## SUMMARY: CHOICE OF AN OPTIMUM POLICY

WE HAVE found in chapters xiii and xvi that the move-ments of the variables that characterize the economy are determined by a combination of (a) certain disturbances of equilibrium resulting from changes in the data and (b) the reactions of the economic system. We pointed out in chapter xviii that the changes in the data which occur in this connection, such as changes in crops, political and technical events, etc., are usually inevitable. The harmful effects of these disturbances, each of which in itself is often unimportant, are due much more to the increase of these initial disturbances by the cumulative processes resulting from the responses of the economic system. The movements of the economic variables are determined by successive reactions, each of which is described by a specific economic relation; since each economic variable is determined by such a relation, there are as many relations as there are economic variables. Well-known examples of these relations are the demand relations and supply relations; a particularly simple example of an economic system is that of the hog market; a more realistic but still simple example of the economic system as a whole is given in our Example I, which uses the two relations of the formation of income and the use of income.

Since the economic relations determine the movements which follow from an initial disturbance of equilibrium, it will be clear that a particular objective with respect to these movements can be achieved only by making the relations satisfy certain specific conditions. It will not be possible to leave the relations as they are and yet to achieve a stable movement; for the relations as they are, are responsible for the cyclical movements as we have observed them. It will be necessary, therefore, to change one or

more of these relations. It is an important question which relation it will be necessary to change. Is adjustment of one relation enough, or should more than one be adjusted? In which way should they be adjusted?

The forms of elementary business-cycle policy discussed in the four preceding chapters consisted usually in the change of one of the relations of the system. We shall analyze in this chapter which combination of these simple forms of policy is necessary to obtain the best composite business-cycle and trend policy. In other words, we shall have to make a choice and possibly combination. It is clear that we should prefer that choice which would require the minimum number of changes in relations, yet which would still be adequate to achieve our purpose. The fewer the relations to be changed, the less difficulty will be encountered in introducing the policy. In Professor J. M. Clark's terms, we shall have to select the strategic factors to which to apply changes.

The relations among the various economic variables deterinine both the character of the fluctuating movements and the
equilibrium level around which these fluctuations occur. Usually, the fluctuations are determined by the slopes of the lines that
represent these relations in diagrams (or the coefficients in forinulas) and by the lags that exist in the relations. The simplest
example of the hog cycle shows this very clearly: the characteristics of the fluctuations are determined exclusively by the
slopes of the demand and the supply curve and by the lag of supply behind changes in the price. The level around which fluctuations occur depends also on the level of the supply and demand
curve. We shall deal in this chapter first with the requirements
of stability and later with the requirements of a maximum
level.

A distinction may be made between more important and less important relations. We count among the former at least those relations which entered in our Example I and which, so to speak, form the skeleton of the business-cycle mechanism. In the succeeding sections of chapter xiii, we introduced a number of other relations both with respect to commodities and with respect to the financial sphere, which were found to have a cer-

tain, but relatively minor, effect with respect to economic movements. The two major relations refer to the formation and the use of income; the two variables which they determine, national income and total expenditure (total demand for goods and services), are the two most important economic variables. These two variables primarily determine each other. For this reason we believe that the regulation of these two variables is of signal importance in the control of the fluctuations of economic developments. Most important is the regulation of the total demand for goods and services, that is to say, the regulation of the use of income; even if the formation of income is left free, no difficulties can arise, since stable total demand will inevitably produce stable income. Stable income, on the other hand, will lead with less certainty to stable demand; demand contains as a separate element the demand for reinvestment which is partially independent of national income, whereas new investment, too, contains a partially independent element. The regulation of the total demand for goods and services can be achieved most directly by compensating government expenditure. For these reasons, we consider this the most important individual form of economic policy.

None of the other individual forms of economic policy would by itself achieve as much stabilization. Thus, the regulation of investment operates primarily as a restraining policy; the same tendency is inherent in the regulation of the production of raw materials which, moreover, has too limited a point of application. The limitations of the various forms of indirect policy are even greater. The effect of a change in the rate of interest on total demand for goods is limited; the same applies to the effect of changes in the wage rate, because of the dual character of this rate as cost and income; a policy of flexible wages involves, moreover, a great deal of friction. Price policy in the form of exchange-rate policy may be quite effective for individual countries but not from a world point of view. Stock-exchange policy may be of consequence in countries where there are strong tendencies toward stock-exchange speculation, since it prevents the formation of speculative incomes and thus operates in the direction of more stable total income.

