 1920–21), and was followed

\*Principal Consulting Economist, Bureau of Employment Security.

<sup>1</sup> A similar tide of inflation occurred in 1812, also during a war.

by a period of expansion that degenerated into a boom and collapsed in deep depression. Until the collapse of 1929, the depression of 1873–79 was regarded as the longest and the most severe in our history. Both times it took about 15 years after the war for prices to return to the prewar level.

Striking as this analogy may appear, it should not be regarded as an inevitable precedent. It does show that a major war may throw a long shadow on the economic life of a nation. The "postwar period" after the Civil War lasted until 1880. After World War I, "postwar dislocations" were not ironed out until 1936. All in all, each period extended over nearly a generation.

### The Phases of Postwar Economy

Both the Civil War and World War I left some maladjustments that were

temporary and more or less superficial, and others that remained in the economy like a hidden infection, with delayed action. Not all the aftermath of war was destructive, however. Both wars stimulated technological progress and expansion of mass production of staple commodities.<sup>2</sup> Economic development after both wars was characterized by acceleration of prewar trends and by violent clashes of inflationary and deflationary forces.

If the length of a full business cycle is measured by the distance between the two low points of factory employment (a simplification of the method recommended by the National Bureau of Economic Research) five cycles may be distinguished in the 20 years following the Armistice in November 1918 (chart 2): February 1919–January 1921, with a peak in March 1920; January 1921–July 1924, with a peak in June 1923; July 1924–January 1928, with a peak in September 1926; January 1928–March 1933<sup>3</sup> with a peak in September 1929; March 1933–June 1938, with a peak in August 1937.

Closer examination reveals that the

<sup>2</sup> Mass production of clothing of standardized size was invented during the Civil War. Assembly lines were introduced in many industries during World War I. Plastics and chemistry have triumphed during World War II.

<sup>3</sup> The second low point of the depression; the preceding low was in July 1932. Since the spell between the two points cannot be described as a distinct cycle, it should be added either to the descending slope of the preceding cycle or to the ascending slope of the following cycle. The writer prefers the first method.

Chart 1.—Variations in wholesale prices, 1850–1945

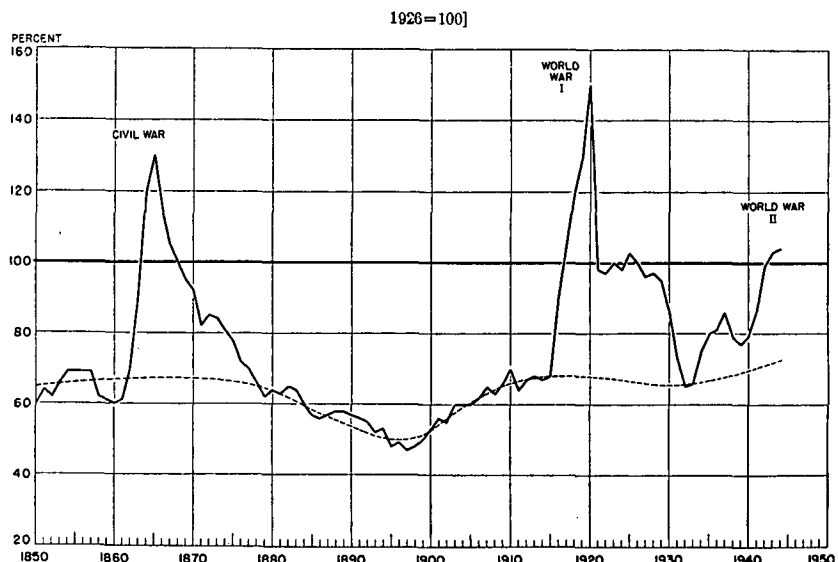
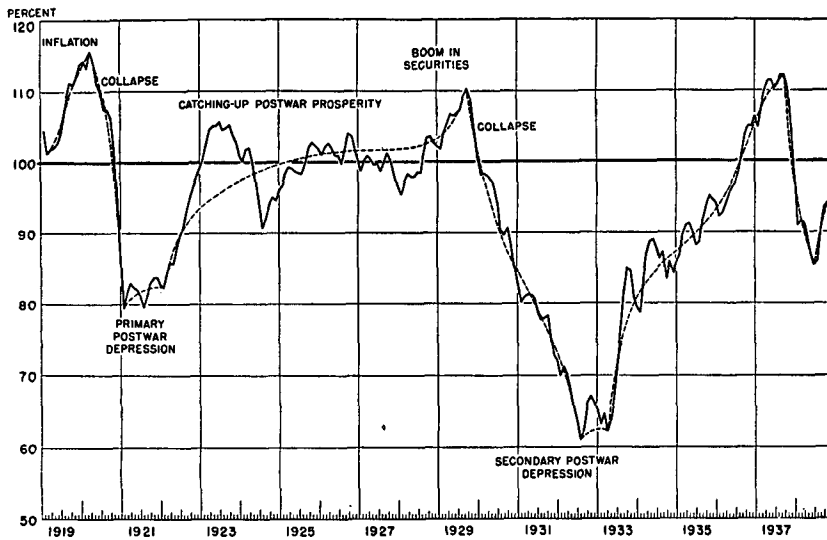


Chart 2.—Variations in employment in manufacturing industries, 1919–38

[Monthly average 1923–25=100]



set-backs from June 1923 to July 1924 and from September 1927 to January 1928 were rather mild in comparison with those in 1920, 1930–32, and 1937. The period from January 1922 to March 1932, therefore, may be regarded as one major cycle with the peak in September 1929, overlapped by minor fluctuations. This simplified pattern of economic ups and downs after World War I is illustrated by the free-hand dotted line in chart 2.

A significant relationship appears between the trend in factory employment (the dotted curve in chart 2) and variation in wholesale prices (chart 1). The rise in employment after the end of the war, with the peak in March 1920, corresponds to the rise and peak of inflation immediately after the Armistice, the contraction of employment in 1921 corresponds to the collapse of wartime price inflation. The expansion period from 1922 to 1929 shown in chart 2 corresponds to the period of relative stability of prices in chart 1, and the descending slope of the employment curve from September 1930 to 1932 parallels a similar movement of prices.

The two major depressions between World Wars I and II have been designated in chart 2 as primary and secondary postwar depressions, while the economic expansion from 1922 to 1929 is termed picking-up postwar prosperity. "Postwar" is used here to indicate that both depressions as well as the era of prosperity between them were consequences of the war. The objective of the following analysis is

to check this contention and to show to what extent World War I was responsible for economic developments in the 1920's and 1930's.

Experience in that decade has been described in great detail by the Committee on Recent Economic Changes of President Hoover's Conference on Unemployment. Wesley C. Mitchell summarized the Committee's report as follows: "What has been happening in the United States is the latest phase of cumulative processes which have dominated western life since the Industrial Revolution got under way. Powerful as these processes are, they were appreciably influenced by the sudden outbreak of the war and by the sudden return of peace. By changing the conditions amidst which the old influences worked, these world shocks contributed to strange results."<sup>4</sup> In the light of more recent events, economic developments in that decade appear still stranger than they appeared when these words were written, shortly before the 1929 collapse.

### The Primary Postwar Depression (1921–22)

Immediately after the Armistice in November 1918, appreciable cut-backs occurred in coal mining and the iron and steel industry as well, of course, as in munitions production and shipbuilding. A feeling of uncertainty was widespread, but, "although workers

<sup>4</sup> *Recent Economic Changes in the United States, Report of the Committee on Recent Economic Changes, of the President's Conference on Unemployment, 1929, Vol. 2, p. 842.*

and employers feared the worst, actually there was little distress."<sup>5</sup>

Early in 1919, Wesley C. Mitchell writes, "there was grave uncertainty regarding the trend of affairs. . . . But, early in the spring, signs of eager demand for consumers' goods began to appear. In April, Federal Reserve agents reported that 'the business community has given up the thought that it may profitably await a further considerable reduction in prices . . .'. The underfed European populations bid eagerly for our foodstuffs; also they were short of raw materials for their mills . . . Domestic demands were scarcely less keen . . . there was need for buying more than the customary quantities of clothing, household furnishings and other semidurable comforts . . . and there was pressing call for more houses . . . For a time customers were willing to pay almost any price for prompt deliveries. Employment had been full for three years, soldiers commonly had substantial sums due them when mustered out, new jobs were readily had at high money wages, everyone seemed tired of economizing. Under these circumstances, 1919 developed into a great trading year."<sup>6</sup>

All in all, contractive forces dominated the first half of this year and expansive forces, the second half.

