CHAPTER TWENTY-ONE

DIRECT POLICIES. I. EXPENDITURE POLICIES

We shall now turn to a treatment of the measures of direct economic policy intended to influence trend and cyclical movements. In this chapter and the next we shall discuss measures of policy that affect the volume of output directly. We shall deal first with the expenditure policy of the government, as a very important example of direct policy that is particularly, though not exclusively, concerned with the regulation of business cycles. All other forms of direct policy will be discussed in the next chapter.

The central objective of a policy of government expenditure or, more specifically from a cyclical point of view, of a policy of compensating government expenditure is that the exercise of additional demand for goods and services by the government can compensate undesired movements in the demand by individuals and business. Such a policy would then consist in a large demand in periods of depression and a relatively smaller demand in periods of boom. This is typically a global policy; it would not require any intervention with the actions of private business.

One normally thinks in this connection of a public works policy, such as construction, road-building, canal-building, land improvement, and sometimes residential construction. Sometimes, also, military objects have been used for the same purpose.¹

Normally, such expenditures are financed by loans; the advantage of this method of financing over financing by taxation in the depression is that it uses money which otherwise would

¹ Cf. also p. 331, infra.
not have been used. A similar beneficial effect in a depression can be obtained with financing by the creation of credit. This would have to be compensated by the formation of reserves in periods of better conditions; if the policy were initiated during a boom period and reserves were created first, the increase in expenditures in the succeeding depression could be financed, in whole or in part, from these reserves. The policy of compensating expenditure has as its corollary that the budget is not balanced every year. In good years there will be a budget surplus and in depression years, a budget deficit. Over a whole cycle, however, the budget might be balanced; the term "cyclical budget" has been used in this connection.

The objective of this policy is to achieve a stabilization of total demand for goods and services. This objective may not be fully achieved in countries that rely to a large extent on foreign trade, but even there it may be achieved in part; hence incomes too will be relatively more stable. Seen from an incidental point of view, the policy may be considered as a remedy against depression with the objective of raising the volume of employment. In analyzing the effects, a distinction is usually made between (a) the direct effects, i.e., the increase of employment on the public works themselves, (b) the indirect effects, namely, the effects in the industries which provide the raw materials and capital goods for these public works, and (c) the secondary effects. The direct and the indirect effects together are called the "primary effects." The increase in incomes in the public works and in the industries which deliver the raw materials and capital goods for these works will lead to a further demand on the part of those who have received these incomes; this demand in turn will lead to a further increase in income; and so on in successive rounds. The total increase in income in these rounds is called the secondary effect of the public works policy. The advantage of government expenditure as an antidepression policy is that the total effects (the primary and secondary combined) are far in excess of the primary effects; thus it might be said that the government not only obtains the finished public works but also enriches the community with more goods and services.

After this brief exposition of the main motives for a policy of
compensating government expenditure, we shall discuss in some more detail the different aspects of this policy, referring to both the protagonists and the antagonists of the policy. The first question to be discussed is whether the objective will actually be achieved.

Compensating government expenditures might succeed in approximately stabilizing the total demand in terms of money for goods and services. This would also stabilize all incomes and hence the total demands, both on the part of entrepreneurs for investment and on the part of families for consumption purposes, for we have seen that both demands depended first of all on the level of national income and on its components (chap. xiii). To some extent, the demand would also depend on the level of prices, but prices, too, will tend to be much more stable if total income is stabilized. Hence, compensating government expenditure or, more precisely, the readiness of the government to engage in compensating expenditure would lead to a stabilization of the “natural” factors determining demand and would hence make itself superfluous.

The policy of compensating government expenditure might be expressed by a great reduction in the marginal propensity to spend, that is to say, in the ratio between an increase in income and the resulting increase in expenditure on consumption and investment goods. In our Example III we assumed this ratio at 0.9. Let us assume now that, as a result of compensating government expenditure, the ratio were reduced to 0.1. This would affect the course of income and expenditure in Example III as shown.

EXAMPLE III''

<table>
<thead>
<tr>
<th>Quarter</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>0</td>
<td>20</td>
<td>32</td>
<td>4</td>
<td>-18</td>
<td>-24</td>
<td>-8</td>
<td>+15</td>
<td>+25</td>
</tr>
<tr>
<td>Increase in income</td>
<td>20</td>
<td>2</td>
<td>-18</td>
<td>-22</td>
<td>-6</td>
<td>+16</td>
<td>+23</td>
<td>+10</td>
<td></td>
</tr>
</tbody>
</table>

The further course of income for quarters 9 through 14 would be as follows: 13, -11, -25, -17, 6, 24, etc. It appears then
that the cyclical movement would have a much shorter period, namely, six to seven quarters as against five years; and the maximum deviation would also be much reduced.

