



## The Maintenance of Full Employment after the Transition Period

### A Comparison of the Problem in the United States and the United Kingdom

by

M. KALECKI

*International Labour Office*

*"The maintenance of high levels of employment during the period of industrial rehabilitation and reconversion" forms the subject of a Resolution adopted by the International Labour Conference at its 27th Session, held in Paris from 15 October to 5 November 1945. But the problem is one which may be expected to extend into the post-transition period and calls for continued analysis. The following article assesses the situation in two countries, the United States and the United Kingdom, in order to account for an anticipated difference in their prospects. For this purpose, the factors determining the level of employment in any economy are first briefly discussed, and the framework so obtained is then used to compare first the pre-war, and then the post-transition position of the two countries.*

**A** NUMBER of enquiries have recently been made into the conditions necessary for maintaining full employment in the United States and the United Kingdom after the transition period. They all point to the fact that the problem of post-transitional employment is likely to be much more formidable in the former country. With rates of taxation roughly speaking midway between pre-war and wartime levels, the loan-financed Government expenditure required to maintain full employment will be much higher in relation to the national income in the United States than in the United Kingdom. The purpose of this article is to examine

the factors which account for this difference. It will be convenient to compare, first, the employment situation in the United States and the United Kingdom before the war, and then to pass to an analysis of the prospective position in the two countries after the transition period. But before the examination of the relevant data (or estimates), it will be necessary to discuss briefly a few points of a general character.

#### EXPENDITURE, INCOME AND EMPLOYMENT

In order to put the problem of employment into a proper perspective, we shall have first to draw up a "national balance sheet" of income and expenditure. The expenditure on goods and services in a given country may be subdivided into four components: (1) personal expenditure on consumption; (2) gross private expenditure on investment, *i.e.*, expenditure on new fixed capital (plant, machinery, buildings, etc., inclusive of dwelling houses), whether for the replacement or for the extension of fixed capital, plus the increase in working capital and stocks; (3) public expenditure on goods and services; (4) expenditure of foreigners, *i.e.*, exports. Now the price of any goods or services bought for personal consumption, for private investment, or by public authorities is accounted for fully by: (1) wages, salaries, rent, interest and profits; (2) depreciation; (3) indirect taxes, if any; and (4) the cost of imported commodities used in the production of the goods considered. For instance, the price of cigarettes in Great Britain is accounted for fully by: (1) wages, salaries, rent, interest and profits earned from the manufacture and distribution of cigarettes; (2) depreciation of machinery and buildings; (3) tobacco duties<sup>1</sup>; (4) cost of imported raw tobacco.

It follows directly that the aggregate expenditure on goods and services in a given year is equal to the sum of the following items taken for the same year: (1) aggregate wages, salaries, rent, interest and profits, which is, in fact, the national income; (2) depreciation; (3) indirect taxes; (4) value of imports. We thus have:

|   |                             |
|---|-----------------------------|
| Personal consumption                        | National income             |
| Gross private investment                    | Depreciation                |
| Public expenditure on goods<br>and services | Indirect taxes              |
| Exports                                     | Imports                     |
| <hr/> Aggregate expenditure                 | <hr/> Aggregate expenditure |

<sup>1</sup> Plus, strictly speaking, employers' contributions to social insurance.

Let us now deduct from both sides depreciation and imports. The remaining part of aggregate expenditure may be called the "net national product": *net*, because we deduct depreciation, namely, that part of investment which serves to make good wear and tear and obsolescence; national *product*, because we deduct that part of expenditure on goods and services which is covered by imports. If we denote by net investment the excess of gross investment over depreciation, we obtain:

|   |  |  |
|---|--|--|
| Personal consumption<br>Net private investment<br>Public expenditure on goods<br>and services<br>Exports minus imports<br><hr style="width: 100%;"/> Net national product |  | National income<br>Indirect taxes<br><br><hr style="width: 100%;"/> Net national product |
|---|--|--|