Essentially, the economic trends in 1919 were determined by the progress of demobilization and reconversion. Quarterly variations in gross national product and its distribution between war and civilian needs in that year, as compared with those in 1918, were as follows:<sup>7</sup>

| Year and quarter         | Annual rates <sup>1</sup> (in billions) |            |               |
|--------------------------|---|------------|---------------|
|                          | Gross national product                  | War output | Nonwar output |
| 1918                     |   |            |               |
| First quarter . . . . .  | \$41.7                                  | \$7.4      | \$34.3        |
| Second quarter . . . . . | 42.3                                    | 9.3        | 33.0          |
| Third quarter . . . . .  | 42.5                                    | 10.3       | 32.2          |
| Fourth quarter . . . . . | 40.5                                    | 11.6       | 28.9          |
| 1919                     |   |            |               |
| First quarter . . . . .  | 40.9                                    | 9.0        | 31.9          |
| Second quarter . . . . . | 40.2                                    | 6.7        | 33.5          |
| Third quarter . . . . .  | 43.0                                    | 4.2        | 38.8          |
| Fourth quarter . . . . . | 42.3                                    | 1.8        | 40.5          |

<sup>1</sup> In terms of 1914 dollars.

<sup>5</sup> Stewart, Stella, *Demobilization of Manpower, 1918–19*, U. S. Bureau of Labor Statistics, Bulletin No. 784, p. 19.

<sup>6</sup> *Recent Economic Changes*, Vol. 2, pp. 849–850.

<sup>7</sup> Kuznets, Simon, *National Product in Wartime*, National Bureau of Economic Research, Inc., No. 44, 1945, p. 138.

After a short spell of contraction, cut-backs in war production were more than offset by the expansion in peacetime industries. Factory employment declined 15 percent from the war peak (third quarter, 1918) to the low point (second quarter, 1919),<sup>8</sup> but the index of average monthly employment in 1919 was only 3 percent below the average for the preceding year (table 1). The apparent absence of unemployment at that time seems to indicate that the lay-offs in munitions industries and release of men from the armed forces were offset by withdrawal of emergency war workers, the pending demand for labor (unfilled jobs), and expanding peacetime production.

The growth of national income in 1919 was due largely to an advance in prices; the great problem was the continuous rise in the cost of living. This was also the immediate cause of the bitter and violent industrial disputes in 1919 and 1920, especially in coal mining, steel, and clothing industries, and in telephone and railroad services. The great trading year 1919 was also a year of runaway inflation and social turmoil.

By the time the inflationary postwar boom reached its peak in the winter of 1919-20, disorganization of the economic system was evidenced by the low output per worker. The available statistics of productivity of labor show either stagnation or decline in technological progress during the war. Wesley C. Mitchell regards these developments as testimony that "both employment and labor were deplorably lax" and suggests that during the war we had "neglected our industrial equipment for civilian production and made but few improvements in methods."<sup>9</sup>

The postwar boom was brief. Stock prices collapsed first, by the end of 1919. The downturn in wholesale prices came 6 months later. By the autumn of 1920 a severe industrial depression had developed. Factory employment dropped 30 percent from March 1920 to July 1921. Unemployment rose above 4 million. Two years after the end of the war, more workers

<sup>8</sup> *Recent Economic Changes*, Vol. 2, p. 464. The Brookmire Economic Service estimated average unemployment in 1919 at 75,000 (as compared with more than 2 million in 1914), defining unemployment as the difference between the "actual employment" and the "probable maximum employment" (or "full employment").

<sup>9</sup> *Ibid.*, p. 851.

Table 1.—Primary postwar depression: Selected business statistics, 1917-22

| Item                               | 1917  | 1918  | 1919  | 1920  | 1921  | 1922  |
|------------------------------------|-------|-------|-------|-------|-------|-------|
| Amount (in billions)               |       |       |       |       |       |       |
| Federal budget: <sup>1</sup>       |       |       |       |       |       |       |
| Receipts.....                      | \$1.1 | \$3.7 | \$5.2 | \$6.7 | \$5.6 | \$4.1 |
| Expenditures.....                  | 2.0   | 12.7  | 18.5  | 6.5   | 5.5   | 3.8   |
| Surplus (+) or deficit (-).....    | -.9   | -9.0  | -13.4 | +2    | +1    | +3    |
| Foreign trade:                     |       |       |       |       |       |       |
| Exports.....                       | 6.2   | 6.1   | 7.9   | 8.2   | 4.5   | 3.8   |
| Imports.....                       | 2.9   | 3.0   | 3.9   | 5.3   | 2.5   | 3.1   |
| National income <sup>2</sup> ..... | 51.3  | 60.4  | 65.9  | 74.0  | 63.4  | 65.9  |
| Index numbers (1918=100)           |       |       |       |       |       |       |
| Manufactures:                      |       |       |       |       |       |       |
| Employment, United States.....     | 98    | 100   | 97    | 98    | 75    | 82    |
| Employment, New York City.....     | 101   | 100   | 97    | 101   | 77    | 101   |
| Production.....                    |       |       |       |       |       |       |
| Prices:                            |       |       |       |       |       |       |
| Wholesale prices.....              | 93    | 100   | 106   | 118   | 74    | 74    |
| Cost of living.....                | 85    | 100   | 116   | 133   | 119   | 111   |
| Stocks (New York Times).....       | 109   | 100   | 118   | 115   | 93    | 113   |
| Number                             |       |       |       |       |       |       |
| Commercial failures:               |       |       |       |       |       |       |
| Monthly average number.....        | 1,154 | 832   | 538   | 740   | 1,638 | 1,973 |
| Amount (in millions)               |       |       |       |       |       |       |
| Monthly average liabilities.....   | \$15  | \$14  | \$9   | \$25  | \$52  | \$52  |

<sup>1</sup> Ordinary receipts and expenditures for year ended June 20.

<sup>2</sup> Total realized income. (*Recent Economic Changes*, Vol. II, p. 763.)

were out of jobs than ever before in the United States.

The origin of the 1921 depression was as clear as that of the boom of 1919. The boom was caused by the run-away inflation, the depression was caused by the boom. The unusual severity of unemployment was due to the protracted rise of prices after the war ended.<sup>10</sup>

Apart from the overdue readjustment of prices, the 1921 depression brought significant changes in organization of industrial enterprises. In view of falling prices and relatively stable wages, manufacturers were compelled to improve the technique of production, to introduce labor-saving devices, to streamline organization.

<sup>10</sup> Mitchell, comparing fluctuations in prices after the first World War with those after the Civil War, shows that in 50 years we had learned little about handling economic problems. "At the close of the Civil War, wholesale prices had fallen from 216 in January, 1865, to 158 in July—a drop of over 25 percent in 6 months. That fall produced no grave crisis . . . Perhaps if the fall had come soon after the Armistice, when many expected it and almost everyone was cautious, it would have passed off much as in 1865. But prices had risen in 1919, the volume of trade had expanded, profits had been high, the preliminary warnings of the Federal Reserve banks had been ineffectual, and, when the turn came, many business enterprises were caught with heavy inventories and heavy future commitments." (*Recent Economic Changes*, Vol. 2, p. 852.)

The "assembly line," which before the war had been the trademark of the automobile industry, was introduced in other branches of production. Industry emerged from the temporary slump vigorous and ready for expansion.

In the summer of 1922, production began to rise. By the end of the year, unemployment dropped almost to the prewar level. Mass unemployment, however, had left bitterness and frustration, particularly among ex-servicemen, who sincerely believed that they had fought to make the world safe for democracy and found themselves without jobs after they came home.

In retrospect we see that the depression of 1921-22 might have been avoided or at least partly ironed out by a far-sighted economic policy in 1918-20. In fact, the immediate aftermath of the war economy could have been liquidated smoothly and more economically, and the necessary technical and administrative improvements in industrial production could have been introduced gradually, without mass lay-offs of workers, if prices had been kept under control during the war and, in particular, after the Armistice. Likewise, if there had not been the continuous rise in living costs, violent clashes between labor and management could have been prevented more readily. Social tur-

moil and the 1921-22 depression had a common source in run-away inflation.

After the inflation had proceeded to the point it reached in the spring of 1920, economic balance could hardly have been restored without drastic deflation. Such a deflation could certainly have been postponed by measures to prolong the inflation. Unless this policy had been carried on indefinitely, however, readjustment would have had to come later, and it is not unlikely that protracted inflation would have brought more costly economic dislocations than the depression of 1920-21. The calamity could have been avoided only by preventive measures. In this sense, the economic losses and suffering during the 1921-22 depression were the price the Nation paid for the inadequacy of economic controls in 1918-20.<sup>11</sup>

### *Postwar Prosperity (1923-29)*

The general trend in 1923-29 was upward, with a steep slope in the early and final stages and a nearly level plateau in the middle (chart 2). The expansion began with the revival after 1922 and ended at the lofty peak in September 1929, on the eve of the stock-market collapse. Despite minor set-backs in 1924 and 1927, this period gave contemporary observers the impression of steady progress and was interpreted as an "era of prosperity." After that prosperity had burst like a soap bubble, it was to be known as a "fools' paradise."

When we speak of full employment in postwar America, we think of something different from the situation in the 1920's. It is therefore necessary to look more closely at the main trends of that time, as they appeared to contemporaries and appear now in the light of subsequent events.

### *Contemporary Views of the Expansion*

When the Committee on Recent Economic Changes completed its report, the glorious era of prosperity was nearing its end and the Committee was not unaware of approaching danger.