Figure 54 compares the development of income in Example III (business-cycle movement without policy), Example III' (business-cycle movement with part of the speculative income eliminated), and Example III'' (business-cycle movement with compensating government expenditure).

![Graph](image)

**Fig. 54.** Fluctuation in national income: (a) without business-cycle policy according to III; (b) if speculative incomes are reduced to one-half (III'), (c) with compensating government expenditure (III'').

It has sometimes been held that the method of compensating government expenditure is a superficial form of business-cycle policy, since it attacks only symptoms and does not provide the necessary basic corrections. A sharp distinction should be made here, however, between the initial application and the application after a certain time. Initially, one may consider this a symptomatic policy; but, as income becomes stabilized, basic corrections do take place; excessive expansion of capital and investment in the wrong direction are prevented. These are the two developments that will occur if profits are unusually high and prices and the rate of interest deviate too far from their nor-
mal position; and these situations will be prevented if stability is achieved over a longer period of time. Whether the ultimate objective is achieved depends on whether the policy will actually lead to the effects set out above. Whether incomes will actually be stabilized depends in particular on the three following factors: (1) the time at which the additional expenditures are started, (2) the extent of the expenditures, and (3) the responses of the entrepreneurs which are of particular importance in the second chain of the argument, namely, that a stabilization of income will lead to a stabilization of demand and hence to a continued stabilization of income.

In principle, a policy of additional expenditure may be started at any phase of the cycle, with such a (positive or negative) amount of additional income as would be necessary to achieve the level of expenditure desired; but the least disturbance and the smallest discontinuity will be produced if the policy is initiated at the time that the level desired is very nearly approximated. If we accept the position that the level to be approximated is that of full employment, the proper time to start the policy would be at the end of the boom. Some students believe for various reasons that this would not be possible or indeed desirable. There is considerable difference of opinion on this point. Optimists believe that the execution of a moderate amount of public works immediately after the start of a depression would nip in the bud the depressive tendencies, so that relatively small amounts would suffice. On the other extreme, there is the most pessimistic belief that in the beginning of a depression the effect of increased government expenditure will be quite small, that it will be better to wait until the crisis has nearly run its course, and that expenditure on a large scale will be necessary at that time to achieve any success.

Another of the rather pessimistic opinions is that, although it might be desirable to start compensating public expenditure at an early time, it would usually be technically impossible to do so. We shall come back later to this more technical point of the inevitable lag in government expenditure.

A solution of these controversies depends on two important questions. In the first place, on the question we mentioned as to
how the individual entrepreneur responds to an increase in government expenditure; and, second, on what other objective factors determine private expenditure for investment and consumption goods.

In the period between 1933 and 1939, when government expenditure was applied for the first time on a considerable scale as a remedy against depression in the United States, the tendency of business to consider public expenditure as something altogether artificial and as a form of government intervention which was undesirable in itself was quite pronounced. This attitude showed itself in a very hesitating response of business with respect to the actual signs of economic recovery. With such response, the policy was inevitably doomed to failure, independent of its intrinsic merits from an objective point of view. If the entrepreneurs were consistently to disregard all the consequences of the increased public expenditure and respond only to what would have happened without this expenditure, the business cycle in the private sector would remain unchanged and the only beneficial effect would be the primary effect. If the additional government expenditure on public works were offset in whole or in part by a reduction in private investment, for fear of "government competition," the net effect could actually be zero, as the primary effect would also be offset by a negative primary effect reflecting a reduction in private investment. In such a situation, the depressive tendencies might continue, for instance, as a result of the echo effect, and, independent of the level of national income, investment might remain at a low level for some time.

If the entrepreneurs did not respond in this way, a policy of compensating expenditure started immediately after the early signs of a depression would have much more favorable effects. The corresponding higher level of national income would increase the level of expenditure by entrepreneurs for investment; but in the echo principle were operative, some decline in investment expenditure would be inevitable, and in order to maintain total expenditure at a stable level, a continued stream of government expenditure would be required. Therefore, assuming a more positive attitude on the part of entrepreneurs, we would
come to a position somewhat between the most optimistic and most pessimistic points of view: a public works policy should be started as soon as possible; it may prove, however, that the immediate compensation of the reduction in national income is not sufficient to prevent a depression completely and that government expenditure will have to be continued for a longer period of time.