The national income is the sum of wages, salaries, rent, interest and profits *before* direct taxation. On the other hand, a part of the expenditure of public authorities is devoted, not to goods and services, but to so-called transfers, that is, pensions, benefits and allowances, etc. It follows that the right-hand side of the balance sheet may be represented as income net of tax (inclusive of transfers) plus direct and indirect taxes minus transfers. Taking into consideration that the item "taxes minus transfers" represents the part of tax revenue available for public expenditure on goods and services, and that a part of income net of tax is consumed and the rest saved, we can write the final result as follows:

|   |   |   |                         |   |   |                      |  |  |
|---|---|---|-------------------------|---|---|----------------------|--|--|
| Personal consumption<br>Net private investment<br>Exports minus imports<br>Public expenditure on goods<br>and services<br><hr style="width: 100%;"/> Net national product |   | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; vertical-align: middle;">Income<br/>net of<br/>tax</td> <td style="width: 5%; font-size: 2em; vertical-align: middle;">{</td> <td style="width: 85%;">                             Personal consumption<br/>                             Savings<br/> <br/>                             Taxes available for public<br/>                             expenditure on goods<br/>                             and services                         </td> </tr> <tr> <td colspan="3" style="border-top: 1px solid black; text-align: center;">Net national product</td> </tr> </table> | Income<br>net of<br>tax | { | Personal consumption<br>Savings<br><br>Taxes available for public<br>expenditure on goods<br>and services | Net national product |  |  |
| Income<br>net of<br>tax   | { | Personal consumption<br>Savings<br><br>Taxes available for public<br>expenditure on goods<br>and services   |                         |   |   |                      |  |  |
| Net national product  |   |   |                         |   |   |                      |  |  |

It should be added by way of explanation that exports and imports are meant here to include not only goods but services as well. In particular, exports include interest and dividends on capital invested abroad, and imports include interest and dividends on foreign capital invested in the country considered. Moreover, savings cover both personal savings and undistributed company profits.

The table arrived at above, which permits us to look at the national product from two different angles, provides a good starting point for the discussion of the problem of employment. On both sides of our balance sheet we see personal consumption. If the public expenditure on goods and services is equal to the revenue available for its financing, that is to say, if the combined budget of all public authorities is balanced, savings are equal to net private investment plus export surplus. It is now clear that with a balanced budget, a given level of employment can be maintained only if savings at that level are in fact "offset" by investment plus export surplus.

If, at the existing level of employment, savings are "too high", this results in the first instance in an increase in the stocks of consumption goods. This will be included in our balance sheet in private investment; the offset to "excess savings" will thus be provided automatically. However, the accumulation of stocks will continue over a short period; firms will soon start to cut employment, which will fall to the level where savings will be fully offset by investment (which no longer includes the accumulation of unsold goods) and export surplus.

More generally, an analysis of the type of investment forthcoming in a given period and of the export surplus (if there is an export deficit, this, of course, exerts a *negative* influence upon employment) can shed light on the question of what chance there is that the existing high level of employment will continue. If, for instance, a large part of investment consists of an increase in stocks of a speculative character, while there is not much chance of an increase in investment in fixed capital or in export surplus<sup>1</sup>, a fall in employment may be expected in the near future. The same is true if the level of investment in fixed capital is so high that the existing productive capacity increases quickly while the national product tends to be stationary; or when the export surplus is due to some special factor which is not likely to last long.

So far it has been assumed that the combined budget of public authorities is balanced. It will be seen at a glance from our balance sheet that, if the public expenditure on goods and services exceeds the revenue available to finance it, savings are equal to private investment plus export surplus plus the excess of public expenditure over revenue, *i.e.*, plus the budget deficit. Thus the budget deficit is an offset against savings also. The gap between what persons and firms choose to save at a given level of employment, on the one

---

<sup>1</sup> It should be noted that a country can maintain an excess of exports of goods and services over its imports only if other countries are willing to deplete their stocks of gold and of the currency (or securities) of that country, or if that country, by foreign lending, provides the means for purchase of its products.

hand, and the offsets of private investment and export surplus, on the other, can thus be filled by a public expenditure on goods and services which has no counterpart in revenue. In other words, a given level of employment can be maintained even though private investment plus export surplus falls short of savings, provided that the difference is made up by a budget deficit.

This brief theoretical discussion provides us with a framework for a comparison between the employment situation in the United States and in the United Kingdom.