"During the later months of the period covered by the survey," it pointed out, "a new tendency has been observed. Investors, as well as a large

body of speculators, have invested through the Stock Exchanges not only their savings, but the proceeds of loans secured through banks and brokers, until the credit structure of the country has been sufficiently weighted to indicate a credit stringency, resulting in an abnormally high rate for call money and an appreciable increase in the rate of interest for business purposes. The consequences of this process cannot be measured at this time, but they are factors in the problem of maintaining economic balance. . . ."<sup>12</sup>

Otherwise, the report describes the economic system as fundamentally sound, full of vitality, capable of practically illimitable expansion. In spite of the "spotty" character of gains, and "difference in activity as between groups and areas and industries, the rising standard of living characteristic of this period was widespread, and has reached the highest level in our national history."<sup>13</sup>

The Committee held that the unprecedented economic expansion in the 1920's was due mainly to technical progress including the widespread development of electric power. Financial conditions also favored expansion of production: "Stimulated by the urge for funds to finance the vast production program of the United States during the World War, the number of shareholders in the country's business enterprises has, it is estimated, grown from about 2 million to more than 17 million; and out of increasing incomes these investors have continued to pour their savings into the stream of credit."<sup>14</sup>

Most fortunate, according to the report, was the synchronizing of a high wage level and a stationary cost of living. "With rising wages and relatively stable prices we have become consumers of what we produce to an extent never before realized."<sup>15</sup>

"In the early postwar period," the report continues, "much of the press and many employers demanded a 'liquidation' of labor. It was freely declared that business could not settle down until wages were brought back to prewar levels. Labor had enjoyed a higher standard of living and naturally opposed wage cuts. This

might have precipitated a period of serious strife, had it not been that leaders of industrial thought, watching the trend of affairs, noted that the result of the continuance of high wages was that the *dammed-up purchasing desires which had been held back during the war on account of the national economic program, burst forth and not only the high wages which were being currently earned but accumulated savings as well were poured into the channels of commerce*. They were quick to grasp the significance of the power of the consumer with money to spend to create an accelerated cycle of productivity. They began consciously to propound the principle of high wages and low costs as a policy of enlightened industrial practice."<sup>16</sup>

"The survey has proved conclusively . . . that wants are almost insatiable; that one want satisfied makes way for another . . . We seem only to have touched the fringe of our potentialities."<sup>17</sup>

"During the past few years equilibrium has been fairly well maintained . . . There has been balance between the economic forces—not perfect balance, but a degree of balance which has enabled the intricate machine to produce and to serve our people."<sup>18</sup>

The Committee's optimism did not keep it from noticing serious maladjustments, however, such as overexpansion of speculation and the unsatisfactory situation of farmers,<sup>19</sup> but its tendency was to underrate the danger of these maladjustments and to over-

<sup>16</sup> Ibid. Italics supplied.

<sup>17</sup> Ibid., pp. XVIII-XIX.

<sup>18</sup> Ibid., p. XXI.

<sup>19</sup> Wesley C. Mitchell describes their situation as follows: ". . . American farmers gained greatly in relative economic status between the beginning and the end of the war, though, even at their peak, agricultural incomes per capita remained far below the national average. The catastrophic drop from 1919 to 1921 wiped out all of this gain and considerably more. If our estimates are reliable, by 1925 farmers had won back to their prewar position in comparison with average per capita incomes in other occupations, but they were by no means so well off as in 1919-20 . . . the not unfavorable income comparison which 1925 makes with prewar years is due to the use of shrinking per capita figures for farmers and swelling per capita figures for the total population. An industry which keeps up its per capita quota of the national income because thousands of workers withdraw from it cannot be regarded as flourishing." (*Recent Economic Changes*, Vol. 2, p. 883.)

<sup>11</sup> *Price-Control Bill: Hearings Before the House Committee on Banking and Currency* (77th Cong., 1st sess.), 1941, revised, Part 1, pp. 225-233.

<sup>12</sup> *Recent Economic Changes*, Vol. 1, p. XII.

<sup>13</sup> Ibid., p. X.

<sup>14</sup> Ibid., p. XII.

<sup>15</sup> Ibid., p. XIV.

rate the stability of the economic system. In brief, the report reflects the widespread conviction in the 1920's that the United States had discovered the philosophers' stone of perpetual prosperity.

### Present View of the Expansion

The collapse in the autumn of 1929 cast new light on the prosperity of the preceding decade. It appears now as a spell of postwar expansion, accelerated at first by liquidation of war savings and a real estate boom and, toward the end, by the boom in stock speculation. The principal expansive forces of that period stemmed from the war: deferred demand for durable goods; postponed repairs of houses and commercial buildings; accumulated savings and liquid business reserves; capital investment delayed because of shortage of labor and raw materials; and growth of new industries.

Production of durable goods, including houses and capital goods, had to make up not only for the brief spell of our actual participation in World War I but also for the periods of uneasiness and uncertainty before the United States entered the war and after the Armistice—in all, at least 7 years. It is hardly possible to measure the backlog in dollars and man-years of work, but probably the demand accumulated during those 7 years was sufficient to bolster production for an equal time on a level some 40 percent above what would have represented current demand.

In fact, the characteristic of the period from 1923 to 1929 is a striking expansion of production of durable goods in comparison with nondurable goods. Taking the average for 1935 to 1939 as 100, indexes of the two branches of manufacturing production varied as follows:

| Year      | Federal Reserve index<br>(1935-39=100) |                     | Ratio of<br>index for<br>durable to<br>index for<br>nondurable<br>goods |
|-----------|--|---------------------|---|
|           | Durable<br>goods                       | Nondurable<br>goods |   |
| 1921..... | 53                                     | 57                  | 0.94  |
| 1922..... | 81                                     | 67                  | 1.21  |
| 1923..... | 103                                    | 72                  | 1.43  |
| 1924..... | 95                                     | 69                  | 1.38  |
| 1925..... | 107                                    | 76                  | 1.41  |
| 1926..... | 114                                    | 79                  | 1.44  |
| 1927..... | 107                                    | 83                  | 1.29  |
| 1928..... | 117                                    | 85                  | 1.38  |
| 1929..... | 132                                    | 93                  | 1.42  |

The abundance of money in the 1920's was likewise a consequence of the war. Although most of the small wartime savings were lost in inflation

and real estate speculation, fortunes of big war profiteers remained ready for investment or new speculation. There was also the spirit of adventure and a readiness to take chances—especially with borrowed money. Money was almost as easy after the war as in 1917-18.

Stimulating expansion, these factors at the same time undermined stability of the economic system. Deferred demand was bound to be satisfied, sooner or later, leaving a vacuum in outlets for current production. Expansion of credit and speculative gains in the stock market could exercise an invigorating effect on the national economy for a few years but not indefinitely. Meanwhile these factors concealed fundamental maladjustments in the economic system such as the increased indebtedness and high production costs in agriculture; the artificially high prices in industries dominated by monopolistic forces; and expansion of the capacity of particular industries far beyond the current demand for their product.

The stupendous rise of the automobile industry typifies the period. Apart from a minor set-back in 1927 the output of motor vehicles increased steadily—from 2.5 million in 1922 to nearly 5.4 million in 1929—and the number of registered cars rose from 12.2 million to 26.5 million, generating a steadily growing demand for gasoline, development and maintenance of roads, repair and storage services, and the like. The expanding automobile industry thus contributed to the growth of other industries.

That growth was bound to slow down, however, after the saturation of demand. To some extent, this is a trend in all new industries, but the contraction in the automobile industry was particularly disturbing, for its expansion had been exceptionally rapid. In retrospect, it is obvious that it would have been better for the American economy as a whole if the annual production of automobiles in the 1920's had not exceeded 3 or 3.5 million.

Generally speaking, the characteristic of the 1920's was the overexpansion of certain industries rather than an excessive over-all rate of economic progress. Until 1928, real per capita income<sup>20</sup> remained below the peak a

<sup>20</sup> As computed by Robert F. Martin, *National Income in the United States, 1799-1938*, National Industrial Conference Board Studies No. 241, 1939, pp. 6, 7.

decade earlier, during the war. In 1928 real per capita income was only a little above the trend, indicating a dramatic retardation in economic progress in comparison with the last three decades of the nineteenth century. The rise from 1922 to 1929 was steep not because its final point was particularly high but because it started far below the trend line. In other words, the steep rise from 1922 to 1929 was a reaction to the steep decline from 1918 to 1922.

The collapse in the autumn of 1929 cannot be explained by the excessive speed of economic growth in the preceding period. If this had been the sole or the chief maladjustment, equilibrium might have been restored by slowing down further advance for 2 or 3 years, without an appreciable set-back in production.

The fundamental weakness of the expansion in the 1920's was in the plight of the farmers and in the steadily widening gap between the current output of goods and services and the purchasing power currently generated by their production and distribution. Despite the policy of high wages, the share of wages in the value of industrial products declined steadily as a result of progressive displacement of human labor by mechanical devices.

