

employment compensation requires Federal action beyond the limits established in existing law. The Congress is basically responsible for the imposition of the taxes collected under State unemployment compensation laws. Are the conditions imposed for the receipt of benefits and the amounts payable from the proceeds

of these taxes such as to be consistent with the national interest in effective unemployment compensation systems? The benefit structures in the various State programs differ greatly—as to weekly amounts, duration, conditions required to qualify for benefits, and as to reasons for and severity of disqualifications from benefits. The

question is whether the resulting protection is nevertheless such that the national interest in unemployment compensation is reasonably satisfied, or whether there are some limitations on benefits so pronounced as to require Federal action in this area, which has heretofore been left largely to State action.

## Postwar Economic Perspectives

### III. Prewar Experience: Production and Consumption

By W. S. Woytinsky\*

*This article continues the analysis begun in the January Bulletin of economic conditions that may reasonably be anticipated after the war in the light of actual prewar experience. Like Mr. Woytinsky's preceding articles, it results from a comprehensive study of the setting for planning measures for social security. Expressions of opinion, as in all Bulletin articles, reflect the views of the author and do not necessarily represent official conclusions of the Social Security Board.*

PROJECTION of prewar experience in the preceding article led to the conclusion that full employment in 1950 would require 55.5 million year-round civilian jobs, including employment by Federal, State, and local governments, as compared with 46.5 million in 1940. In terms of man-years of work, the required increase from the number in 1940 is almost 20 percent. The increase in man-hours worked would be somewhat less, probably not more than 16 percent, if account is taken of the trend toward a shorter workweek and more extensive provision of paid vacations. What changes in production and consumption in the United States would accord with such a rise in the level of employment?

#### Postwar National Product as Compared With 1940

##### Changes in Volume of Production

To estimate the hypothetical volume of production in 1950 as compared with 1940, definite assumptions

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must be made on change in the productivity of labor.

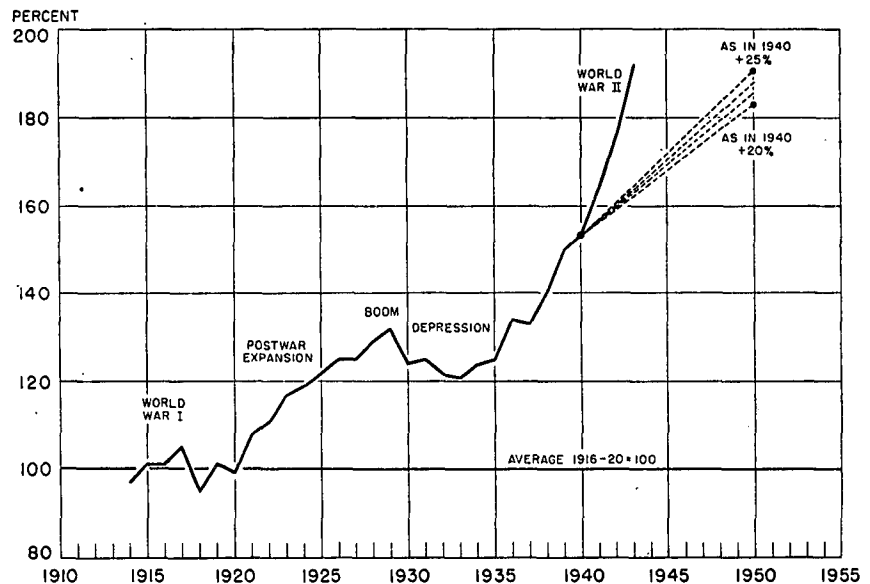
Chart I shows variations in real per capita output of goods and services in the 30 years 1914-43, computed as follows: the gross national product for each year, expressed in dollars at 1940

prices, has been divided by the number of persons in employment in that year, and the average for 1916-20 is used as the base (=100) to develop an index.

Since postwar economic conditions in the United States will differ greatly from those during the war and will be more like those in the last prewar years, the probable productivity of labor in 1950 may be estimated in relation to the prewar pattern in, say, 1940 rather than in the war years. It seems reasonable to expect that the rate of increase in per capita output from 1940 to 1950 will be similar to that from 1915 to 1925 or through any other decade that includes the last war. The average increase over the decades ending with each of the years 1924 to 1930 was 26.7 percent. It is likely that the increase from 1940 to 1950 will be somewhat less spectacular.

Although the war economy has

Chart 1.—Variations in real per capita output of goods and services,<sup>1</sup> 1914-43



<sup>1</sup> Gross national product in a year (expressed in dollars at 1940 prices) divided by number of employed persons in that year.

probably accelerated economic progress by introducing new methods of production and improving industrial organization, these changes may not become apparent for several years, as was the case after the last war, and not all the technical achievements of the war economy will be of future use. It may be advisable, for example, to discount somewhat the importance of synthetic rubber, glass fiber, plastics, refrigeration, and dehydration in considering over-all output per man-hour after the war. On the other hand, one cannot disregard the progress in metallurgy and chemistry and new production methods which have been used for turning out tanks, airplanes, and liberty ships but are also applicable to prefabricated housing. In brief, it is conservative to assume that the over-all output per man-hour will increase 20 to 25 percent from 1940 to 1950, as compared with an average rise of 26.7 percent through the decades including World War I.