#### COMPARISON OF THE PRE-WAR SITUATION

We choose for the comparison of the employment situation the last pre-war year in the United Kingdom, namely, 1938, and 1940 in the United States. The reason for the latter choice is that, although the United States was not at war until the end of 1941, the rearmament in that year was already on a considerable scale. Moreover, just like 1938 in the United Kingdom, 1940 in the United States was a year of moderately high employment as compared with the employment levels of the late 'thirties. However, the percentage of unemployment was greater in the United States in 1940 than it was in the United Kingdom in 1938. Indeed if people engaged on public emergency projects in the former country are counted as unemployed (as is done in the Bureau of Census statistics published since 1940), the percentage of unemployed in relation to the total available labour force in 1940 was about 14 per cent. In the United Kingdom the proportion of registered wholly unemployed<sup>1</sup> to the number of workers insured against unemployment was in 1938 about 9 per cent.; there is no doubt that the unemployment percentage for the whole of the available labour force was lower. It follows that the British unemployment percentage in 1938 was substantially lower than the American figure of 14 per cent. for 1940. It should be remembered here that the normal working hours were 40 per week in the United States and 48 in the United Kingdom. The actual average working hours in manufacturing were somewhat shorter: 38.5 per week in the United States in 1940; and 46.5 in the United Kingdom in 1938.

We shall show that not only was employment in the United States in 1940 lower in relation to the available labour force than it was in the United Kingdom in 1938, but that in addition its basis was more precarious. To maintain the level in the longer run would require a higher budget deficit in relation to nation-

---

<sup>1</sup> The "temporarily stopped" are left out of consideration because a roughly corresponding category is excluded from the U.S. statistics of unemployment.

al product than to maintain the 1938 employment level in the latter country. We shall conduct our analysis by means of the pattern elaborated in the preceding section. Tables I and II give the balance sheet of net national product for the United States in 1940 and for the United Kingdom in 1938. It should be noted that the component "net private investment" is subdivided into "investment in fixed capital" and "change in the value of working capital and stocks".<sup>1</sup>

TABLE I. NET NATIONAL PRODUCT OF THE UNITED STATES  
IN 1940

(*\$ thousand million*)

|   |      |                 |   |         |
|---|------|-----------------|---|---------|
| Personal consumption <sup>1</sup>                     | 65.7 | Income<br>=75.1 | Personal consumption <sup>1</sup>   | 65.7    |
| Net private investment in fixed capital               | 3.9  |                 |   | Savings |
| Change in value of working capital <sup>2</sup>       | +2.5 |                 |   |         |
| Export surplus  | +1.5 |                 | Taxes available for public expenditure on goods and services <sup>3</sup> | 12.7    |
| Public expenditure on goods and services <sup>3</sup> | 14.2 |                 |   |         |
| Net national product <sup>1 3</sup>                   | 87.8 |                 | Net national product <sup>1 3</sup>                                       | 87.8    |

Source: M. GILBERT and G. JASZI: "National Income and National Product", in *Survey of Current Business*, Apr. 1944, pp. 12-14.

<sup>1</sup> Exclusive of imputed income from houses used by owners. <sup>2</sup> Inclusive of increase in monetary stock due to home production of gold and silver (i.e., increase in monetary stock minus net import of gold and silver). <sup>3</sup> Exclusive of the interest on national debt paid to persons and firms, which is treated as a transfer payment; also exclusive of wages of workers on public emergency projects (who are counted as unemployed), such wages being treated as transfers.

TABLE II. NET NATIONAL PRODUCT OF THE UNITED KINGDOM  
IN 1938

(*£ thousand million*)

|   |       |                 |   |         |
|---|-------|-----------------|---|---------|
| Personal consumption <sup>1</sup>                     | 4.15  | Income<br>=4.52 | Personal consumption <sup>1</sup>   | 4.15    |
| Net private investment in fixed capital               | 0.26  |                 |   | Savings |
| Change in value of working capital                    | -0.04 |                 |   |         |
| Export surplus  | -0.07 |                 | Taxes available for public expenditure on goods and services <sup>2</sup> | 0.72    |
| Public expenditure on goods and services <sup>2</sup> | 0.94  |                 |   |         |
| Net national product <sup>1 2</sup>                   | 5.24  |                 | Net national product <sup>1 2</sup>                                       | 5.24    |

Source: White Paper on *National Income and Expenditure 1938-44* (Cmd. 6623).