Population increased in the 1920's at a rate of somewhat more than 1 percent annually. The equilibrium of the economic system required a similar rate of annual increase of employment—that is, a gain of about 500,000 per year, or 3 million from 1923 to 1929. However, employment in the main industrial divisions varied from 1919 to 1929 as follows:<sup>21</sup>

| Industry   | A average number of work-<br>ers<br>(in thousands) |        |        |
|--|--|--------|--------|
|  | 1919   | 1923   | 1929   |
| Agriculture, total.....  | 11,106   | 11,385 | 11,289 |
| Family workers.....  | 8,322  | 8,401  | 8,305  |
| Hired workers.....   | 2,784  | 2,984  | 2,984  |
| Wage earners in manufac-<br>turing, mining, and<br>steam railroads, total. | 11,322   | 11,076 | 10,835 |
| Manufacturing.....   | 8,418  | 8,195  | 8,369  |
| Mining.....  | 824  | 904    | 712    |
| Steam railroads.....   | 2,079  | 1,977  | 1,755  |

All the addition to the labor force was directed to building construction, trade, and service industries, and,

<sup>21</sup> *Handbook of Labor Statistics, 1941 Edition*, U. S. Bureau of Labor Statistics, No. 694, Vol. 1, p. 179, and Vol. 2, p. 8.

since the work opportunities in these industries could not keep pace with the growing labor force, a persistent and large volume of unemployment remained throughout the whole period of prosperity.<sup>22</sup>

The share of wages in income paid out in manufacturing, mining, and railroad transportation declined steadily. At the beginning of expansion—perhaps from 1923 to 1926—the additional purchasing power necessary for keeping the wheels of production rolling was provided by increasing earnings in service industries,<sup>23</sup> war savings, business reserves, expansion of credits (especially for home building), and the demand for American products abroad. Later, these factors were dwarfed by the fabulous gains from stock-exchange speculation.

From 1922 through 1924 the rise in the stock market kept pace with the general economic expansion. Beginning with 1925, stock prices began to outrun the capitalized value of dividends of the respective concerns. In 1928, when the average price of securities was more than double that in 1924, the situation became alarming, and the Federal Reserve Board increased the discount rate to discourage speculation. The new discount rate (5 percent per annum) was trivial, however, in comparison with gains which could be made at that time by gambling with borrowed money. In the summer of 1929 the average price of stocks was more than double the average for 1926, and more than triple that for 1924 (see table 1). The market value of all shares listed on the New York Stock Exchange advanced from \$27 billion in December 1924 to \$38 billion in December 1926 and to \$90 billion in August 1929.

Assuming that security prices as of December 1926 represented roughly the capital value of the respective concerns, it appears that in August 1929 stockholders held approximately \$52 billion in fictitious values, gains from stock speculation in 2½ years. During the 12 months before the collapse, the stock exchange yielded \$32 billion in profits. Measured in net

<sup>22</sup> *Recent Economic Changes*, Vol. 2, p. 478.

<sup>23</sup> According to the Department of Commerce, compensation of all employees for the years 1923–29 represented 63.3, 62.8, 61.3, 63.3, 64.1, 63.0, and 63.7 percent, respectively, of the total national income.

profits, security speculation not only became the biggest single business in the United States but overshadowed all other businesses combined. In fact, gains from stock-exchange speculation were five times as much as the combined dividends in manufactures, mining, wholesale and retail trade, railroads, telegraph and telephone companies, and insurance and banking, including trust companies, which in their turn specialized in security speculation.

There is no precise information on the distribution of speculative gains among different groups of the population. It is fairly probable, however, that billions of dollars of such gains were pooled with dividends and other capital income—to some extent even with wages and salaries in higher income brackets—and the total amount was partly spent, partly saved, and partly used for further speculation. By creating supplementary purchasing power over the whole era of prosperity, and especially in its final phase, speculation provided outlets for goods which could not be sold to the people engaged directly in production or distribution and opened new opportunities for investments.

In brief, the prosperity of the 1920's was a tower built on the sands of progressive inflation. The fact that there was no price rise at that time does not change the basic character of that era.<sup>24</sup> It was inflationary and doomed to collapse because, at that time, not only further expansion of production but also maintenance of the existing level depended on the continuous expansion of credit and accumulation of fictitious gains from security speculation.

### *The Secondary Postwar Depression (1930–36)*

Very few contemporary observers suspected that the panic which broke out on the stock exchange in September 1929 was the end of one era in the economic history of the United States and the beginning of another.

*The progress of depression.*—The first symptoms of the approaching downturn in business conditions appeared in the building industry. Construction of houses reached the peak in 1925 and then declined slowly. The

<sup>24</sup> The inflation of the 1920's had an indirect effect on prices inasmuch as it prevented and postponed their return to the prewar level (see chart 1).

value of contracts awarded for buildings of all types (in 37 States) began to decline in the second half of 1928. The loss in 1929 was particularly sharp.<sup>25</sup> The fact that the cycle in building activities had entered the contractive phase did not alarm the business world, however, since in nearly all other fields expansion was gaining momentum—industrial output and factory employment rose from month to month, and security prices went up day by day.

The panic on the stock exchange in September 1929 came unexpectedly. For the first day or two, losses were more or less spotty; some securities resisted more than others; some concerns succeeded—temporarily—in protecting the price of their shares. But finally all stocks were carried down by the irresistible avalanche of sales. The stock-prices index of the *New York Times* fell in 2 months from 301 to 199; the market value of shares listed on the New York Stock Exchange dropped from \$90 billion in August to \$64 billion in November.

Although this was the most far-reaching “liquidation” in the history of the stock exchange, its immediate consequences for the economy of the United States were not spectacular. The number of bank suspensions and commercial failures rose somewhat, and industrial production and factory employment declined. These reactions were comparatively mild, however.

Officially, the depression was not recognized until the summer of 1930. The Department of Labor, for example, minimized the significance of the decline in factory employment in October 1929, pointing out that the loss was due mainly to the reduction of personnel in the automobile and automobile-tire industries.<sup>26</sup> In November there was an unusually sharp seasonal decline.<sup>27</sup> No explanation was given for the 3-point drop in December, but analyzing the labor market in January 1930 the *Monthly Labor Review* emphasized that the observed contraction in employment was seasonal.<sup>28</sup> In February only an

<sup>25</sup> Wickens, David L., and Foster, Ray R., *Nonfarm Residential Construction, 1920–1936* (National Bureau of Economic Research, Bulletin No. 65, Sept. 15, 1937).

<sup>26</sup> *Monthly Labor Review*, December 1929, p. 169.

<sup>27</sup> *Ibid.*, January 1930, p. 150.

<sup>28</sup> *Ibid.*, March 1930, p. 150.

unusually small seasonal growth of employment was perceived.<sup>20</sup> The April changes seemed again to follow "the most general seasonal trends."<sup>20</sup> No comments on business trends were given in subsequent monthly surveys of employment.

The road the United States traveled from the peak of prosperity in 1929 to the depth of depression, and then back uphill to recovery, is outlined in table 2. The tempo of the decline in production and other economic activities was uneven, and the

prevailing trend may be described as a series of consecutive spasmodic contractions.

The spring of 1930 brought a stock-market revival. Security prices recovered almost 40 percent of their losses. The upturn in the index of industrial production, especially in durable goods and in employment and pay rolls in durable goods industries, seemed to indicate that business conditions were improving. All illusions, however, were dispersed by a new collapse of the stock market that began in May 1930 and continued at an accelerated pace to the end of that year. Although not quite as

abrupt as the panic in September–November 1929, this set-back proved as destructive: from May to December 1930, \$26 billion in market value of shares was wiped out.

The new losses caused serious difficulties for banks. More than 1,000 banks suspended operations in 1930, and the amount of deposit liabilities jumped from \$240 million in 1929 to \$860 million in 1930. Some symptoms of improvement became apparent in the first half of 1931. Production and factory employment went up; for several months security prices remained fairly stable, at about 40 percent below the 1929 peak but not much below

<sup>20</sup> Ibid., April 1930, p. 174.

<sup>20</sup> Ibid., June 1930, p. 200.