In combination with a rise of approximately 16 percent in the weekly number of man-hours worked, a rise of 20 to 25 percent in output per man-hour would result in an increase of from 40 to 45 percent in the total output of goods and services in 1950 as compared with that in 1940.

#### *Changes in the Level of Consumption*

The general level of consumption would not rise in the same proportion as the total output. A part of any additional output will be absorbed by expenditures related to the liquidation of the war—hospitalization of veterans, and the like. The increase in the amount available for private use, which includes direct consumption and private capital formation, might approximate 35 to 40 percent under the described conditions. Thus, assuming that the relationship between direct consumption and capital formation remains about the same as before the war, from 35 to 40 percent more consumer goods would be available in 1950 than in 1940.

On the other hand, it is generally anticipated that the population in the United States will increase from 1940 to 1950 by approximately 10 percent. In view of the declining average size of family, the number of households in the Nation will rise at a higher

rate; the Bureau of the Census estimates 14.3 percent, which would result in 39.9 million private families in 1950 as compared with 34.9 million in 1940. With this increase in population and in the number of consumer units, the rise in the output of goods and services would be 25–30 percent per capita or 20–25 percent per family.

#### *Changes in the Gross National Product*

In 1940, the gross national product of the United States—that is, the value of all goods and services produced in the Nation, at market prices—amounted to \$97 billion, including services of men in the armed forces, or to \$96.4 billion if such services are not counted. If the national product, excluding services of the armed forces, is from 40 to 45 percent—say, about 43 percent—higher in 1950, it would amount to \$138 billion at 1940 prices. Assuming an additional \$4 billion for the armed forces, the total gross national product in 1950 would reach \$142 billion at 1940 prices, \$150 billion at 1941 prices, or \$180 billion, in round numbers, at 1944 prices. This dollar amount, of course, would be further increased by a post-war rise in price levels.<sup>1</sup>

To sum up, under the conditions indicated above the corollaries of full employment in 1950 are that:

Demand for labor, in terms of man-hours, increases about 16 percent;

The physical volume of production of goods and services increases 40–45 percent;

Production of goods and services for general consumption increases from 25 to 30 percent per capita of population, and from 20 to 25 percent per family;

The gross national product in 1950 amounts to \$150 billion at 1941 prices or \$180 billion at 1944 prices.

<sup>1</sup> This projection of gross national income for 1950 follows essentially the estimate presented by the author in "Techniques of Income Projection," in National Industrial Conference Board, *Measuring and Projecting National Income*, pp. 5–9 (Studies in Business Policy, No. 5). The estimate is lower than the projections for 1947 and 1948 developed in the author's "Economic Perspectives, 1943–48," Social Security Board, Bureau of Research and Statistics (Memorandum No. 52), chiefly because of different assumptions as to the level of prices.

## National Budget for Full Employment

Prewar experience shows that the volume of production—and consequently the level of employment—is bound to decline unless outlets for goods and services are sufficient for full utilization of the Nation's labor force and technical resources. In 1940, for example, the United States had a gross national product of \$97 billion and average unemployment of 7.4 million. With full employment, allowing 2.5 million for frictional unemployment, the gross national product would have approached \$107 billion in that year. In other words, in 1940 we were 5 million jobs short of full employment and \$10 billion short of the national product associated with that level of economic activity. Since our economic system was not fully utilized when full employment corresponded to a gross national product of \$113 billion at 1941 prices, what is the chance of achieving full employment in 1950 when that level of activity will presuppose a national product of \$150 billion at the same prices?

#### *Our Capacity to Consume*

Robert R. Nathan has stated effectively the view of some economists that current purchasing power would not be sufficient to absorb the goods and services the Nation would produce at the full-employment level: "An analysis during the decade of the 20's and during previous periods of relative prosperity indicates that total savings tend to average approximately 20 percent of the gross national product in good times . . . Let us assume that a level of \$150 billion per year is accepted as reasonably attainable for the first few years after the war. If the old prewar relationship prevails, then there will be a tendency for individuals to spend about \$120 billion for consumption, and for individuals and business enterprises to save about \$30 billion per year."<sup>2</sup>

Of the total gross national product, Mr. Nathan continues, goods and services representing \$120 billion "will be purchased directly and immediately by consumers out of their income.

<sup>2</sup> Nathan, Robert R., *Mobilizing for Abundance*, 1944, p. 65.

The \$30 billion of income saved must be used or offset by other expenditures if the residual \$30 billion of goods and services are to be sold. If offsets to savings are less than \$30 billion, then total demand in goods and services will be less than the supply, resulting in unsold inventories or in depressed prices and business losses, which in turn will discourage further production."<sup>3</sup>

Since savings of about \$30 billion a year could not be fully absorbed by productive investments, full employment, in Mr. Nathan's opinion, would require special devices to offset the excess of savings over private investments. He declares that the problem would be solved if exports of the United States exceeded imports by \$5 billion a year and if Government spent for public works and similar purposes an additional \$15 billion a year obtained from savings through taxation or borrowing.<sup>4</sup>

Once accepted as a means for balancing the national budget, a policy of exports "with limited prospect for early repayment" could, in the opinion of this writer, hardly be abandoned. The growth of the national product would make it necessary to keep increasing the export of surplus products that could not be disposed of in the domestic market. Likewise it would be difficult or impossible to reduce the volume of public works launched to absorb surplus products. After the most useful projects were completed, it would be necessary to undertake less promising projects—almost anything would appear preferable to mass unemployment. There would be no way to stop deficit spending or slow down the rate of growth, for such steps would cause "prosperity" to collapse.