<sup>1</sup> Inclusive of imputed income from houses used by owners. <sup>2</sup> Exclusive of the interest on national debt paid to persons and firms, which is treated as a transfer payment.

<sup>1</sup> The latter item reflects not only the quantitative change in working capital and stocks, but also the change in prices at which they are valued.

As will be seen from table I, savings in the United States in 1940 amounted to \$9,400 million, while private investment in fixed and working capital plus export surplus was \$7,900 million. The "gap" of \$1,500 million was made up by the excess of public expenditure on goods and services (\$14,200 million) over the revenue available for its financing (\$12,700 million).

Similarly, in the United Kingdom in 1938 savings were £370 million, while investment in fixed and working capital minus export deficit was £150 million, and the "gap" of £220 million was covered by the excess of public expenditure on goods and services (£940 million) over the revenue available for its financing (£720 million).

To be able to compare the structure of the net national product in the two countries, we shall express all the items of tables I and II as percentages of the respective values of aggregate income net of tax (which is equal to the sum of personal consumption and savings; since the national product is the sum of these two items and taxes available for public expenditure on goods and services, the percentage for the net national product is in each case higher than 100).<sup>1</sup>

TABLE III. NET NATIONAL PRODUCT IN THE UNITED STATES IN 1940 AND IN THE UNITED KINGDOM IN 1938, EXPRESSED AS PERCENTAGES OF AGGREGATE INCOME

|   | U.S.A. | U.K.  |                | U.S.A.   | U.K.        |
|---|--------|-------|----------------|--|-------------|
| Personal consumption                        | 87.5   | 91.8  | Income<br>=100 | Personal consumption   | 87.5 91.8   |
| Net private investment<br>in fixed capital  | 5.2    | 5.7   |                | Savings  | 12.5 8.2    |
| Change in value of<br>working capital       | +3.3   | -0.9  |                |  |             |
| Export surplus                              | +2.0   | -1.5  |                |  |             |
| Public expenditure on<br>goods and services | 19.0   | 20.9  |                | Taxes available<br>for public ex-<br>penditure on<br>goods and<br>services | 17.0 16.0   |
| Net national product                        | 117.0  | 116.0 |                | Net national product   | 117.0 116.0 |

It seems at first glance that the position with regard to maintaining the existing level of employment without Government intervention by means of a budget deficit was less favourable in the United Kingdom than in the United States. Indeed the budget de-

<sup>1</sup> The items in the two tables are only roughly comparable. In particular, as stated in table I, footnote 1, and table II, footnote 1, the imputed value of income from houses used by owners is excluded from the American and included in the British figures of personal consumption and national product. This, however, does not affect significantly the *percentages* shown in table III.

ficit in the latter country was 2 per cent. of aggregate income, while in the former the corresponding figure was 4.9 per cent. A closer examination shows, however, that the reverse is true. Both the change in the value of working capital and the export surplus were at an unusually high level in 1940 in the United States. A correction for these "abnormalities" would reduce the level of private investment plus export surplus from 10.5 per cent. of aggregate income to a level not substantially exceeding 7 per cent. On the other hand, the change in the value of working capital and the export surplus were particularly low in 1938 in the United Kingdom, where the correction for abnormality would raise the proportion of private investment plus export surplus to aggregate income from 3.3 to something like 6 per cent. As a result the budget deficit necessary to maintain the existing level of employment would be of the order of 5 per cent. of aggregate income in the United States and 2 per cent. in the United Kingdom. This difference would be due to the fact that, while the "corrected" level of investment in relation to aggregate income was assumed above to be only a little higher in the United States than in the United Kingdom, the percentage saved out of income was substantially larger in the former than in the latter country: 12.5 per cent. in the first case (in 1940) as compared with 8.2 per cent. in the second (in 1938).

It follows from the above analysis that: (a) employment in the United States in 1940 was lower in relation to the available labour force than in the United Kingdom in 1938; (b) that if the special factors operating in the years considered are eliminated, the budget deficit necessary to maintain the existing level of employment was higher in relation to aggregate income net of tax in the United States than in the United Kingdom, and this was due to the higher percentage of income saved in the first country.