Table 2.—The great depression: Selected business statistics, 1929–38

| Year and month | Economic indexes                        |  |               |   |               |                   |  |               |                   |                             | New York stock prices (dollars per share) | Market value of shares on New York Stock Exchange (in billions) | Failures         |                               |        |
|----------------|---|--|---------------|---|---------------|-------------------|--|---------------|-------------------|-----------------------------|---|---|------------------|-------------------------------|--------|
|                | Income payments <sup>1</sup> (1929=100) | Manufacturing production (1935-39=100) |               | Wage-earner employment in manufacturing industries (1939=100) |               |                   | Wage-earner pay rolls in manufacturing industries (1939=100) |               |                   | Wholesale prices (1926=100) |   |   | Bank suspensions | Number of commercial concerns |        |
|                |   | Total                                  | Durable goods | Total   | Durable goods | Non-durable goods | Total  | Durable goods | Non-durable goods |                             |   |   |                  |                               | Number |
| 1929           |   |  |               |   |               |                   |  |               |                   |                             |   |   |                  |                               |        |
| January        | 98                                      | 103                                    | 120           | 101.7   | 111.9         | 93.7              | 112.6  | 118.6         | 106.8             | 95.9                        | \$238                                     | \$71  | 54               | \$16                          | 2,535  |
| April          | 99                                      | 116                                    | 144           | 106.7   | 119.6         | 96.6              | 123.8  | 136.4         | 111.6             | 95.5                        | 243                                       | 74  | 29               | 8                             | 2,021  |
| July           | 101                                     | 112                                    | 139           | 107.4   | 121.0         | 96.7              | 117.8  | 127.4         | 108.5             | 96.5                        | 282                                       | 82  | 69               | 66                            | 1,752  |
| October        | 102                                     | 114                                    | 132           | 109.1   | 119.3         | 101.0             | 123.4  | 131.7         | 115.3             | 95.1                        | 269                                       | 72  | 43               | 13                            | 1,822  |
| 1930           |   |  |               |   |               |                   |  |               |                   |                             |   |   |                  |                               |        |
| January        | 100                                     | 95                                     | 105           | 98.2  | 105.0         | 92.8              | 104.7  | 105.7         | 103.8             | 92.5                        | 211                                       | 69  | 99               | 29                            | 2,759  |
| April          | 96                                      | 102                                    | 119           | 97.4  | 105.2         | 91.3              | 106.9  | 112.5         | 101.5             | 90.0                        | 240                                       | 75  | 96               | 33                            | 2,198  |
| July           | 93                                      | 87                                     | 94            | 90.5  | 95.7          | 86.4              | 92.3   | 91.8          | 92.7              | 84.4                        | 198                                       | 67  | 65               | 32                            | 2,028  |
| October        | 89                                      | 84                                     | 83            | 88.8  | 89.7          | 88.1              | 90.0   | 86.4          | 93.5              | 83.0                        | 169                                       | 55  | 72               | 25                            | 2,124  |
| 1931           |   |  |               |   |               |                   |  |               |                   |                             |   |   |                  |                               |        |
| January        | 85                                      | 74                                     | 71            | 80.1  | 80.1          | 80.2              | 76.3   | 68.6          | 83.8              | 78.2                        | 152                                       | 52  | 202              | 77                            | 3,316  |
| April          | 89                                      | 83                                     | 84            | 81.3  | 80.5          | 81.9              | 81.0   | 75.0          | 87.0              | 74.8                        | 145                                       | 49  | 64               | 42                            | 2,383  |
| July           | 80                                      | 74                                     | 66            | 77.8  | 74.4          | 80.4              | 72.2   | 62.2          | 82.0              | 72.0                        | 129                                       | 44  | 93               | 41                            | 1,983  |
| October        | 74                                      | 68                                     | 54            | 75.5  | 69.0          | 80.7              | 67.1   | 55.4          | 78.6              | 70.3                        | 96  | 34  | 522              | 471                           | 2,326  |
| 1932           |   |  |               |   |               |                   |  |               |                   |                             |   |   |                  |                               |        |
| January        | 71                                      | 61                                     | 48            | 70.1  | 64.3          | 74.6              | 58.6   | 47.3          | 69.7              | 67.3                        | 74  | 26  | 342              | 219                           | 3,458  |
| April          | 66                                      | 58                                     | 46            | 67.9  | 61.6          | 72.8              | 53.8   | 42.9          | 64.6              | 65.5                        | 53  | 20  | 74               | 32                            | 2,816  |
| July           | 61                                      | 50                                     | 36            | 61.1  | 55.5          | 65.5              | 43.9   | 34.1          | 53.4              | 64.5                        | 40  | 20  | 132              | 49                            | 2,596  |
| October        | 59                                      | 59                                     | 38            | 67.2  | 55.0          | 76.9              | 49.7   | 34.6          | 64.5              | 64.4                        | 56  | 23  | 103              | 20                            | 2,273  |
| 1933           |   |  |               |   |               |                   |  |               |                   |                             |   |   |                  |                               |        |
| January        | 58                                      | 54                                     | 35            | 63.3  | 52.9          | 71.6              | 43.7   | 31.9          | 55.2              | 61.0                        | 59  | 23  | 241              | 135                           | 2,889  |
| April          | 55                                      | 58                                     | 42            | 63.9  | 53.1          | 72.5              | 43.9   | 32.0          | 55.5              | 60.4                        | 60  | 27  | -----            | -----                         | 1,902  |
| July           | 58                                      | 84                                     | 74            | 76.3  | 66.3          | 84.1              | 57.2   | 46.0          | 68.1              | 68.9                        | 88  | 33  | -----            | -----                         | 1,375  |
| October        | 61                                      | 73                                     | 61            | 84.6  | 75.4          | 91.9              | 66.3   | 53.8          | 78.6              | 71.2                        | 80  | 30  | -----            | -----                         | 1,167  |
| 1934           |   |  |               |   |               |                   |  |               |                   |                             |   |   |                  |                               |        |
| January        | 66                                      | 67                                     | 55            | 78.8  | 72.1          | 84.1              | 60.9   | 50.0          | 71.5              | 78.3                        | 88  | 37  | -----            | -----                         | 1,317  |
| April          | 65                                      | 82                                     | 80            | 88.8  | 84.9          | 92.0              | 75.6   | 69.2          | 81.8              | 78.6                        | 92  | 36  | -----            | -----                         | 1,020  |
| July           | 66                                      | 71                                     | 63            | 86.4  | 83.2          | 88.8              | 68.2   | 59.5          | 76.6              | 78.4                        | 83  | 31  | -----            | -----                         | 870    |
| October        | 67                                      | 71                                     | 55            | 86.0  | 76.8          | 93.2              | 69.4   | 55.9          | 82.6              | 78.0                        | 82  | 32  | -----            | -----                         | 1,039  |
| 1935           |   |  |               |   |               |                   |  |               |                   |                             |   |   |                  |                               |        |
| January        | 69                                      | 80                                     | 73            | 86.8  | 81.4          | 91.0              | 73.2   | 64.0          | 82.3              | 77.7                        | 86  | 33  | -----            | -----                         | 1,146  |
| April          | 70                                      | 85                                     | 83            | 91.3  | 88.9          | 93.1              | 80.9   | 75.3          | 86.3              | 77.2                        | 86  | 34  | -----            | -----                         | 1,083  |
| July           | 70                                      | 83                                     | 76            | 88.8  | 85.7          | 91.3              | 74.9   | 67.6          | 82.1              | 78.0                        | 99  | 39  | -----            | -----                         | 902    |
| October        | 73                                      | 95                                     | 92            | 95.3  | 92.9          | 97.2              | 86.2   | 81.7          | 90.6              | 78.3                        | 108                                       | 43  | -----            | -----                         | 1,056  |
| 1936           |   |  |               |   |               |                   |  |               |                   |                             |   |   |                  |                               |        |
| January        | 76                                      | 90                                     | 89            | 92.4  | 92.2          | 92.5              | 83.5   | 80.2          | 86.6              | 78.8                        | 116                                       | 50  | -----            | -----                         | 1,077  |
| April          | 77                                      | 101                                    | 107           | 95.5  | 97.0          | 94.3              | 89.6   | 90.8          | 88.4              | 80.1                        | 122                                       | 48  | -----            | -----                         | 830    |
| July           | 87                                      | 103                                    | 109           | 98.4  | 100.8         | 96.5              | 90.7   | 91.3          | 90.0              | 79.4                        | 131                                       | 54  | -----            | -----                         | 639    |
| October        | 83                                      | 114                                    | 120           | 105.0   | 106.7         | 103.6             | 100.8  | 102.8         | 98.9              | 80.5                        | 138                                       | 59  | -----            | -----                         | 611    |
| 1937           |   |  |               |   |               |                   |  |               |                   |                             |   |   |                  |                               |        |
| January        | 85                                      | 113                                    | 118           | 104.8   | 108.6         | 101.8             | 102.6  | 104.8         | 100.5             | 80.6                        | 139                                       | 62  | -----            | -----                         | 811    |
| April          | 88                                      | 124                                    | 137           | 111.4   | 119.1         | 105.3             | 119.0  | 129.9         | 108.2             | 79.7                        | 131                                       | 68  | -----            | -----                         | 786    |
| July           | 89                                      | 118                                    | 130           | 110.9   | 120.0         | 103.7             | 114.1  | 123.1         | 105.2             | 80.5                        | 131                                       | 59  | -----            | -----                         | 618    |
| October        | 88                                      | 109                                    | 117           | 110.4   | 118.9         | 103.7             | 113.8  | 124.1         | 103.6             | 81.5                        | 100                                       | 45  | -----            | -----                         | 768    |
| 1938           |   |  |               |   |               |                   |  |               |                   |                             |   |   |                  |                               |        |
| January        | 82                                      | 78                                     | 70            | 91.1  | 91.5          | 90.7              | 81.8   | 77.3          | .1                | 85.9                        | 91  | 39  | -----            | -----                         | 1,377  |
| April          | 79                                      | 80                                     | 72            | 89.4  | 86.8          | 91.4              | 81.6   | 75.6          | 87.4              | 88.0                        | 82  | 36  | -----            | -----                         | 1,172  |
| July           | 78                                      | 83                                     | 69            | 86.0  | 79.7          | 90.8              | 77.8   | 67.9          | 87.5              | 87.9                        | 99  | 45  | -----            | -----                         | 1,038  |
| October        | 81                                      | 99                                     | 92            | 94.3  | 89.9          | 97.7              | 92.2   | 87.1          | 97.2              | 85.4                        | 105                                       | 47  | -----            | -----                         | 997    |

<sup>1</sup> Adjusted for seasonal variation.