If the philosophy of spending and dumping surplus products were the only alternative to mass unemployment, the chance of achieving full employment would be rather slim. Fortunately, this philosophy rests on the assumption that gross savings made out of a gross national product of \$150 billion would not be absorbed by productive investments.

This danger is, however, rather remote. If the old prewar relationship

prevails, \$30 billion put aside by individuals and business enterprises in 1950 will include, in addition to net savings, capital charges such as the maintenance cost of industrial installations, houses, and the like. In fact, capital charges are included in the prices of goods and services produced and are therefore listed in the aggregate gross national product but do not appear in current incomes of employees or employers. This item averaged 11 percent of gross national product in the 20-year period from 1919 to 1938 and would amount to \$16.5 billion in 1950 if the same ratio were applied to a gross national product of \$150 billion in that year. This would leave \$13.5 billion for net savings of individuals and business enterprises, and the problem of equilibrium between production and consumption would be reduced to the question whether this amount might be absorbed by net capital formation including net private investments in industrial plants, building up of inventories, and housing construction.

This question is answered by the experience after World War I, when net capital formation varied as follows:<sup>5</sup>

Year	Net capital formation (in billions)	Formation in percent of gross national product
1919.....	10.3	14.2
1920.....	11.4	13.5
1921.....	3.3	4.9
1922.....	4.5	6.6
1923.....	8.6	10.8
1924.....	5.9	7.4
1925.....	9.3	11.0
1926.....	9.2	10.2
1927.....	8.2	9.2
1928.....	7.4	8.1
1929.....	10.0	10.3

Excluding the depression period of 1921-22, after World War I the net capital formation averaged \$8.9 billion annually or more than 9 percent of the gross national product. If the same relationship prevails after World War II, net capital formation in 1950 would absorb somewhat more than \$13.5 billion, leaving no gap whatsoever between the supply of goods and services and the demand for them.

<sup>5</sup> Kuznets, Simon, *National Income and Its Composition, 1919-1938, 1941*, Vol. I, p. 269.

Moreover, the preceding reasoning is very rough and implies a considerable margin of error. There is no evidence that the pattern of gross savings (including capital charges) after this war will be the same as in the 1920's. It is fairly possible, for example, that business reserves, which constitute a large part of the gap between gross national product and national income, will be considerably less than \$16.5 billion in 1950. Assuming that they drop to \$9 billion<sup>6</sup> while the ratio of net savings by individuals and business enterprises to gross national product remains the same as in the 1920's, gross savings would total \$22.5 billion leaving \$127.5 billion for consumer expenditures. The last amount may be further increased if consumers divert to current expenditures even a small fraction of their reserves accumulated during the war.<sup>7</sup>

To sum up, neither the prewar experience nor the probable deviations from the prewar relationships in saving and spending indicate the danger of a collapse of the full-employment economy because of lack of outlets for goods and services.

### The "Gap" in the National Budget

Although there appears to be no reason to anticipate a \$15 billion gap between current purchasing power and the output of goods and services at a full-employment level of the postwar economy, the threat of even a small "deficiency" should be considered. This danger has been analyzed systematically by the National Planning Association in its report, *National Budgets for Full Employment*.

The basic "national budget" developed in that report applies to a hypothetical gross national product of \$170 billion, at 1941 prices, in the year 195x. To show that the conclusions of the report do not depend on any specific assumption on the size of national product, the report also offers alternative projections of \$150 billion and \$130 billion. For practical purposes the date 195x in all the projections stands for 1950.

The "national budgets" given in the

<sup>3</sup> *Ibid.*, p. 66.

<sup>4</sup> *Ibid.*, pp. 180 and 206.

<sup>6</sup> See line 3, tables 1 and 3.

<sup>7</sup> See line 11-a, table 3.

report follow essentially the pattern of "disposition of national income" used by the Department of Commerce and are arranged to emphasize the relationship between the output of consumer goods and services and consumer demand. A set of alternative "models" has been developed. The first model shows that the economic system would be badly out of balance if wartime taxes remained in force and the Government had an \$18 billion surplus in receipts over expenditures. Rejecting this model, the Association proposes a more realistic alternative described as the "adjusted-gap" model and reproduced in table 1. This model shows a deficiency of \$8.5 billion in consumer demand when gross national product amounts to \$170 billion and \$7.5 billion or \$5.6 billion, respectively, when the gross national product is \$150 billion or \$130 billion. Gaps of this magnitude would necessarily produce mass unemployment and contraction of economic activities.

"The trouble is," the report declares, "that if past relationships continue, the incomes that are derived by producing the estimated total national product will not generate enough actual expenditures to justify the product. . . . Since the fatal defect is that expenditures are too low, the remedy is to increase expenditures in one or more of the three categories—Individuals, Business, and Government."<sup>8</sup> Three alternative models without a deficiency are offered in the report: the "Government" model which provides for current deficit financing and heavy capital outlays by the Government; the "Business" model in which the gap is closed by increased investments by private business and to some extent by Government expenditures, but without deficit spending; and the "Standard of Living" model in which individual savings are cut down, consumer demand for goods and services is raised, and higher outlays are also envisaged for Government and Business. A summary of these proposals, at the \$150 billion level of gross national product, is given in table 2.