Any one of these forms of business-cycle policy has in any case some stabilizing influence, and it would be of some advantage to combine one or more of them with the regulation of total demand. In the choice of policy, much will depend on the structure of the country, the state of international co-operation, and the business-cycle position. In a situation where international co-operation is completely absent, a country with much foreign trade will be inclined to resort to exchange-rate policy, complemented perhaps by commercial policy; if there is full international co-operation, measures that will improve conditions in one country at the expense of those in other countries will have to be renounced. When there is a very strong private demand, it may be necessary to add direct control of investment and credit-rationing to a policy of compensating government expenditure. In some industries, such as residential construction, direct regulation may almost always be useful.

In the preceding paragraphs we have discussed the policies required for reduction of fluctuations and indicated that the latter were due to the slopes of the various economic relations and the lags existing in these relations. We have indicated also that the equilibrium level will depend both on the slopes and on the level of these relations. There is thus a set of data which do not affect the fluctuations but which do have an influence on the equilibrium level. Hence it is possible for economic policy to affect the equilibrium level, in addition to operating on fluctuations. It can even be shown that there are as many combinations of these level magnitudes in our relations as there are economic variables whose equilibrium level has to be determined. The equilibrium level of each economic variable can therefore be regulated separately. We shall have to formulate the conditions for the equilibrium levels so that the equilibrium level, or the equilibrium development, of the economy satisfies the objectives set out at the beginning of chapter xvii. Among the various policies, we will again give preference to those which leave free as many relations as possible.

As in the case of fluctuations, we shall consider first the most important relations, namely, again, the formation and use of income. In order not to enter too deeply into mathematical for-

mulations, we shall put the question as follows: What lasting conditions should be satisfied by the formation and the use of income for the equilibrium level of production to coincide with a state of full employment?

The use of income will have to be such that, at the level of income corresponding to full employment, total investment plus total consumption equals national income. It is not possible to say exactly what this condition implies, since the factors determining investment and, to a lesser extent, saving are not known with sufficient certainty. Some of these factors may be mentioned, however. Investment tends to drop when there is a pronounced fall in the profitability of business, when there is an important fall in prices, and when there is uncertainty concerning the future. A surplus of saving will develop also if a country is saturated with investment. Such a situation is conceivable for a country which, compared with other countries, is at the top of technical development; it has often been assumed that this situation occurred in the United States around 1928. Stagnation may occur also if new investment is not profitable because of a disproportion between prices and costs, which is essentially a disproportion between prices and wages. This situation may also lead to the use of part of income in the capital market for the purchase of existing shares, thus pushing up share prices. Some economists have attributed the 1929 Stock Exchange boom to this cause. In order to maintain investment, it will be necessary to take measures to prevent a sharp decline, or too low a level, of the profitability of business, to prevent sharp price falls, and to prevent general business insecurity. Falls in profitability and in prices and, hence, insecurity may be reduced to much smaller proportions by the forms of business-cycle policy discussed in the preceding chapters. There remain, however, these two requirements: (a) the need to counteract the consequences of saturation and (b) the need of adequate profitability.

We now consider the conditions that apply to the formation of income. In order for income to continue at a level consonant with full employment, the receipts of business on the basis of the total demand for goods and services will need to be adequate to continue business. This implies that marginal enterprises do not operate at a loss or at least not at a loss greater than their fixed costs. This requirement is less rigorous than the requirement that new investment should be profitable; the latter implies not only that no losses are suffered but also that there is a certain profit. We are led back, therefore, to the condition that we had already derived with respect to the use of income, but from this point of view the requirement of profitability of new investment need not apply to marginal enterprises.

The two profitability requirements consist in the last analysis in a condition for the relation between prices and costs, with wages as the most important element in the latter. Essentially, therefore, the condition is one of the distribution of income. The difficulties that may arise here are, therefore, almost entirely in the social field. It is possible for labor to insist on a level of wages that is too high compared to the level of prices, so that (a) marginal enterprises would suffer excessively large losses and (b) new investment would become insufficiently profitable. This would occur if the transfer of real income to the workers by the increase in wages would make entrepreneurial activity insufficiently attractive in real terms. Hence, investment demand would decline, and perhaps decline more than the increase in consumer demand, as a result of which total demand would be insufficient to absorb total supply at current prices. There would therefore be losses and unemployment because of an inadequate level of investment.