With respect to the second point, that of the extent of expenditure, some remarks have already been made. It would not be possible to count on a small amount as adequate, at least not the first time. On the other hand, the amount is in all probability smaller than what is sometimes calculated on the basis of past depressions; for, once a policy of compensating government expenditure has been accepted, depressions will be less pronounced and hence the amount required will be smaller.

We have also already dealt in part with the third point, the reactions of the entrepreneurs: an unreasonable amount of distrust on the part of business would, of course, make any favorable result of the policy impossible. If, however, it were possible to persuade employers that the policy is fundamentally correct and if business learned to make a distinction between this type of government policy, which is sound, and other possible government policies, which are not sound, it may be hoped that in the future the reaction of entrepreneurs will not be so negative as it was in the United States between 1933 and 1939.

As we shall show, the policy is indeed fundamentally sound. It is a sound principle that all productive resources should be used; the policy is financially possible if there is no hoarding and if money is created only in proportion to the trend increase in production. Government policies to compensate private demand, with precedence for the latter in order to approximate as closely as possible the optimum utility in accordance with the preferences of individual consumers, constitute an equally sound principle. Provided it is properly financed, i.e., provided that neither too much money is created nor too much borrowed, the policy of compensating government expenditure is therefore sound in principle. It is interesting to observe in this connection that proper financing depends to a large extent on the very fact
of the co-operation and understanding of the entrepreneurs. The two factors influence each other. The more positive the response of entrepreneurs, the less will it be necessary to rely on less appropriate methods of financing; conversely, if entrepreneurs hoard their additional income, the financing methods will be less appropriate.

In summary we may say that the objective of a public expenditure policy can indeed be achieved, provided that (1) entrepreneurs understand that the policy is sound in principle and act accordingly and (2) the government spend adequate amounts to bridge the decline in private expenditure that may occur even if national income is kept at a constant level (in particular decline due to the operation of the echo principle).

To indicate the extent to which the objective is achieved and to measure the results of a public works policy, the concept of the "multiplier" has been introduced. This concept has been used both with respect to income and with respect to employment ("income multiplier" and "employment multiplier"). The multiplier indicates the ratio between the total increase of the variable considered and the primary increase. As indicated, the primary increase of employment or of income is considered to consist of both direct primary employment (and income) and indirect primary employment (and income).

The two simplest cases of a calculation of the multiplier are the following. In the first case (I), the additional government expenditure occurs during one time unit (e.g., year); in all following time units, expenditure falls back to the earlier level. In a second case (II), there is a permanent increase in government expenditure by a constant amount. In both cases, the results will in principle continue over an infinite period of time. In case I, income will be higher in the period of increased government expenditure but also in succeeding periods, in a decreasing series, as a result of the successive rounds of expenditure of the additional primary income. In case II, a new stationary level of income and employment will be reached (under certain simplifying assumptions), and the multiplier will indicate the ratio between the increase in the level of income and the amount of the increased government expenditure.

In case I, the multiplier should be considered as the ratio be-
tween the total additional income (or employment) and the additional income (or employment) of the public works in the one period of time; in case II, it is the ratio between the increase in the annual rate of income (compared to the period prior to the execution of the public works) and the increase in the annual rate of income in connection with the public works themselves.

Not only is a multiplier calculated in connection with additional government expenditure. The concept has also been used with respect to investment as a whole, including private investment. This method is closely linked with the concept that private investment is independent of the general economic position and that the fluctuations in income may be understood as the result of these independent fluctuations in investment. Even if one does not accept this position and considers investment to be primarily determined by endogenous factors, the multiplier may still be used in this way. It should be realized, however, that a multiplier derived from empirical observation of the relative fluctuations of national income and investment is not applicable to the calculation of the effects of a certain amount of additional investment, if investment itself is in part caused by endogenous factors, for the empirical fluctuations of investment and income will show, in that case, not only the effect of investment on income but also the effect of income on investment.

The size of the multiplier depends on the reactions of the various consumer and producer units which receive the additional income. Calculations of the multiplier have usually been made on the assumption of a severe depression, so that no additional investment as a result of additional income could be expected. Where private investment is taken as the multiplicand, it is assumed that a certain amount of additional private investment occurs but that the resulting increase in income does not provoke any further private investment. The multiplier is then based exclusively on the effects on consumption. All results of saving are “lost” and are considered as “leakages.” Saving is considered identical with hoarding. That part of consumption expenditure which is spent on imports is also considered as a leakage. The effect on exports via the increase in income abroad is usually disregarded, as being of minimal size.