<sup>8</sup> National Planning Association, *National Budgets for Full Employment*, April 1945, p. 34 (Planning Pamphlets, Nos. 43 and 44).

Table 1.—National budgets in 1950, at different levels, according to the National Planning Association

[In billions, at 1941 prices]

Item	Gross national product		
	\$170.0	\$150.0	\$130.0
A. Income from gross national product:			
1. Total income.....	170.0	150.0	130.0
2. Deduct: Business tax and nontax liabilities.....	12.5	11.8	11.1
3. Deduct: Business reserves, etc.....	9.5	9.0	8.5
4. Equals: Net national income.....	148.0	129.2	110.4
5. Deduct: Corporate undivided profits.....	2.5	2.3	1.9
6. Deduct: Contributions to social insurance funds.....	3.9	3.4	2.9
7. Add: Government transfer payments.....	4.3	4.0	3.9
8. Equals: Income payments to individuals.....	145.9	127.5	109.5
9. Deduct: Personal tax and nontax payments.....	15.5	13.5	11.6
10. Equals: Disposable income of individuals.....	130.4	114.0	97.9
11. Deduct: Savings of individuals.....	16.3	13.5	10.7
12. Equals: Individuals' demand for goods and services.....	114.1	100.5	87.2
B. Expenditures for gross national product:			
13. Total expenditures.....	170.0	150.0	130.0
14. Deduct: Government share <sup>1</sup> .....	25.4	23.0	21.0
15. Deduct: Business share <sup>2</sup> .....	22.0	19.0	16.2
16. Remainder: Goods and services that must be bought by individuals.....	122.6	108.0	92.8
17. Deficiency of income (16 minus 12).....	8.5	7.5	5.6

<sup>1</sup> Government's share in gross national product is determined as follows: line 2, plus line 6, minus line 7, plus line 9, minus hypothetical surplus of receipts over expenditures (\$2.2 billion, \$1.7 billion, and \$0.7 billion, respectively).

<sup>2</sup> Business share or private capital formation

includes business reserves (line 3) and net investments.

Source: National Planning Association, *National Budgets for Full Employment* (Planning Pamphlets Nos. 43 and 44), pp. 32, 93, 94; projections here reproduced in abbreviated form.

To ensure full employment in the future, according to the National Planning Association report, it will be necessary to take steps that "will do one or more of the following things: (a) increase expenditures by Government or further reduce taxation while maintaining desirable expenditures, (b) increase business expenditures for private investment, (c) increase expenditures relative to incomes by individuals as consumers. . . ."

" . . . There seems to be no escape from these conclusions. If Business is to operate at moderate levels of expenditure for its own capital account, and if Government expenditures are to remain moderately low relative to the total economy, and if the Government budget is to be balanced, then consumers' expenditures must go up or full employment will not be reached or maintained. Consumers' expenditures will not go up unless the past spending and saving patterns of individuals shift toward higher expenditures for consumption, or unless an increasing number of people in the lower income groups become larger

consumers and better customers—through higher wages and salaries or through lower prices, or both."<sup>10</sup>

The last conclusion is in full accord with the statement in the third report of the Director of War Mobilization and Reconversion: "The American people are in the pleasant predicament of having to learn to live . . . better than they have ever lived before."<sup>11</sup> It also agrees with the conclusion drawn earlier in this article that full employment in 1950 implies an increase in consumption per capita and per family. A rising standard of living would also reflect the prewar trend in the disposition of the gross national product.

On the contrary, the distribution of the gross national income postulated in table 1 (the "gap" model in table 2), with its huge deficiency in expenditures, is not in harmony with prewar experience. It assumes, for example, that the Federal Government will collect in taxes \$1.7 billion more than it needs for current expendi-

<sup>10</sup> *Ibid.*, p. 53.

<sup>11</sup> U. S. Office of War Mobilization and Reconversion, *The Road to Tokyo and Beyond*, July 1, 1945, p. 57.

<sup>9</sup> *Ibid.*, p. 52.

Table 2.—Alternative national budgets in 1950, at the level of \$150 billion, according to the National Planning Association

[In billions, at 1941 prices]

Item	"Gap" model	"Government" model	"Business" model	"Standard of living" model
<b>A. Income from gross national product:</b>				
1. Total income.....	\$150.0	\$150.0	\$150.0	\$150.0
Items 2 through 9.....		As in Table 1		
10. Disposable income of individuals.....	114.0	114.0	114.0	114.0
11. Deduct: Savings of individuals.....	13.5	13.5	13.5	9.7
12. Equals: Individuals' demand for goods and services.....	100.5	100.5	100.5	104.3
<b>B. Expenditures for gross national product:</b>				
13. Total expenditures.....	150.0	150.0	150.0	150.0
14. Deduct: Government share.....	23.0	30.5	24.7	24.7
15. Deduct: Business share.....	19.0	19.0	24.8	21.0
16. Remainder: Goods and services that must be bought by individuals.....	108.0	100.5	100.5	104.3
17. Deficiency of income (16 minus 12).....	7.5	0	0	0
18. Balance of Federal budget: surplus of receipts (+) or expenditures (-).....	+1.7	-5.8	0	0