Table 3.—The great depression: Losses in national income

(In billions)

| Year | Actual national income<br>(Department of Commerce) |                                  | Hypothetical<br>national<br>income <sup>1</sup><br>at average<br>prices,<br>1935-39 | Actual<br>national<br>income<br>less than<br>hypothetical<br>(at average<br>prices,<br>1935-39) |
|------|--|----------------------------------|---|---|
|      | At<br>current<br>prices                            | At average<br>prices,<br>1935-39 |   |   |
| 1927 | \$76.2   | \$61.9                           | -----   | -----   |
| 1928 | 80.1   | 64.8                             | \$64.8  | -----   |
| 1929 | 83.3   | 68.0                             | 66.1  | -----   |
| 1930 | 68.9   | 57.9                             | 67.4  | \$-9.5  |
| 1931 | 54.5   | 50.9                             | 68.7  | -17.8   |
| 1932 | 40.0   | 41.6                             | 70.1  | -28.5   |
| 1933 | 42.3   | 45.7                             | 71.5  | -25.8   |
| 1934 | 49.5   | 50.5                             | 72.9  | -22.4   |
| 1935 | 55.7   | 56.0                             | 74.4  | -18.4   |
| 1936 | 64.9   | 65.2                             | 75.9  | -10.7   |
| 1937 | 71.5   | 69.0                             | 77.4  | -8.4  |
| 1938 | 64.2   | 64.1                             | 78.9  | -14.8   |
| 1939 | 70.8   | 71.8                             | 80.3  | -8.5  |

<sup>1</sup> Assuming annual 2-percent growth of the national income.

the level in the middle of 1928. The large number of business suspensions and failures at the beginning of 1931 was due to the repercussions of the blow suffered in the preceding year, rather than new difficulties.

In the middle of 1931, stock prices again dropped, and losses spread to the bond market, which had not been affected earlier. From March to December 1931, holders of shares registered in the New York Stock Exchange lost \$27 billion, and an additional \$11 billion was lost in the market value of bonds. The volume of industrial production continued to decline, especially in manufacture of durable goods; factory employment and pay rolls continued to fall; agricultural prices sank, in many cases to a level which made continuation of production impossible; commercial failures, foreclosures of farm mortgages, and bank closings became more and more usual.

In the summer of 1932 the contraction came to a standstill. The depression seemed to have reached rock bottom. Rising industrial production and factory employment (in industries of nondurable goods) in the third quarter of 1932 suggested that recovery was around the corner (see chart 2). Security prices began to inch up (see table 2). Soon, however, this upward movement was interrupted by new set-backs in all these areas. In March 1933, panic broke out, and all banks in the Nation were compelled to suspend payments.

This was the turning point. With the reopening of the banks and the establishment of dramatic measures by the new Administration, confidence was reborn in the people, production was resumed, employment began to

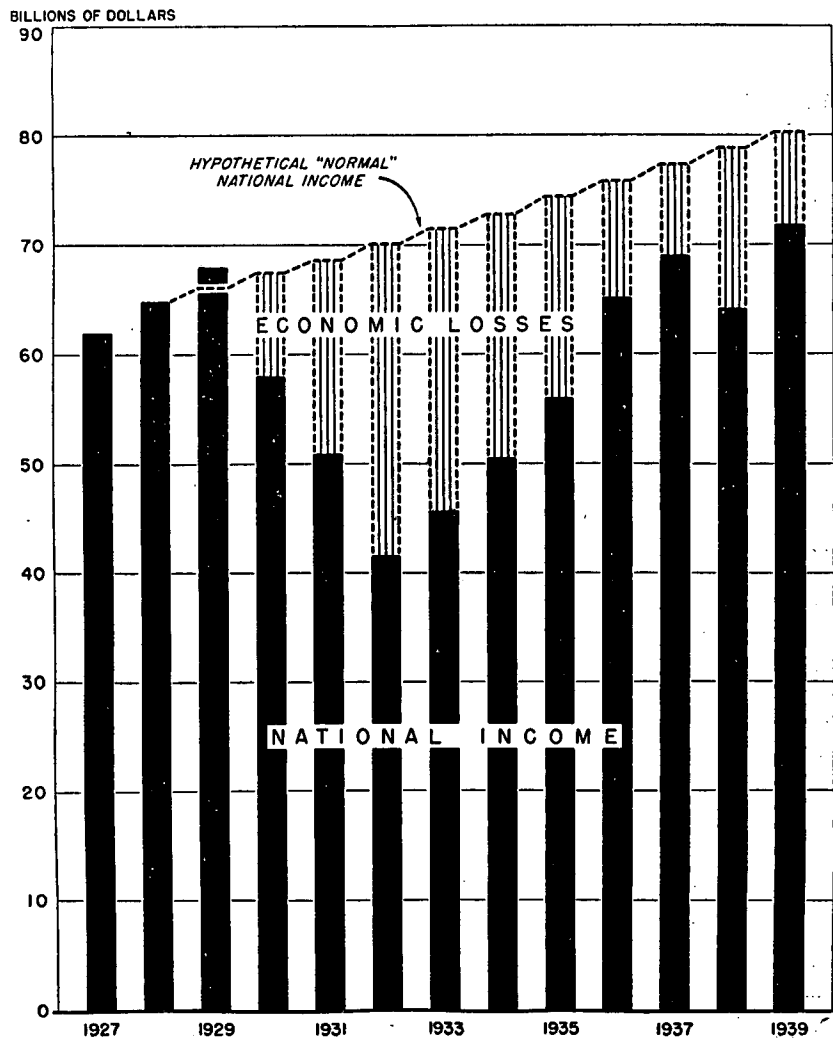
rise. So rapid was the initial recovery that in 6 months employment returned to the level at the end of 1930. Then the upward movement slowed down. At least 3 years more elapsed

before the United States returned to a more or less satisfactory level of economic activity and employment. All in all, the 7 fat years (from 1923 to 1929) were followed by 7 lean years.

**Economic losses.**—The depression of the 1930's was unique in the history of the United States in the extent of contraction of economic activities, the severity of unemployment, and the losses in national output and income. At the low point (summer of 1932) manufacturing production was less than 50 percent of the predepression volume. The number of workers then unemployed was estimated at 12 to 15 million. Perhaps as many more had only part-time work. Accordingly, about one-third of the working population was fully employed, about one-third was partly unemployed, and only about one-third worked as usual.

Chart 3.—Losses in national income during the depression

[At average prices in 1935-39],





The economic losses caused by the depression may be roughly estimated as the difference between the national income in the depression years and the hypothetical amount under the assumption that economic activities would have been stabilized at a given level, somewhat lower than the peak of 1929, and would have increased thereafter, keeping pace with population growth and technological progress. In order to eliminate the influence of falling prices, both the actual and the hypothetical national income should be expressed in dollars with steady purchasing power. In table 3, the 1928 national income is used as the benchmark and the annual rate of advance of hypothetical national income from this mark is set at 2 percent (see chart 3).

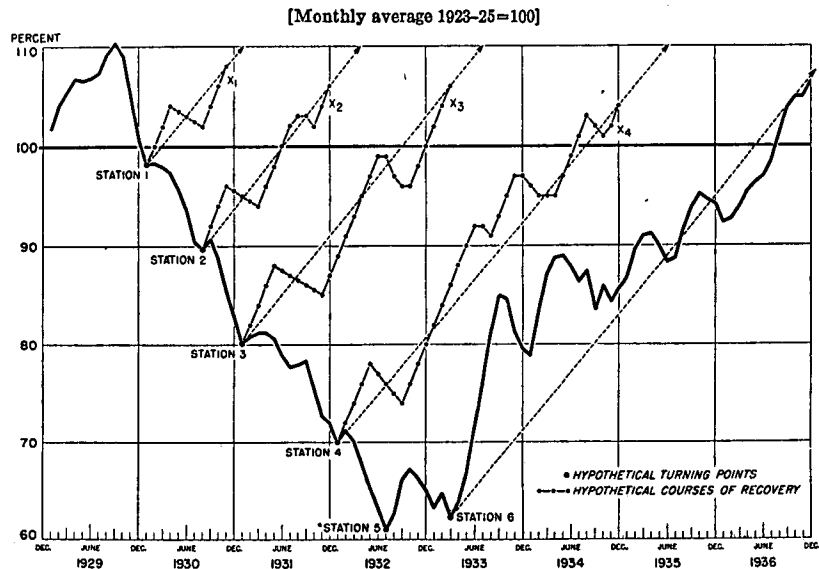
According to this estimate, the cumulative deficit in national income—in comparison with its hypothetical "normal" size—from 1930 to 1936 amounted to \$133.1 billion, at average 1935-39 prices, and to \$31.7 billion in 1937-39. In brief, the cost of the second postwar depression, in terms of loss of national income, was about three times our expenditures for World War I.<sup>21</sup>

*Causes of the disaster.*—A disaster of that magnitude demanded a thorough investigation. What were its causes? How could recurrence of such a calamity be prevented? The puzzle of the great depression is that, when the downward movement started, it could not be stopped for many years.