Hence the increased income in the second round, owing to in-
increased expenditure on consumption, will be smaller than in the first round. Again, the third round will be smaller than the second one and, it is usually assumed, in approximately the same ratio. The total increase in income or employment obtained by this method will be a finite amount which will be the larger, the smaller the leakages, that is, the larger the marginal propensity to consume and the smaller the marginal propensity to import.

The marginal propensity to consume will be large in a country with a very poor population where practically all additional income will be spent on consumption. The propensity will be much smaller in a country with considerable unemployment compensation; for in that case the expenditure by the government on public works will be offset in part by a reduction of government expenditure on unemployment assistance, and the multiplier (measured with respect to the expenditure on public works) will thus be reduced. The marginal propensity to import is small in large countries, and the multiplier in such countries will on this account be higher.

For countries with relatively large international trade, such as England, Germany, Denmark, the Netherlands, multipliers in the order of magnitude of 1½-2 have been computed. For a country like the United States, with very little international trade, one may come to figures as high as 3 or 4. As has been mentioned, all these computations were based on the assumption that additional government expenditure did not lead to increased private investment. One might make a more optimistic assumption, namely, that as a result of the increase in profits investment will increase also. This has often been the expectation when public works policies were initiated. The expression “pump-priming” reflected that expectation. If additional investment occurs, the multiplier will become higher; it may even become infinitely large if an injection of additional purchasing power at one time should lead to a lasting improvement.

On the other hand, it is also conceivable and actually possible that, as a result of public works policy, private investment and even consumption expenditure is reduced below the level it would have had otherwise. This, as we have mentioned, may occur if there is a certain distrust in the future because of the in-
creased government expenditure in particular and of the fact of state intervention in general. This would reduce the multiplier and might even bring it below unity.

For an empirical determination of the magnitude of the multiplier, one would need to know the development of income and employment that would have occurred without the execution of the additional government expenditure program whose consequences one endeavors to measure. This is by no means a simple assignment. One could in principle know this development, if one knew quantitatively all relations which determine the fluctuations of the economy under consideration. In this case one could, as we have done in our various examples, extrapolate a movement that has started and hence one could determine how this movement would have continued without government intervention. In this way, one could conceivably have measured how large employment in the United States or Germany would have been after 1932 without government intervention. Our present measurements, however, hardly permit us to make such computations. No attempts to compute the multiplier in a concrete case of government policy have been made in this way as far as we are aware.

Those authors who have expressed an opinion on the effectiveness of a government expenditure policy, without making any specific reference to the development which would have occurred without the government’s policy, make, nevertheless, an implicit assumption with respect to this difficult question. This applies, for instance, to the computations of Gayer. For each of the years 1883–87 he compared the year-to-year increase in national income with the absolute amount of income-creating expenditure of the government and finds that the latter are about one-half the former. On the assumption that the income velocity of money is about 2 per year, Gayer then concludes that the recovery can be attributed almost completely to the government’s expenditure policy. Clearly, the assumption that an additional amount of money A brought into circulation by government expenditure will forever continue to produce a rate

of increase of income of \$1 per annum implies the very unrealistic assumption of an infinitely large multiplier (provided that enough time is allowed). This assumption leads Mr. Gayer almost certainly to an overestimate of the effect of the government measures and hence to too pessimistic a view with respect to the natural recovery. It is probable that without the intervention of the government a certain recovery would have taken place anyway and that only part of the actual recovery is attributable to government expenditure.

The effect of the additional government expenditure has been analyzed in another way. For the period prior to 1933 the relation between national income and a number of other factors, on the one hand, and expenditure for consumption and private investment, on the other hand, can be established. This relation has then been tested for the period 1933-37. It appeared that at the same level of national income and of the other factors a considerably lower amount was spent for consumption and for private investment than would have been the case prior to 1933. It would appear from this test that private consumption and private investment showed a lesser degree of response than would have been "normal" in the preceding period. This may have been due to the general dislike, on the part of business, of government intervention and to the fact that some of the concrete measures of government policy aroused the specific hostility of business because they were believed to affect profit expectations unfavorably. The vacillations of the government's business policy may also have had an unfavorable effect on investment expenditure. Often one measure was incompatible with another, and it took a number of years before the various forms of business-cycle policy were co-ordinated.