Source: National Planning Association, *National Budgets for Full Employment* (Planning Pamphlets Nos. 43 and 44), p. 93.

tures.<sup>12</sup> A balanced Federal budget would narrow the hypothetical "gap" from \$7.5 billion to \$5.8 billion. It would be further narrowed if savings of individuals are estimated at less than \$13.5 billion. The estimate in the model is based on a mathematical formula proposed by Louis Paradiso which assumes that the rate of savings increases with the rise in disposable income of individuals.<sup>13</sup> Under this formula, savings in 1950 would amount to 11.1 percent if the gross national product is \$100 billion, to 4.8 percent if it is \$50 billion, and to 14.1 percent if it is \$200 billion. Experience, however, fails to support this

<sup>12</sup>At the level of \$150 billion gross national product, this model assumes business taxes of \$11.8 billion, personal taxes of \$13.5 billion, and contributions of \$3.4 billion to social security funds—a total of \$28.7 billion. On the other hand, Government expenditures are assumed to be \$23.0 billion and transfer payments, \$4.0 billion. The net balance is \$1.7 billion more in collections than in outlays.

<sup>13</sup>This formula reads

$$Y = 5.5 + 0.04(\text{year} - 1935) + 0.828X \quad (1)$$

where Y stands for expenditures and X for disposable income.

For 1950 this formula gives

$$Y = 6.1 + 0.828 X \quad (2)$$

Savings (S) are measured as the difference between disposable income (X) and expenditures (Y) so that

$$S = 0.172 X - 6.1 \quad (3)$$

which implies that with the rise of disposable income only 82.8 percent of the increment will be spent by consumers and 17.2 percent will be set aside as savings.

relationship: such increases in the rate of savings, paralleling the growth in the gross national product, did not occur in the past and there is no reason to expect them in the future.

It is true that the Consumer Purchases Study, based on a survey in 1935-36, and other surveys have shown that the ratio of savings to income rises rapidly with the increase in income at the upper end of the frequency distribution of consumers by income. A rise in the rate of savings in all income classes and therefore in the Nation as a whole would, however, not necessarily follow a rise in the gross national product and in the average standard of living. In fact, use of income by consumers depends not only on earnings but also on occupation and educational background, manner of living, environment, and the like.

A definition of "rich" and "poor" cannot be expressed in terms of dollars. As long as the relative distribution of income in the Nation remains stable—in accordance with the Pareto law—the lowest 25 percent of consumers remain the poor of the Nation, and it is fairly probable that they will not save as a group, whether their annual income averages \$250, \$500, or \$750. In the long run, it is not clear whether the middle and upper income classes will increase or curtail their rate of saving as the level of welfare in the Nation rises. It appears, however,

plausible that the rich will have the lion's share of savings, at any stage of economic development, and will put aside about the same part of their income.

This theory is supported by studies recently made by the U. S. Bureau of Labor Statistics.<sup>14</sup> It is indirectly supported also by the fact that in the past, when this country was not as rich as it is now, the Nation as a whole saved about the same fraction of its current earnings. If the opposite theory were true and the rate of saving were determined by, say, the third formula given in footnote 13, no savings would be possible in the United States as long as the disposable income was less than \$35.5 billion or gross national product was less than \$50 billion. Contrary to this assumption, the rate of savings in the United States in the middle of the nineteenth century, was about as high as in the 1920's.

The formula used by the National Planning Association for the relationship between consumer expenditures (or savings) and disposable income was deduced according to a conventional mathematical technique from the available statistics for the years 1923-40. Unfortunately, correction was not made for changes in the price level, and prosperous years were not segregated from depression years, when savings dwindled to nearly zero. These omissions are important enough to vitiate the formula. In fact, as far as prewar relationships cast light on the probable behavior of consumers under conditions of full employment after the war, deductions should be based on observations in comparatively prosperous years when employment was on a high level. If the results of observation are to be applied to hypothetical national income expressed in dollars with a constant purchasing power, the statistics used as the basis of observation should be expressed likewise in dollars at constant prices.<sup>15</sup> A formula which meets these

<sup>14</sup> Brady, Dorothy S., and Friedman, Rose D., paper on Savings and the Income Distribution, presented at the annual meeting of the Conference on Research in Income and Wealth, November 1945.

<sup>15</sup> See Woytinsky, W. S., "Relationship Between Consumers' Expenditures, Savings, and Disposable Income," *Review of Economic Statistics*, February 1946.