There is yet another aspect of table III to consider. It will be seen that the ratio of tax revenue available for financing public expenditure on goods and services was about the same for the two countries (17 and 16 per cent. respectively). This is important, because this ratio has some relevance to the level of employment. If, for instance, the ratio in the United States were not 17 per cent. of aggregate income net of tax, but, say, 10 per cent., this would make the employment problem more difficult. Indeed, with the same offsets to savings and the same percentage saved out of aggregate income net of tax, such income would be bound to be unchanged. However, the national product would then be not 117, but 110 per cent. of aggregate income, and thus employment would be correspondingly smaller. The fact that the percentages in



question are about the same means that this factor is *not* responsible for the difference in the employment situation of the two countries.

\* \* \*

The main difference in the structure of the national product in the United States and the United Kingdom is seen to be the higher percentage of income saved in the former country at the same level of employment. This percentage was substantially higher in the United States in 1940 than in the United Kingdom in 1938, although the level of employment was lower in relation to the available labour force. If employment were as high as in the United Kingdom, the discrepancy in the percentage of income saved would be even greater, since this percentage increases with the level of employment. Roughly speaking, the problem of employment is more difficult in the United States than in the United Kingdom because the percentage of income saved at the same degree of employment of the available labour force is substantially higher; and because this percentage is not normally offset by a correspondingly higher ratio of private investment plus export surplus to incomes. This situation prevailed, as was shown above, in the pre-war years; it will be seen below, in the section relating to the post-transition period, that this discrepancy is likely to be even greater in that period. But before comparing the post-transition employment problem in the two countries, we shall discuss here the reasons for the higher "savings ratio" in the United States.

One reason for the discrepancy is certainly that the savings shown in the tables are the figures after deduction of death duties, which are higher in relation to aggregate income in the United Kingdom than in the United States. To obtain the amounts *currently* saved, death duties must be added back. The ratio of current savings (*i.e.*, after the adding back of death duties) to aggregate private income was about 13 per cent. in the United States in 1940 and 10 per cent. in the United Kingdom in 1938, as compared with the 12.5 per cent. and 8.2 per cent. for savings net of death duties shown in table III. There still remains, however, a substantial difference, which, as indicated above, would be even greater if the degree of employment of the available labour force were as high in the United States in 1940 as it was in the United Kingdom in 1938.

Another possible reason for a higher savings ratio in the United States might be a divergence in the distribution of aggregate income net of tax as between wages, salaries, pensions, relief payments, etc., on the one hand, and profits, interest, rent, etc., on the other. The percentage saved out of wages, salaries, etc., is lower

than that out of profits, interest, etc., both because a part of profits is saved by companies in the form of "undistributed profits" and because a greater percentage is usually saved out of high than out of medium and low incomes. Thus if the relative share of wages, salaries, etc., in aggregate income net of tax were lower in the United States than in the United Kingdom, this would explain, at least in part, the higher savings ratio in the first country. It appears, however, from the figures given below that such is not the case.

The relative shares of wages, salaries, etc., in aggregate income should be calculated for our purpose as follows: wages, salaries, pensions, relief payments, etc., net of taxes except death duties, should be divided by aggregate income net of taxes except death duties (because the percentages of income currently saved that we analyse here are the ratios of savings before payment of death duties in relation to aggregate income net of all taxes except death duties). As, however, the taxes paid out of aggregate wages, salaries, etc., were relatively very small in both countries, the comparability will not be significantly affected if in both cases we calculate the ratio of wages, salaries, etc., *before* taxation to aggregate income net of taxes except death duties. We obtain 72 per cent. for the United States in 1940 and 69 per cent. for the United Kingdom in 1938. Thus the relative share of wages and salaries in aggregate income appears to be somewhat higher in the first country than in the second. The figures require a correction, however, to be quite comparable, because the imputed value of income from houses used by the owners is excluded from income in the United States but included in the United Kingdom. The correction for this factor would make the American figure about equal to the British. We thus see that the higher savings ratio in the United States *cannot* be explained by a higher share of profits, etc., in aggregate income. This discussion accounts for only one aspect of the distribution of aggregate income. It is not at all impossible that the distribution of income in the United States, in spite of the approximate equality in the proportion of profits, etc., to the aggregate income net of tax, is such as to result in a higher savings ratio. Little that is positive can be said, however, on this subject, for lack of comparable statistics.