With respect to the cyclical effect of additional government expenditures, the concrete nature of the projects to which the additional demand of the government is directed is of secondary significance. In times of depression it is a matter of prime importance to keep the level of expenditure to that of income; the great social benefit of the works is due to the fact that they

3. In an unpublished study by J. Tinbergen.
enable a large number of persons to continue to make their normal expenditure since their income is maintained.

But, from a more general point of view, the choice of projects is also of great importance. The more these projects contribute to an increase in welfare, the better. It is most desirable that they also make possible a permanent increase in employment. This will occur particularly if the objects of expenditure are capital goods that can be used profitably in the future. But such cases will be rare, because, in those circumstances, the capital goods would normally have been produced by private initiative. Among many projects possible, it will, in any case, be necessary to select those that are most desirable from the point of view of the community as a whole. A certain order of priority will have to be established; here, certain computations to which we will refer below can be helpful.

A great variety of projects is possible, and no dogmatic choice among them can be made. One may first select projects that are normally part of ordinary government expenditure. The continuation at the normal level of ordinary government services should have a high priority. The development of underdeveloped areas, much poorer in capital goods than the countries which suffer unemployment, is also of great importance. From a world point of view, there is great utility in the construction of capital goods for areas like China. Many projects of public works at home may be mentioned in third place. After all these possibilities have been exhausted, there would always be the possibility of producing consumption goods to be made available to low-income groups free of charge. Only if there were good reasons to believe that there was no further need, appropriately measured, for any of these things, could some unemployment be accepted; in that case, however, the unemployment should be distributed more equally over the population and should be accompanied by such measures as an increase in the school age, in paid vacations, etc.

A proper order of these various projects should, as far as possible, be established on the basis of objective calculations. These calculations, of course, can never provide a final answer. Many imponderable factors enter into the decision. Thus, a compari-
son of the need for a new hospital with the need for a new school or for the expansion of public utilities can never be made simply by measurement; nevertheless, if certain norms are accepted, certain computational elements may enter into this choice. Not everyone, however, will be prepared to accept the same norms. The choice of a proper priority scale in government expenditure is, of course, not a difficulty that is peculiar to the policy of compensating government expenditure. It exists in any case with respect to government expenditure.

Any computation should consist in a comparison of profits and losses. In the projects under consideration these two concepts have to be considered from a social point of view. The question at issue is not the income and cost for the treasury but for the community as a whole; for this purpose both income and cost have to be expressed as well as possible in terms of money.

The yield of the project is the increase in income of all members of the community that results from the creation of the particular project; its cost is the increase in costs to all members of the community. When the project is a capital good, the yield will consist, first of all, in the yield of the output for which it is used. If the products of the capital goods are not actually sold but are given away without charge, it will nevertheless be possible, even though it may not always be simple, to estimate an amount in money for this yield. Thus, the opening of a bridge on which no toll is levied will constitute a decrease in transportation costs for many enterprises and individual persons. Inquiries may show the amount of saving in transportation costs. If consumption goods are delivered free of charge, their price in the free market may be taken as a yardstick, provided that the quantity distributed free is small in comparison to the total production of the goods in question.

Cost will consist in the first place in interest and redemption of the cost of the capital good. As to the labor cost, one should not include the full wages of workers who would otherwise have been unemployed but a smaller amount. The amount included in cost will depend on the point of view. The simplest, but perhaps somewhat too fiscal, point of view would be to take only the difference between the wage and the amount of unemploy-
ment assistance that would have been paid otherwise. One may also take as a basis the consideration that the work constitutes for the re-employed workers not a real disutility but perhaps rather a positive enjoyment. If one could assume that the position was just intermediate, the social cost of labor might be put equal to zero. The costs would, further, consist in the operating costs of the capital good. With respect to these costs, similar considerations apply. If the capital employed was previously "unemployed," the interest may also be computed as zero.

An example may indicate how some of the so-called "imponderable" factors may be taken into consideration. In order to estimate the value of the output of a hospital, one might assume that every patient would be charged the price he would just be prepared to pay. It would be possible to get an impression of this magnitude by means of an inquiry.

Apart from these calculations, other data will play a role in the selection of the order in which certain projects will be taken up. The time necessary for their execution is an important element, so are possible technical relations with other projects, the geographical position of the project, the share of direct labor cost in total cost, the possibility of postponing the project in whole or in part or of executing it again in whole or in part at an increased or reduced rate, and, finally, the amount of foreign exchange that would be involved.