Table 3.—National budget in 1950 at the level of full employment, according to the projections of this article

[In billions, at 1941 prices]

Item	Amount
<b>A. Income from gross national product:</b>	
1. Total income.....	\$150.0
2. Deduct: Business tax and nontax liabilities.....	11.8
3. Deduct: Business reserves, etc.....	9.0
4. Equals: Net national income.....	129.2
5. Deduct: Corporate undivided profits.....	2.3
6. Deduct: Contributions to social insurance funds.....	3.4
7. Add: Government transfer payments.....	5.0
8. Equals: Income payments to individuals.....	128.5
9. Deduct: Personal tax and nontax payments.....	13.5
10. Equals: Disposable income of individuals.....	115.0
11. Deduct: Savings of individuals.....	9.9
11a. Add: Spending of war savings.....	4.0
12. Equals: Individuals' demand for goods and services.....	109.1
<b>B. Expenditures for gross national product:</b>	
13. Total expenditures.....	150.0
14. Deduct: Government share.....	23.7
15. Deduct: Business share.....	19.0
16. Remainder: Goods and services that must be bought by individuals.....	107.3
17. Deficiency of supply (12 minus 16).....	1.8

conditions<sup>16</sup> would indicate for disposable income of \$114 billion (item 10, table 2) savings amounting to \$9.9 billion, almost exactly the amount suggested in the "Standard of Living" model. Thus, without changing the prewar relationships of the various factors, the deficiency in the national budget would be narrowed to \$1.8 billion. A deficiency of this magnitude falls within the margin of error of the computation. It might be caused by understatement of business share in expenditures (item 15, table 1) or the Government share (item 14) or both, and the danger of such a "gap" might be checked by liquidation of a small part of war savings or otherwise without substantial deviation from the prewar pattern of the disposition of the national product.

The conclusion seems inescapable that the impressive deficiency in the "gap" models rests on dubious mathematics rather than on prewar experience.

### The Double Danger

The preceding analysis does not imply that a national budget of \$150 billion in 1950 would necessarily be in balance. Deflationary and inflationary dislocations might develop at this

<sup>16</sup> The revised formulas for consumer expenditures (Y) and savings (S) are

$$Y = 0.925 \times -1.3 \dots \dots \dots (4)$$

$$S = 0.075 \times +1.3 \dots \dots \dots (5)$$

or any other level of economic activity. Moreover, inflationary pressure in certain sectors of the economic system and certain areas does not preclude deflationary dislocation in other sectors of the economy. It appears, however, that for the United States as a whole the danger of inflation 4 or 5 years after the end of the war is more real and imminent than the danger of deflation.

The third report of the Director of War Mobilization and Reconversion stressed the fact that

"The vast reservoir of liquid assets—currently estimated at \$230 billion or almost three times the 1939 total—adds a completely new factor to our economy. These financial resources, plus the great need for goods which has been built up during the war, can be a self-starter for our postwar economy, and if handled right, a 'fly-wheel' for years to come."<sup>17</sup>

It is impossible to predict what various groups of the population will do with their war savings. At least some people, however, will use savings to build or buy houses; to buy cars, washing machines, or radio sets; improve their standard of living; give their children higher education; and so on. Assuming that the war savings of individuals and business enterprises will total \$200 billion by the end of the

<sup>17</sup> U. S. Office of War Mobilization, op. cit., p. 58.

reconversion and that these savings and reserves are spent at a rate of 2 percent annually, \$4 billion will be added each year to current purchasing power.<sup>18</sup>

In this event, the national budget for 1950, at the level of \$150 billion, will have a surplus of demand for goods and services (table 3). This model differs at two points from that proposed by the National Planning Association for a gross national product of \$150 billion: first, it postulates a balance between public expenditures, including transfer payments, on the one hand, and tax and nontax payments, including contributions to social security funds, on the other; second, it assumes a different pattern of individual savings.

Government expenditures—items 14 and 7—total \$23.7 billion+\$5.0 billion=\$28.7 billion, as compared with \$23.0 billion+\$4.0 billion=\$27.0 billion in table 1. Tax and nontax payments—items 2, 6, and 9—total \$11.8 billion+\$3.4 billion+\$13.5 billion=\$28.7 billion, as in table 1. In table 3, these two sums are in balance while table 1 suggests a deflationary gap of \$1.7 billion. A precise estimate of the separate items mentioned above is not very important for the present analysis; the crucial point is the balance: (14)+(7)=(2)+(6)+(9).

Savings of individuals (11) are estimated here at \$9.9 billion on the basis of formula (5) in footnote 16, applied to disposable income of \$115 billion—7.5 percent of \$115 billion+\$1.3 billion=\$9.9 billion—and it is assumed that \$4 billion of war savings will be spent by holders in the year surveyed, leaving net savings amounting to \$5.9 billion, in contrast to \$13.5 billion in table 1. If the hypothetical expenditure of war savings (11a) is increased, the deficiency of supply (17) will likewise increase, and vice versa.

In the model in table 3, output trails the demand for goods and services by \$1.8 billion. The deficiency of output, however, could be many times greater. It would increase if we assume that Government and business will have a

<sup>18</sup> The role of war savings, one of the most important and most controversial problems in the analysis of employment perspectives, will be discussed in the concluding article of this series. Cf. also Woytinsky, W. S., "Economic Perspectives, 1943-48," op. cit.

larger share in the gross national output<sup>20</sup> or if we assume a higher rate of spending of war savings. If, for example, 5 percent of war savings is spent (or invested in durable goods) in 1950, the surplus of the current purchasing power (demand) over the goods and services produced at the full-employment level would approximate \$8 billion. The situation would be as inflationary as that after World War I.