The problem is illustrated schematically in chart 4. The solid line shows monthly variations in factory employment from January 1929 through December 1936, analogous to the corresponding sections of chart 2. In its descending slope from the peak (September 1929) to the low point (July 1932) five steps are discernible, separated by halts or incipient upturns designated as "stations." Although this rhythm may have been due in

<sup>21</sup> These figures serve only as illustrations. If, instead of the national income of 1928, that of the preceding year is taken as the benchmark of projection, and the normal annual growth of national income is set at 2.5 percent, losses from 1930 to 1936 would total \$134.8 billion, and those from 1937 to 1939, \$38.4 billion. On the other hand, the gain due to the expansion in 1928 and 1929 above the "normal" trend would amount to \$4.4 billion. The final result would not differ much from that suggested by table 2 and chart 3.

Chart 4.—*The great depression and hypothetical courses of recovery: Index of wage-earner employment in manufacturing industries*



part to seasonal factors, it is characteristic of the progress of the depression in its early phase. Each slowdown or temporary interruption of the contraction revived hopes for an early upturn. Could not any "station" have become the starting point for revival and recovery?

Assuming an upward movement roughly similar to that which finally developed after July 1932, with a setback in the following winter and a decisive upswing after March 1933, recovery might have followed the patterns  $X_1$ ,  $X_2$ ,  $X_3$ , or  $X_4$ . Pattern  $X_1$  would have marked a very mild setback, suggesting that we had reached the stage of economic progress at which business cycles are practically ironed out. Pattern  $X_2$  would have portrayed a setback similar to that in 1924; pattern  $X_3$ , a depression of about the same severity as the primary postwar depression in 1921. If recovery had followed pattern  $X_4$ , the depression would have been of unprecedented violence but it would have cost the Nation about one-third less than the great depression actually did.

Why did none of these hypothetical patterns of recovery materialize? Why was each slight improvement in business conditions followed immediately by a new decline more disastrous than that preceding?

Reference to the maturity of our economic system does not solve the mystery. "Maturity" cannot strike a Nation as unexpectedly as lightning. The economic set-backs the United States had suffered since the begin-

ning of this century, and especially those between the end of the war and the autumn of 1929, had been comparatively mild and short. In 1927 the contraction had been less severe than in 1924, and in 1924, less severe than in 1920-21. This is not the way in which the "maturity" would manifest itself.

Nor can the destructive character of the depression in the 1930's be explained by monopolistic tendencies and rigidity of prices and wages. In these respects, the situation in the 1920's differed only quantitatively from that in the early 1930's.

The writer believes that the clue to the mystery of the great depression must be sought in the particular features of the expansion of the 1920's.

The preceding analysis shows that expansion of production depended at that time on a progressive inflation of bank credits and security speculation. After several years of this type of prosperity, economic activities could not be continued at the existing level without continuous injection of new billions of dollars into circulation. The collapse of the security market in September 1929 had a dual effect on the national economy: it brought the influx of additional purchasing power to a halt and simultaneously eliminated scores of billions of dollars from the flow of income and wealth. This double shock naturally caused a violent contraction of luxury consumption and investment. The contraction of employment in industries directly affected by the set-back

in speculation resulted in considerable losses in purchasing power of the working population, provoked cut-backs in consumer goods industries, and caused a drop in agricultural prices. In short, the stock-exchange panic not only stopped the hidden inflation but also set a deflationary spiral in motion.

The liquidation of the inflationary economy of the 1920's was longer and much more costly and painful than the liquidation of war inflation, for four reasons.

(a) *The inflationary pressure of the 1920's.*—Inflationary pressure at the end of the prosperity era was much stronger than at the end of World War I. During the war, the Government spent \$23 billion of borrowed money, but not all these expenditures flowed into the domestic economy. On the other hand, the speculation in the 1920's yielded \$60 billion in stock prices and an additional \$15 billion in bonds. All in all, including expansion of consumer credits, more than \$80 billion was pumped into the economic system during the 7 years' expansion. At its end, the system required injection of an additional \$3 billion a month to keep going at its existing level.

From the point of view of economic equilibrium, it is not essential that money continuously injected into circulation should come from gambling. It might have come from a more respectable source and yet have been equally dangerous. What is essential is that it did not come from production and distribution of real goods and services and that it therefore could disappear at any time. The pattern of economic activities in the late 1920's required a perpetual rise of the stock market or some other form of injection of easy money. The collapse of the market left the whole system hanging in midair, with commitments which could not be honored, industrial plants which could not be operated, stocks of goods which could not be sold, prices which could not be maintained.

(b) *The growth of debts.*—Price inflation in wartime tends usually to lighten the burden of private debts.<sup>22</sup>

<sup>22</sup> Bangs, R. W., "Public and Private Debt in the United States, 1916-42," *Survey of Current Business*, May 1943, p. 24. Private debts increased from \$72.9 billion at the end of 1917 to \$93.2 billion at the

The inflationary process in the 1920's, by contrast, was characterized by accumulation of debts without price rise. From \$96.7 billion in 1922, the net amount of private debts rose to \$142.0 billion in 1929. The average rate of increase was about \$7 billion a year. This rise involved not only continuous expansion of mutual commitments of business enterprises and individuals but also expenditure of future income in advance for current consumption or investment.

By the end of 1929, farm mortgages amounted to \$9.6 billion, urban real-estate mortgages to \$31.6 billion, short-term debts of corporations to \$28.6 billion, commercial and individual loans (including those of stock-exchange brokers) to \$19.8 billion, and consumer credit to \$8.4 billion. This tower of debt was held up by the continuous influx of stock-exchange gains. When that influx stopped, the tower was bound to topple of its own weight.

(c) *Absence of other expansive forces.*—Liquidation of wartime inflation is facilitated by deferred demand and saved-up purchasing power. When war spending ceases, other expansive forces are set free and cushion the deflationary shock. This cushion did not exist after the collapse of the inflationary expansion in the 1920's, which left people without financial reserves and with debts for purchases made under the lure of installment sales.

(d) *Attitude of the public.*—Wartime inflation is always a temporary situation, a grim necessity, even if some persons may use it to enrich themselves. Few people believe that the war boom will last forever, and those with average—and even somewhat less than average—capacity for judgment are prepared to readjust themselves to normal conditions sooner or later. The expansion in the 1920's, on the contrary, was accepted by the public as a new economic pattern for the indefinite future. The first set-backs on the stock exchange did not shake this belief, and, as long as people lived in expectation of a prompt upturn, fundamental reforms which could have promoted recovery were impossible. More specifically, this public attitude blocked the way

end of 1920, but the latter amount represented less than \$70 billion at 1917 prices.

for such long overdue measures as rehabilitation of farmers, control of the security market, and reduction of hours of work.

In brief, the violence and duration of the depression of the 1930's are attributable to the cumulative effect of maladjustments which were left over after the last war and were aggravated by 7 years of continuous expansion of credit and run-away stock-exchange speculation. If caution, moderation, farsightedness, and wisdom are characteristics of maturity, it is far from clear how the prosperity of the 1920's and the depression of the 1930's can be interpreted as evidence of economic maturity of this country.

### *Lessons of Experience After the First World War*

The course of economic developments after World War I should not be projected as a prophecy of dislocations that must come again. The present economic scene is in certain respects similar to that after November 1918, in other respects substantially different. To make full use of the lessons of experience after World War I, both the similarities and the differences should be taken into account.

The task of reconversion is essentially the same: demobilization of industry and of the armed forces; redistribution of manpower and other resources; readjustment of hours of work, prices, wages, and taxes; relaxation and eventual repeal of wartime controls. In these respects, the situation now is similar to that after World War I, the only difference being that all present problems are on a larger scale.

Past experience signals the dangerous shoals we shall pass in the course of reconversion: economic dislocation immediately after the end of the war, as in the winter 1918-19; a deeper economic set-back and perhaps acute social conflicts a couple of years later, after demobilization is completed, as in 1921; mass unemployment and misery still later, as in the 1930's, after a new era of prosperity during which industry has caught up with the demand accumulated during the war.

*The danger immediately after the end of the war.*—As far as the first danger point is concerned, conditions this time seem, on the whole, much more favorable than after World War

I. Of decisive importance is the fact that reconversion is being stretched over a longer period of time.

After World War I the shift from war to peace came suddenly, when our war economy was in full swing and had not yet reached the potential peak. This time we passed the crest of war production toward the end of 1943, long before the landing in Normandy. Subsequently the demand for labor by munitions industries declined steadily from month to month, so that the first steps of reconversion were effected while the war in Europe was nearing the climax. Cut-backs were accelerated after the surrender of Germany. The capitulation of Japan found employment in munitions industries 20 to 25 percent below the peak in the last quarter of 1943 and peacetime industries ready for expansion as soon as labor and strategic materials become available.