One important point is to know what is the ratio of undistributed company profits to the aggregate income net of tax. Although the relevant British data are not quite comparable with the American, it may be shown that the difference between the respective percentages calculated on a comparable basis cannot be great, and that therefore it is the difference between the percentage saved out of personal incomes that is responsible for the higher savings ratio

in the United States. Now, as mentioned above, we do not know enough about the comparative distribution of incomes to say whether this accounts at least partly for a higher savings ratio. What we do know, however, is that the real personal income per head is substantially higher in the United States than in the United Kingdom<sup>1</sup>, and this is likely to be a factor which makes for a higher percentage saved out of personal incomes. Even this statement, however, requires qualification. From the available statistics it seems that the savings out of lower incomes are very small in both countries. It is probably the fact that "the rich are richer" in the United States than in the United Kingdom which accounts, at least partly, for the higher savings ratio in the former country.

#### COMPARISON OF THE POST-TRANSITION SITUATION

In order to compare the post-transition employment situation in the two countries, we shall give in tables IV to VI the relevant items of the national product estimated on the assumption of full utilisation of the anticipated labour force; in both cases, an unemployment of only about 3 per cent. is assumed. Working hours are assumed to be the same as before the war.

For the United States, we use estimates by Arthur Smithies (variant B) of the national product and its components in 1950.<sup>2</sup> The assumptions of variant B with regard to the tax system are that the excess profits tax will be repealed; that present federal excise taxes will be reduced 50 per cent.; that income tax rates for companies and individuals will be established at 1941 levels; and that other tax rates will be left unchanged. The national product and its components are evaluated at 1943 prices.

For the United Kingdom, the writer's own estimates of the national product and its components in 1951 are used.<sup>3</sup> The underlying assumptions with regard to foreign trade are that the terms of trade will be the same as in 1938 and that foreign trade in goods and services will be balanced. With regard to the tax system, it is assumed that the standard rate of income tax will be 8 shillings in the £ (approximately midway between the pre-war and the

---

<sup>1</sup> Taking as a basis, in the first place, the income net of tax per head in the United States in 1940 and in the United Kingdom in 1938; secondly, the relative purchasing power of the \$ and the £ in the period 1925-1934 as given by Colin CLARK in *The Conditions of Economic Progress* (London, Macmillan & Co., 1940), p. 40; and, thirdly, the subsequent changes in the cost-of-living indices — it can be calculated that the real income net of tax per head in the United States in 1940 was about one third higher than in the United Kingdom in 1938.

<sup>2</sup> ARTHUR SMITHIES: "Forecasting Postwar Demand", in *Econometrica*, Jan. 1945.

<sup>3</sup> M. KALECKI: "Employment in the United Kingdom during and after the Transition Period", in *Bulletin of the Oxford Institute of Statistics*, Vol. 6, No. 16 and 17, Dec. 1944.

present rate); that the exemption limit and personal and family allowances will be increased proportionately to wage rates as compared with 1938, and that the percentage allowance for earned income and the ratio of reduced rate to standard rate will be restored to the 1938 level; that the surtax system will be such as to result in the same proportion between income tax and surtax yield as in 1938; and, finally, that aggregate indirect taxation will increase as compared with 1938 in the same proportion as the value of the national product.<sup>1</sup>

TABLE IV. FORECAST OF NET NATIONAL PRODUCT IN THE UNITED STATES IN 1950

(*\$ thousand million at 1943 prices*)

|   |                  |                |  |                  |
|---|------------------|----------------|--|------------------|
| Personal consumption                                | 127              | Income<br>=152 | Personal consumption   | 127              |
| Net private investment in fixed and working capital | 10               |                | Savings  | 25               |
| Export surplus                                      | 2                |                | Taxes available for public expenditure on goods and services | 26 <sup>1</sup>  |
| Public expenditure on goods and services            | 39 <sup>1</sup>  |                |  |                  |
| Net national product                                | 178 <sup>1</sup> |                | Net national product   | 178 <sup>1</sup> |

Source: Arthur SMITHIES, *loc. cit.* The concepts of the particular items are the same as in table I.