This danger could not be checked by an increase in the national product. In fact, if instead of \$150 billion worth of goods and services the gross national output in 1950 should be \$160 billion, national income would probably rise from \$129.2 billion to approximately \$138 billion and disposable income of individuals from \$115 billion to \$123 billion, in round numbers. Assuming a proportionate rise in current savings and expenditure of war savings of somewhat less than \$8 billion, individuals' demand for goods and services might amount to \$120 billion. On the other hand, Government and business shares in expenditures for gross national product would rise from \$23.7 billion and \$19 billion to about \$25 billion and \$20 billion, respectively, leaving, for individual consumption, goods and services aggregating \$115.0 billion in value. The "gap" would be slightly narrowed but not closed.

A more drastic reduction of the deficiency might be effected by increasing taxes (items 2, 6, and 9 in table 3) to more than current Government expenditures (items 7 and 14). A similar effect would result from a rise of business reserves (3) and corporate undivided profits (5) and curtailment of business outlays (15).

To sum up, if prewar relationships—with necessary adjustments for industrial and social progress in a dynamic society—prevail in 1950, there will be sufficient outlets for all the goods and services produced with full utilization of the Nation's human and technical resources. The equilibrium would be precarious, however, and could be destroyed at any time by various factors. If inflationary pressures developed, the situation would require measures to reduce or immo-

<sup>20</sup> Estimated at 28.5 percent in table 3, as compared with 32 percent in 1939 and 30 percent in 1940.

bilize free purchasing power, though such a policy might differ considerably from the anti-inflationary policy required by a war economy.

### Postwar Consumption

Distribution of consumption in a postwar period of full employment would necessarily differ from the pattern in 1935-36, when the country was in the early phase of recovery, with millions of workers out of jobs or on relief work projects. It would also differ from the pattern in 1940, when the progress of recovery had been interrupted by the war in Europe, and from that in 1942 and more recent years, when many durable goods had disappeared from the market and consumption of other articles, including alcoholic beverages and jewelry, increased disproportionately under the impact of the hidden inflation.<sup>20</sup>

The general pattern of distribution of consumer expenditures in postwar America may be deduced from prewar experience, especially during the changes in business conditions when the Nation shifted from prosperity (1929) to depression (1933), and from depression to recovery (1937) and to the war boom (1942) (table 4). From 1929 to 1940, expenditures for food (including beverages) and tobacco varied in more than direct proportion to the total amount of consumer expenditures, largely because of ups and downs in food prices. Consumption of food varied in a narrower range than the total disposable real income

<sup>20</sup> See "Consumption Expenditures 1929-43," *Survey of Current Business*, June 1944, pp. 6-13.

Table 4.—Consumption expenditures under changing business conditions, 1929-42<sup>1</sup>

Expenditure	[In millions]					
	1929	1933	1937	1940	1941	1942
Total consumption <sup>1</sup> .....	\$72,018	\$44,083	\$62,939	\$67,758	\$77,376	\$85,614
Food and tobacco.....	21,723	13,277	21,420	21,876	25,296	31,459
Clothing and accessories.....	11,138	5,637	7,879	8,801	10,341	12,547
Personal care.....	1,112	705	967	1,107	1,274	1,529
Housing.....	11,273	7,732	8,280	9,136	9,664	10,127
Household operation.....	11,064	6,697	9,655	10,890	12,319	13,294
Medical care, etc.....	3,559	2,382	3,162	3,522	3,939	4,407
Personal business.....	3,413	2,029	2,667	2,742	2,953	2,877
Automobile.....	6,014	2,976	5,266	5,746	6,842	3,332
Transportation, other than automobile.....	2,018	1,082	1,421	1,461	1,640	2,244
Recreation.....	4,275	2,253	3,396	3,736	4,264	4,640
Education, etc.....	652	474	592	644	703	801
Religious and welfare activities.....	1,190	867	890	1,040	1,094	1,233
Foreign travel, etc.....	995	440	613	306	277	190

<sup>1</sup> Excludes outlays for personal business and foreign travel.

Source: *Survey of Current Business*, June 1944, pp. 9-11.

of consumers. It may be anticipated, however, that the civilian demand for food in 1950 will be appreciably greater than in 1940. The growth of the population and especially of the number of households, new nutritional habits, and general improvement of the standard of living may increase the over-all expenditure for food by 25 percent, from \$25.3 billion in 1940 to \$31.6 billion, at 1941 prices, in 1950.

Expenditures for clothing and personal care are likely to increase at a higher rate, say 50 percent, mainly because of improvement in standards of living. From \$11.6 billion in 1941, this item might rise to \$17.4 billion.

Expenditures for housing will be determined by the increase in the number of dwelling units and the effectiveness of rent control. Assuming that the number of households increases 14.3 percent from 1940 to 1950 and rents are not permitted to rise more than 20 percent, expenditures for housing may increase from \$9.7 billion to \$13.3 billion.

A much larger rise may be anticipated in household operation. The accumulated demand for refrigerators, washing machines, radio sets, and electrical kitchens will make itself evident, and a 50-percent rise, from \$12.3 billion to \$18.5 billion, seems within the realm of probability.

A 40-percent increase in expenditures for medical care, from \$4 billion to \$5.5 billion, may be projected.