In order to enable the responsible authorities to make a rapid selection of the various projects, an inventory of projects should be available that provides a convenient record of these various elements for all possible public works. The choice among these possibilities will then depend on the particular situation in which the projects are undertaken, such as the geographical distribution of unemployment, the location of the different industries, the requirements of the balance of payments, etc.

It is clear that the speed with which the government responds to the beginnings of a depression is of great importance for the success of a policy of compensating expenditure. If the lag were to be very large, for instance, some four years, or half a cycle, the additional government expenditure would occur just at the time when the cycle in the private sector of the economy would
have recovered and the effects of the expenditure would be to reinforce rather than to flatten the business cycle. The lag must therefore be brief, although it is not quite necessary that the government’s intervention be immediate. Complicated procedures make for a rather considerable lag in most countries; according to Professor J. M. Clark, a period of about a year between the decision to execute a certain work and the start of its actual execution represented the normal speed of procedures. Various ways are open to reduce this lag; a measure of great importance is the advance preparation of plans for public works with periodic minor revisions of these plans. Swedish experience of the years between 1933 and 1938 indicates that much shorter lags are possible; on the average, there was a lapse of only four and a half months before the actual execution of a particular work could be taken in hand. One of the main causes of delay is usually the desirability of having certain works executed by state or local authorities. An important measure to speed up such authorities might be to make the amount of financial assistance from the central government dependent on their speed of action.

One of the most important aspects of a government expenditure policy is the method of financing. While the choice of projects is immaterial from the point of view of business-cycle policy, the method of financing is of prime importance; improper financing may spoil all useful effects of a government expenditure policy. What matters primarily is the net amount of expenditure by which the total demand of the private economy is increased in times of depression and reduced in boom times. If public works in the depression were financed by new taxes which would lead to a restriction of private expenditure, part or all of the additional demand exercised by the government would be destroyed, and the effect would be unfavorable. Financing should, therefore, be done from any one of these three sources: (a) reserves previously formed, (b) borrowing, or (c) the creation of money.

It would be most desirable to finance from reserves previously

formed; but this requires that such reserves have actually been formed in the preceding boom. If no reserves are available, the choice is between the creation of money and borrowing. There is much to be said for the issuing of government bonds during a depression; we shall refer to this below. But here, too, there are certain limits. As a final means remains the creation of money.

The advantage of the creation of money is that it does not involve the payment of interest. Its great danger lies in the possibility of creating an excessive quantity of money which later on may lead to uncontrollable inflation with its well-known dangerous effects on the economy. Thus, particular care will have to be taken with regard to the scale on which money is created.

The creation of money can in any case be accepted to the extent of the desirable annual increase in the circulation. One will have to bear in mind in this connection that, in the absence of a 100 per cent reserve system, a certain expansion of the note circulation may permit a very much larger expansion of the quantity of bank money. Careful observation and, if necessary, binding regulations with respect to reserve requirements are therefore necessary accompaniments of this policy.

In a period of depression, however, when there is a tendency toward hoarding, the creation of additional money may not in itself be dangerous. At that time there is no risk of inflationary consequences in the creation of additional money. But when there are signs of recovery, full attention should be given to the problem of excess money, and the government should be prepared to take the necessary measures. These may consist in an increase in reserve percentages, a reduction in government activity, and (if there are tendencies of excessive tension in the fields of prices or of production) the fixation of prices and the rationing of credit. It may be hoped, however, that if a policy of compensating government expenditure is successful in greatly reducing the depths of the depression, the recovery will also be much less pronounced and serious measures will rarely, if ever, be necessary. In order to judge the situation, sharp business-cycle observations will be required, paying attention in particular to the quantity of money and its composition, as well as to
the various other types of assets and their prices (shares, bonds, real capital goods of all sorts), in order to discover as early as possible any disturbance of equilibrium in the financial sphere. The tendencies toward disequilibrium in the share market could have been observed long before September, 1929!

The preceding paragraphs were concerned primarily with the business-cycle objectives of a policy of government expenditure, i.e., with stimulation in the depression and restraint in the boom. In addition to this, it may be desirable, in a country in which the level of private demand is inadequate, to raise the general level of employment by a policy of government expenditure. In that case, there may be room for a permanent component in the additional government expenditure. How should this component be financed? The financing should be done from resources that can be used permanently without disturbing the equilibrium of the economy. A major part will probably be required to be financed from taxes, levied on income groups with a high marginal propensity to save, since excessive saving is the cause of underemployment. A further source of financing will be the desirable annual increase in the money supply (in proportion to the expansion of production) and, lastly, the acceptable annual increase in the government debt.