<sup>1</sup> These figures differ from those that follow directly from the source owing to the exclusion of interest on national debt paid to persons and firms.

TABLE V. FORECAST OF NET NATIONAL PRODUCT IN THE UNITED KINGDOM IN 1951

(*£ thousand million at 1938 prices*)

|   |                   |                 |  |                   |
|---|-------------------|-----------------|--|-------------------|
| Personal consumption                                | 5.33              | Income<br>=5.88 | Personal consumption   | 5.33              |
| Net private investment in fixed and working capital | 0.40 <sup>1</sup> |                 | Savings  | 0.55              |
| Export surplus                                      | 0                 |                 | Taxes available for public expenditure on goods and services | 1.07              |
| Public expenditure on goods and services            | 1.22              |                 |  |                   |
| Net national product                                | 6.95 <sup>1</sup> |                 | Net national product   | 6.95 <sup>1</sup> |

Source: M. KALECKI, *loc. cit.* The concepts of the particular items are the same as in table II.

<sup>1</sup> These items differ from those given in the source because allowance has been made here for the fact that a part of investment, especially in housing, will be carried out by public authorities, and that thus private investment will be reduced and public expenditure on goods and services will be increased by an equal amount.

<sup>1</sup> More precisely, home national product, *i.e.*, national product minus net income from abroad (interest, dividends, etc.).

Both forecasts (like other estimates of this type) have been made in the following way. First, the future labour force is estimated and reasonable assumptions are made about the future productivity of labour. On this basis the value of the national product at a given price level may be roughly estimated. Next, on the basis of the assumed tax system, a rough estimate of the tax revenue may be made. Future transfer payments are estimated on the basis of existing or promised legislation. It is then possible to divide the national product into aggregate income net of tax and tax revenue available for financing public expenditure on goods and services.<sup>1</sup> Next, on the basis of pre-war relations between savings and personal consumption, plausible assumptions are made as to how much will be saved and consumed out of aggregate income net of tax in the future. It is further roughly estimated what level of investment may be expected to take place continuously without causing over-capacity in the longer run.<sup>2</sup> Finally, the export surplus is assumed to be zero in the case of the United Kingdom<sup>3</sup>, while for the United States a figure equal to a reasonable amount of foreign lending is adopted. In this way all elements necessary to analyse the structure of the national product in the same way as was done in tables I and II are available. The results are presented in tables IV and V.

We now express all items of tables IV and V as percentages of aggregate income net of tax (*i.e.*, of the sum of personal consumption and savings) and thus obtain table VI, corresponding to table III.

TABLE VI. FORECAST OF NET NATIONAL PRODUCT IN THE UNITED STATES IN 1950 AND IN THE UNITED KINGDOM IN 1951, EXPRESSED AS PERCENTAGES OF AGGREGATE INCOME

|   | U.S.A. | U.K.  |                      | U.S.A.   | U.K.      |
|---|--------|-------|----------------------|--|-----------|
| Personal consumption                                | 83.5   | 90.6  | Income<br>=100       | Personal consumption   | 83.5 90.6 |
| Net private investment in fixed and working capital | 6.6    | 6.8   |                      | Savings  | 16.5 9.4  |
| Export surplus                                      | 1.3    | 0     |                      | Taxes available for public expenditure on goods and services | 17.2 18.2 |
| Public expenditure on goods and services            | 25.8   | 20.8  |                      |  |           |
| Net national product                                | 117.2  | 118.2 | Net national product | 117.2  | 118.2     |

<sup>1</sup> See above, p. 451.

<sup>2</sup> However, in the estimates for both countries allowance has been made for the arrears in residential building, which most likely will not have been made good by 1950.

<sup>3</sup> See above p. 459.