The sudden termination of war contracts after August 14 was largely offset by the reduction of hours of work in peacetime industries, the current demand for labor, and temporary or final withdrawals of emergency workers. Expansion of production was somewhat slowed down by the scarcity of labor, uncertainty of wage and price conditions, and the prospect of lower taxes (especially the elimination of the surplus-profit tax) after 1945. On the other hand, the return of ex-servicemen to civilian occupations trailed their release from the armed forces, since many of them have been taking time out after leaving the service before they go back to their former jobs or begin to look for new positions.

In these circumstances, industrial and military demobilization has proceeded very smoothly. Except for a few pockets of unemployment in such centers of war production as Detroit and sizable frictional unemployment in some other places, the labor shortage has remained acute, although about 8 million wartime jobs have been terminated and 5 million men released from the armed forces. Thus, the first shock of the reconversion has been absorbed.

The chances of reabsorption of the several millions of ex-servicemen who will join the civilian labor force during the months ahead are likewise good. Millions of emergency war workers are still in the labor force and their retirement—either voluntary or

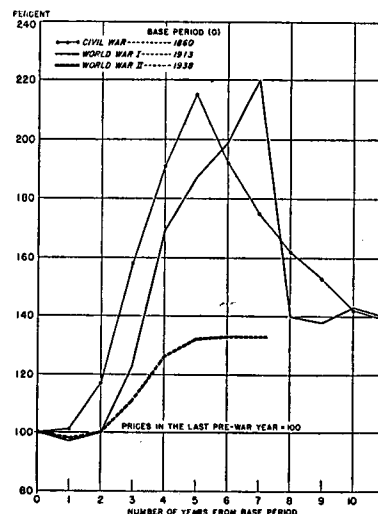
under the pressure of changed employment standards—will increase demand for labor in manufacturing, construction, service industries, and professional activities, all of which are expected to expand. It is probable, therefore, that the demand for labor in 1946 will not be fully met by the influx of new workers released from the military service, so that the labor market will remain tight, with a light frictional unemployment and jobs "going begging." Such a situation may continue a year or two after the reconversion is completed, say until the end of 1947, and this would prevent dislocations like those following the sudden demobilization in 1918-19.

*The danger of a postwar depression.*—Such a pattern of reconversion, however, is of major importance only for the first repercussion of the ending of the war economy, analogous to that in the winter of 1918-19. Even then there was less unemployment than fear of unemployment.<sup>23</sup> The fact that the course of the initial phase of postwar economy is even smoother this time does not prove that the Nation is already out of danger. Indeed, much more serious than reconversion unemployment is the danger of a setback some time later, similar to the primary postwar depressions in 1867 and 1920-21. Both those depressions resulted from the collapse of inflated prices, which, in turn, was caused by the discontinuation of Government spending for war.

In this respect, the present situation is somewhat less explosive than in 1920 because of the difference in price movements during the war. Comparison of the indexes of wholesale prices (chart 5) indicates that our price policy during World War I was as poor as that during the Civil War—perhaps even worse. In contrast, this time price-stabilization measures have been fairly effective. Prices rose moderately before Pearl Harbor, partly because the country was recovering from a long depression, partly under the impact of the defense program, but then the rise slowed down and came to a standstill. While the official index of wholesale prices may be deceptive insofar as finished products and quality of consumer goods are concerned, it seems fairly certain that so far we have avoided the run-away inflation

<sup>23</sup> See Stewart, Stella, *op. cit.*

Chart 5.—Variations in wholesale prices during and following three wars



which characterized World War I and that this time the downward readjustment of prices will cause less dislocation. But we are not yet out of danger. A premature repeal of controls could readily result in a postwar inflation, and if prices skyrocket in 1946-47, as in 1919, the rise will probably be followed by a collapse and mass unemployment in 1948, as in 1920-21. The danger is the greater this time because of the accumulation of savings during the war and the amount of money in circulation.

Moreover, even if these dislocations are avoided, the actual trend in prices from 1940 to 1945 does not preclude the danger of a postwar deflation of moderate severity. Apart from the visible rise in prices of staple commodities reflected in the official price index, a war economy is characterized by deterioration of the quality of goods and services, disappearance of certain goods from the market, excessive rise of uncontrolled prices, development of local black markets, extravagant luxury spending, and other manifestations of hidden inflation. As the cumulative effect of all these factors, the average purchasing power of the dollar may be considerably less after the war than is suggested by the official price index.

Hidden inflation may be liquidated gradually, without dislocations in the economic system, by progressive improvement of the quality of goods and services through free competition of business enterprises. But there is a danger that it will be liquidated abruptly, by a sudden fall of prices after the first rush of consumers to buy cov-

eted goods is over. Such a collapse of prices would result in considerable losses in production and employment. It may be prevented by a rise of wages and curtailment of taxes planned in such a way as to ensure a smooth flow of consumer expenditures.

Thus, the success of reconversion and the high level of employment in the first year or two after the end of the war should not lull us into complacency. The menace of a depression similar to that in 1920-21 should be taken into account in economic planning, especially in policy relating to wages, prices, and taxes.

*The danger of a secondary setback.*—To appraise the dangers later in the postwar economy, experience after World War I should be supplemented by an analysis of our prewar experience and trends in our war economy, which will be presented in subsequent articles. It seems possible that difficulties will increase as time goes on. The most painful repercussions of the war economy may develop after a considerable period of expansion, say, in 10 or 12 years. In fact, even if we are spared the mass unemployment and violent economic dislocations in the period of regearing production from war to peacetime conditions; even if we succeed in ironing out the primary postwar depression related to the readjustment of prices; and if we enjoy a fairly high level of economic activities for a few years—say, until 1950—prosperity may not last.

The war has not eliminated maladjustments in the economic system which have caused periodically recurring unemployment in the past. It is therefore logical to plan for reconversion in such a way as to increase the stability of the postwar economic system and protect it against future shocks. In this sense, far-reaching measures to ensure full employment in postwar America are a necessary part of reconversion.

On the other hand, if prosperity is maintained in the 1950's by methods

similar to those used in the economic expansion in the 1920's, the results may be similar: the entrance into fools' paradise is free; the price is paid at the exit gate.

Several new factors, however, justify hope of more favorable developments.

A very important new factor is our relative success in curbing inflation during this war. This success not only reduces the immediate danger of dislocations but also proves our ability to handle economic questions. It is natural to expect that we will make use of our new skills in dealing with taxation, hours and wages, foreign trade, investments, and the like, and will not repeat the mistakes which led to the disaster of the 1930's. More specifically, it may be hoped that we will not repeat the short-sighted policies in liquidating Government-owned plants and surplus war materials which caused serious economic troubles after World War I.<sup>24</sup>

Another new factor is that the Nation is better equipped to handle social problems of reconversion. Social turmoil after the last war was kindled by the lack of public understanding of the problem of veterans.<sup>25</sup> We are pledged to avoid this mistake after this war and we hope to succeed. The shock of reconversion and subsequent occasional postwar set-backs will also be cushioned, this time, by the system of social security, which did not exist after World War I.

<sup>24</sup> See U. S. Bureau of Labor Statistics, *Historical Studies of Wartime Problems: No. 58, Post-Armistice Industrial Developments 1918-1920: Prices, Production and Employment*; No. 65, *Cancellation of War Contracts: Plans and Practice, 1918-1919*; No. 67, *Settlement of Claims Arising under Canceled War Contracts, 1918-1926*; No. 74, *Disposition of Artillery Plants, World War I, 1918-1930*; No. 75, *The Disposition of Surplus Machine Tools by the War Department Following World War I*.

<sup>25</sup> The same series, No. 73, *The Public Reaction to the Returned Servicemen After World War I*.

To sum up, the Ship of State will have rough sailing in the sea of postwar economics. Extreme watchfulness will be needed not only to avoid the shoals which can be easily spotted on the map but also to traverse deceptively calm straits. We have passed the first danger spot successfully—the industrial reconversion per se. The United States has reconverted rapidly and smoothly, with surprisingly little unemployment. But the difficulties are not over; throngs of ex-servicemen will join the labor force in the coming months, and fundamental problems of wage readjustment remain to be solved.

The pilot will have to watch for at least four danger spots ahead:

(1) For the inflationary boom which may come in the next year or two if wartime controls are released prematurely;

(2) For the contraction of production and mass unemployment which will become imminent in 2 or 3 years if a run-away inflation develops;

(3) For the deceptive lull of catching-up prosperity that is likely to follow the period of postwar readjustment and may readily degenerate into a new inflationary boom;

(4) For the secondary postwar depression that would follow that boom.

On the other side, four new factors may help the pilot to progress safely:

(1) Smooth and successful reconversion that leaves our economic system better balanced than it was after World War I;

(2) Relative stability of prices during this war that reduces the danger of a postwar inflation and facilitates the final adjustments of prices;

(3) Increased ability of the Nation to handle economic problems, proved during the war (price control) and in the crucial phase of the reconversion;

(4) Better preparation for meeting social problems, such as protection of rights of ex-servicemen, collective bargaining, public employment offices, unemployment compensation, and old-age and survivors insurance.