It will be clear that there will be no problem of permanent unemployment in an economy in which a gradually increasing amount of real income is continuously spent on consumption or investment, provided that there was full employment initially. These conditions will be realized only if business as a whole makes adequate profits; and this in turn will require a proper relationship between the price level and the wage level. We shall refer to this point in chapter xxiii.

We referred to borrowing as one of the methods of financing. Borrowing in periods of depression is usually considered legitimate, provided that the amounts are repaid in boom periods. This repayment, however, may involve certain dangers; the repayment of considerable amounts in boom periods may lead to excessive investment. Some neutralization of the repayment by increased taxes may therefore be necessary, in order to channel back to the government certain amounts that would otherwise
have increased the aggregate demand. To the extent that the yield of these taxes exceeds the level of government expenditure, it may be employed as a business-cycle reserve. This reserve should not, of course, be "invested," in the normal sense of the word, since in that case it would again be added to the circulation. Rather, the reserve should be sterilized or blocked. In a simple exposition it might be said that it should be put in a stock of banknotes; more realistically, it should be kept in a blocked account with the central bank or used to reduce the government's debt with the central bank below the statutory limit.

For various reasons, the method of borrowing is not suitable for application on a very large scale. Every increase in the government debt leads to an increase of the interest burden, and there is, no doubt, a certain optimum of the government debt which should not be exceeded. To the extent that new debt is floated for profitable projects whose yield can finance the interest, there is not much objection to an increase in the debt. Social security funds and institutional investors require, moreover, a certain amount of government debt: the interest provides a stable form of income to these investors. A certain minimum of government bonds should also be held by the banks, to make possible an open-market policy to lower the rate of interest.

The danger of an excessive government debt should not be considered so much in terms of the "interest burden" as with respect to the redistribution of income it involves: certain amounts are taken from the taxpayers by a variety of taxes and are turned over to the holders of government bonds as interest. If it were possible to finance the increased interest payments by means of taxes levied on the owners of government bonds only, and in proportion to their holdings, no difficulties would arise, of course; for every holder the payments would, so to say, go from one pocket into another. Such an arrangement, however, is impossible and undesirable; it would be an inequitable distribution of taxes. It might be possible to distribute the tax over all holders of wealth and thus to eliminate at least one of the most important objections against an increase in the public debt, namely, that it leads to an increase in taxation of produc-
ers for the benefit of nonproducers. But since the specific direction of taxes in the ways indicated will be limited, the size of the public debt itself cannot be increased at will.

In a country in which foreign trade plays a large role, a policy of compensating government expenditure involves additional risks, if the world cycle is not stabilized. A considerable increase of government expenditure in times of depression will lead to additional imports. If, owing to the persistence of depressed conditions abroad, exports continue at a low level, it will be necessary to cede gold or foreign exchange or to depreciate the currency. There is always a certain risk in currency depreciation, since it may be interpreted—according to perhaps outdated financial standards—as an indication of weakness either of the government's financial policy or of the currency itself. Depreciation may therefore lead to a withdrawal of foreign capital or to a flight of domestic capital and thus to further depreciation which it may be difficult to control.

The first and most desirable way of eliminating these risks would be the international synchronization of business-cycle policy. If this synchronization is not successful, the country will nevertheless be able to engage, to a considerable extent, in business-cycle policy of its own, if it disposes of an adequate reserve of foreign exchange. If a country has an "international margin," it will be able to allow internal expansion while maintaining its rate of exchange. It may further be possible to keep the balance of trade in equilibrium by special trade agreements. Centralization and bulk purchasing of the raw-material requirements, which follow from the execution of public works and the resulting secondary employment, may be used to bargain for additional export possibilities. Another possibility is to combine a policy of expansionary government expenditure with a policy of import restrictions. Public works may be selected in such a way as to minimize the import component. In the absence of an international margin, it may be necessary, as a final measure, to introduce a very strict regulation of foreign trade and foreign payments, in order to stabilize both the rate of exchange and the domestic price level.
DIRECT POLICIES

It is somewhat difficult to add to these general considerations a description of the experience of compensating government expenditure. It is true that in the period since 1929, measures have been taken in many countries that were generally in the direction of the policies outlined above; but, as we shall see, many of these measures were tentative and uncertain. The principles and conclusions outlined in this chapter have only gradually crystallized from recent experience; one might say, therefore, that these policies, as such, have not yet actually been put into operation. It should also be added that the experience of the thirties has not yet been subjected to any general and profound analysis.