Disbursements for automobiles and other user-operated transportation (including private airplanes) may rise 50 percent, from \$6,842 million to \$10.3 billion. In other means of transpor-

tation the rise may amount to 30 percent, as a result of the growth of population (8 percent), dispersion of urban communities, and increasing interest in travel. From \$1,640 million this item may rise to \$2.1 billion.

Increase in expenditures for recreation was probably retarded by the war. Assuming a rise of 40 percent over 1941 or 1929, the outlay would reach \$6.4 billion by 1950.

A gain of 30 percent, from \$1.8 billion to \$2.3 billion, may be anticipated in private expenditures for education and in religious and welfare activities.

These very rough projections merely illustrate the assumption of full employment and the long-range trend in productivity of labor and are by no means a forecast, but they are wholly within the realm of possibility. They would result in the following distribution of consumer expenditures in 1950, as compared with amounts obtained by applying the 1941 pattern to the 1950 population:

Type of expenditure	Amount in billions at 1941 prices	
	1950	1941 pattern
Total consumer expenditures..	\$107.3	\$85.0
Food, beverages, and tobacco.....	31.6	27.8
Clothing and accessories and personal care.....	17.4	12.8
Housing.....	13.3	10.6
Household operation, including furniture, electrical appliances, etc.....	18.5	13.5
Medical care.....	5.5	4.3
Automobile and other owner-operated transportation.....	10.3	7.5
Other transportation.....	2.1	1.8
Recreation.....	6.4	4.7
Education.....	.9	.8
Religious and welfare activities.....	1.4	1.2

Expenditures of this magnitude would not require revolutionary change in our consumption habits.<sup>21</sup> In fact the assumed changes are trivial in comparison with the contrasts between the fat and lean years in the past (table 4). The general pattern of these changes conforms with the projections of the National Resources Committee. Within this pattern, of course, the postwar demand for par-

<sup>21</sup> Another tentative distribution of consumers' expenditures was suggested by S. Morris Livingston in a report published by the Department of Commerce in March 1943 under the title "Markets After the War."

ticular types of goods and services will be determined by competition, the quality and prices of goods, and the ability of producers to sell their merchandise to consumers.

### Postwar Capital Formation

In accordance with the classification used in the report of the National Planning Association, private capital formation is listed in table 3 as the "business share" of expenditures from the gross national product. The estimate of \$19 billion is purely illustrative. In fact, this is one of the most elusive items in projections of national income, since the amount used for capital formation in a year is largely determined by current business conditions.

The figure of \$19 billion was proposed by the National Planning Association in its "gap" model for a gross national product of \$150 billion (table 2).<sup>22</sup> The derivation of that figure is not very clear but may include about \$6 billion for residential construction, \$1 billion for growing inventories, \$8 billion for maintenance of capital, and \$4 billion for expansion of producers' plant and equipment.

Gross capital formation is thus set at 12.7 percent of the gross national product or somewhat more than 13 percent of the hypothetical civilian gross product, excluding services of the armed forces. This estimate appears rather conservative against the background of past experience. According to Kuznets, the ratio was somewhat over 20 percent before World War I, skyrocketed to over 25 percent in 1919 and 1920, and averaged 19 percent in 1921-29. It dropped during the depression but climbed back to 13.4 percent in 1935 and to 18.8 percent in 1936, and to 19.3 percent in 1937.<sup>23</sup> It may rise above 15 percent in the period of the catching-up postwar expansion, but its subsequent increase would threaten over-expansion of the industrial plant.

The estimate of gross capital formation in 1950 at \$19 billion thus appears rather conservative. A somewhat

higher figure—for example, \$21 billion—would not be unreasonable.

### Lessons of Prewar Experience

The main conclusion to be drawn from prewar experience is that the Nation can enjoy full employment and can also suffer a deep depression at any level of productive capacity. There is no evidence against the possibility of either a new depression or a balanced national budget on a full-employment level. Clearly, such a budget would not be an enlarged copy of the prewar pattern but would reflect definite changes in prewar relations, similar to changes that have characterized economic progress in the past. However, if an economic equilibrium on a high level of employment is reached after the war, it will be as precarious and difficult to preserve as in the past. Maladjustments may develop in any quarter of the economic system, and if they are not ironed out at the proper time their cumulative effect may become disastrous.

The preceding analysis seems to permit a rough ranking of postwar dangers. Least of all appears the danger that people would not know what to do with increasing wealth and that a "gap" would develop between production and consumption.

The greatest threats to postwar economic equilibrium appear to be inflation and overexpansion: overinvestment, a boom in real estate, a boom on the stock exchange, precipitous liquidation of savings, and a rise in prices.

If deflationary danger develops, remote as it now appears, three factors will tend to offset it: the war savings of individuals, the liquid reserves of business, and deferred demand for consumer durable goods and for private and public investments.

If inflationary danger becomes imminent, two forces will meet it: the will of the Nation not to indulge again in false prosperity and our ability, shown in wartime wage and price controls, to handle economic matters.

Not only our wartime success in controlling prices but, even more, the present control of the security markets, the progress of social legislation, and the increasing interest of the public in the problem of full employment justify the hope that the United States will find ways of protecting its postwar economy against dislocations.

<sup>22</sup> National Planning Association, *op. cit.*, p. 93.

<sup>23</sup> Kuznets, Simon, *Uses of National Income in Peace and War*, 1942, p. 37.