It will be seen that the comparative structure of the full-employment national product in the two countries shows basically the same features as were apparent in our pre-war analysis. The percentage of private investment plus export surplus is a little higher in the United States than in the United Kingdom, but not much. The percentage of tax revenue available for public expenditure on goods and services is not very different either. On the other hand, the percentage saved out of income net of tax is again considerably higher in the United States, the difference being even much greater than that between the corresponding figures for the United States in 1940 and the United Kingdom in 1938 (12.5 and 8.2 per cent. respectively). This increase in the divergence in question may be partly the result of the fact that the techniques applied in making the estimates are different; the prospective savings in the United Kingdom may very well have been under-estimated. It is, however, natural that the percentage of income saved at full employment should show a higher increase in the United States as compared with 1940 than in the United Kingdom as compared with 1938, and this for two reasons:

- (1) Unemployment was higher in relation to the available labour force in the United States in 1940 than in the United Kingdom in 1938. If the degree of utilisation of the available labour in the first case had been as high as in the second, the percentage of income saved in the United States would even at that time have been greater than it actually was (see p. 457).
- (2) The increase in the productivity of labour, and consequently in real income per head, is anticipated to be considerably higher than in the United Kingdom, and this is another factor making for an increasing divergence between the American and the British savings ratios (see p. 459).

It will be seen from table VI that the divergence between the savings ratios results in a much higher budget deficit at full employment in the United States than in the United Kingdom. The difference between public expenditure on goods and services and the tax revenue available for such expenditure is 8.6 per cent. of the aggregate income net of tax in the former country, and only 2.6 per cent. in the latter. It should be added that the budget deficit in the United Kingdom is due almost entirely to the expected participation of the public authorities in residential building. In the source we use, where this type of investment is included under the heading of private investment (because it is undertaken on a more

or less commercial basis), the budget of public authorities is approximately balanced.

\* \* \*

We see thus that the solution of the problem of employment after the transition will require a much more unorthodox policy in public finance in the United States than in the United Kingdom. The latter country will certainly experience serious difficulties in the sphere of foreign trade, because it will have to increase its volume of exports considerably over the pre-war level in order to obtain means for paying for the necessary imports (mainly because of the loss of foreign investments). However, the financial problems involved in securing a national expenditure adequate to maintain full employment is likely to be of a much smaller order than in the United States.

It is true that the budget deficit necessary for the maintenance of full employment in the United States may be diminished by a variety of factors. Working time may be reduced somewhat below 40 hours per week; the system of taxation may be shaped in the future in such a way that it will redistribute income from the higher to the lower income groups to a greater extent than is done in the system assumed above, and thus will tend to increase personal consumption beyond the anticipated level; finally, a vigorous policy of foreign lending may provide a higher export surplus. But it seems unlikely that all these factors would enable the United States to maintain full employment after the transition period without a substantial budget deficit.<sup>1</sup>

As long as the resulting rate of increase in the interest on public debt is not higher than the rate of increase in the national income, no rise in the "burden of the debt" would take place; and there is no reason why a development of this type should be in any way harmful to the economy. If the budget deficit is so high that the burden of the debt does increase, the problem is more complicated but by no means insoluble.<sup>2</sup> A detailed discussion of this problem is clearly beyond the scope of this article.

---

<sup>1</sup> The "gap" cannot be filled by stimulation of private investment. For if investment is above the level at which productive capacity increases *pari passu* with the expansion of full-employment output that results from increasing population and higher productivity of labour, it creates over-capacity. This tends to depress investment in the longer run; and thus stimulation of private investment above a certain level will eventually prove a self-defeating measure.

<sup>2</sup> See, for instance, M. KALECKI: "Three Ways to Full Employment", in *The Economics of Full Employment. Six Studies in Applied Economics* prepared at the Oxford University Institute of Statistics (Oxford, Basil Blackwell, 1945), p. 45.

It should finally be added that a substantial budget deficit need not necessarily be associated with a very high level of public expenditure on goods and services; for the Government can increase its expenditure on transfers, such as old-age pensions, family allowances, etc. In our tables this will be reflected in a reduction of the item "taxes available for public expenditure on goods and services" (because this item represents the total tax revenue minus transfers). If the transfers benefit mainly people with low incomes, any addition made to them will very largely be spent on consumption, and in this way the budget deficit will contribute to the increase in national expenditure without a rise in public expenditure on goods and services.

---