The policy of government expenditure as an antidepression measure—because this is the form in which the policy was executed—has been applied on a large scale only in the United States and Germany. In England this policy was shunned as a matter of principle. Some smaller countries, such as Belgium and Sweden, have also applied the method, but in a measure which was smaller both absolutely and relatively; in some countries, finally, such as the Netherlands, governments were forced against their will into deficits in the depression and adopted an intentional policy of deficit financing only much later and on a very small scale.

As a matter of fact, those governments which had adopted the policy in principle, like the governments of Belgium and Sweden, have gone less far, quantitatively, than those governments which objected to the policy in principle. Here the figures are a more important guide than the avowed principles.

The projects of expenditure have in general been public works; but there are important local distinctions. In Germany rearmament became soon one of the main objects of expenditure. In the United States special operations such as soil-conservation measures and the Tennessee Valley Authority project may be mentioned in particular. Even for a country like the Netherlands, with a very high percentage of arable land, an adequate supply of public utilities, good streets, sewerage, schools, it was not difficult to establish a long list of projects for which
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the need could be considered as entirely serious. An interesting experience in the Netherlands was that public works executed by private business with government subsidy (in particular, land improvement) cost the Treasury less than the unemployment assistance of the same workers would have cost; in accordance with the principles developed earlier, the execution of these works was therefore perfectly proper. The same financial results were not obtained in the reclamation of the Zuider Zee, if the value of the land produced is taken at market prices; but the reclamation appears profitable if account is also taken of the opportunity for work that the land offered to people who would otherwise have been unemployed.

Sweden is the country in which the first attempt has been made to make an inventory of suitable public works projects, to be used if and when a new depression would occur.

Public works have generally been financed by loans. Thus, in the United States, the public debt increased greatly during the thirties, owing to the large public works program; and similarly in Germany. In Sweden, where borrowing also occurred, a beginning of debt redemption was made rather quickly. Finland was one of the countries that instituted an official business-cycle reserve. Generally speaking, recovery was too moderate to allow the accumulation of important reserves; in the Anglo-Saxon countries at least, the downturn came as early as 1937, when unemployment had by no means been eliminated. Apparently it had not been possible to move the equilibrium level upward to a point of full employment, at the business-cycle equilibrium. The effects of the oncoming war were also clearly noticeable, so that business-cycle policy became indistinguishable from rearmament policy.

The timing of government expenditure in the years after 1929 was extremely slow. An appeal to continue investing was made to the public utilities in the United States very soon after the crisis, but the extent to which this appeal was heeded was by


no means adequate to provide a counterweight to the depressing tendencies. A full realization of the depth of the depression was necessary before the need of extensive public works appeared convincing. No country started its public works program before late in 1932. In Germany the beginning was made at the end of that year, in the United States late in 1933, in Sweden also in 1933, and in Belgium and the Netherlands even later.

With respect to the results achieved, only a few adequate analyses have been made, as we have noted. The results in the United States have no doubt remained below expectations; one of the most important reasons for this has been discussed earlier.7 In Germany "full employment" was achieved, but the scale of rearmament expenditure was vastly greater than that of public works expenditure in the United States. It is generally assumed that the success of the public works policy in Sweden was considerable, in the sense that a pronounced recovery occurred; but factors other than the public works policy may also have been responsible for this recovery. Among these other factors, the depreciation of the krone, the government support to agriculture, and the favorable tendencies in the demand for Sweden's main export commodities may be mentioned; also, Sweden still had in its industries important possibilities of development, such as did not exist to the same extent in other countries. Some indication of the success of the policy of government expenditure may nevertheless be derived from a comparison with Finland, a country which in many respects was in a position similar to that of Sweden (Fig. 38, p. 87).

The public works policy had no serious balance of payments effects in the cases of Sweden and the United States, as both countries had quite adequate reserves of gold and foreign exchange; both, moreover, had recently improved their competitive position by devaluation. In the United States, in any case, the problem of foreign trade is of such relatively minor importance that the question did not really arise there. Belgium, too, had devalued its currency before engaging on a program of government expenditure. But in Germany the balance of payments

7. Cf. p. 87, supra.
problems were extremely serious. Germany did not want to de-value because of the strong inflation fears carried over from the twenties, and it had very small foreign-exchange reserves. For these reasons it had to combine its expansionary financial policy with an extremely strict system of exchange control.

In summary we may state that extremely interesting experience has been gained in many elements of the policy which may be of great use in the future but that a real policy of compensating government expenditure, started in time and understood and appreciated by all groups of the economy, has not yet been applied.