If the wage rate which is consonant with full employment is lower than the wage that is desirable from the point of view of social justice, corrections will have to be found, not in an increase of the wage rate, but in an increase of other income elements of the working class, such as payments for absence due to sickness, free distribution of certain goods and services, etc.—these additions to labor income to be financed by taxes on profits of enterprise or on medium and high incomes. With respect to profit taxes, certain limits will also have to be observed in this respect. It is clear, therefore, that the conditions of full employment are most intimately connected with questions of social justice. An important point to be borne in mind in this connection is that the level of output and therefore the share of

all classes in total consumption will be the larger, the nearer full employment is approximated, so that all classes of the community have an interest in full employment's being achieved.<sup>1</sup>

As we have mentioned, however, it may be possible, in countries with a very high level of income, that adequate investment will not come forward at any level of prices and wages whatever. In that situation it will be necessary to equalize income by means of taxation, in order to bring down the level of savings to the given level of investment possibilities.

In addition to these central conditions for full-employment equilibrium, there are other conditions of a more partial nature, relating to the proportions among the various parts of the economy. These conditions will usually be the same as the corresponding propositions of economic statics, such as the condition of the equality of price ratios and marginal utility ratios, the equality of marginal costs and prices, etc. We do not want to go more deeply into this matter. In general, we may say that if the main conditions for stability and full employment are fulfilled, these secondary conditions for the balancing of the parts of the economy with respect to each other may come about automatically by the operation of the free forces of the economy. Certain exceptions, such as residential construction, where the great lag in the process of adjustment and long lifetime of the products of the industry can lead to serious deviations, were mentioned before.

Special mention must also be made of the equilibrium of the balance of payments, in particular for a country heavily dependent on foreign trade. The rate of exchange for the currency should be such as to provide equilibrium among the permanent items in the balance of payments, that is to say, an equilibrium with the exclusion of items that are used to finance a deficit, such as gold payments, short-term credits, or unusually large long-term credits. In this field, again, statistical verification is very well possible.

<sup>1.</sup> The productivity of labor may be affected unfavorably by a level of employment so high that it leaves insufficient room for regular changes in jobs, etc. "Full employment" should be understood, in this context, as a level of employment which would leave room for such changes.

to the microsic to be taken to prevent such whome diagnoses. These questions can best be discussed on the basis of concrete examinies. We take as our first examinie a reduction in cininityment which is attributed to a cyclical recession but which, in fact, is due to two high a level of wages. Acting on the wrong TITE. TITE (W.C. IIIX). IN-AIXIE JAINZING CININIAIXIE INGENI INGENI IN THE certain time tecovery will not occur in the present case, exertal taerialian las citation. Lietter the increase in deint and the 

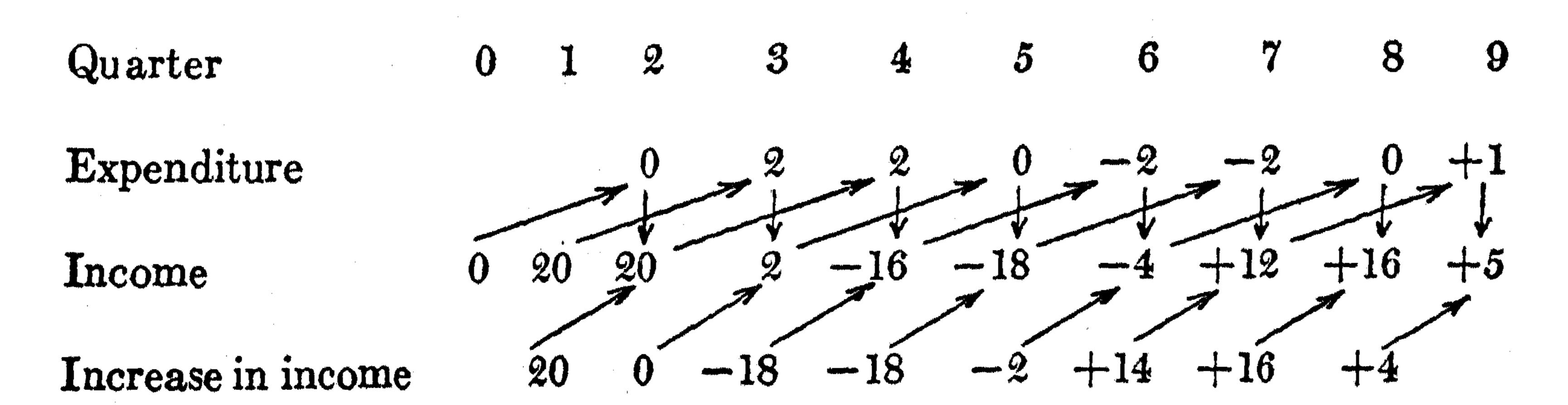
of facts will be recessary. In the case uniter constraint, one SIGNIC IN VERNICALINAL LICE CECLINE IN ACTIVITY WAS CIVEN, total cost, whereas the characteristic of a cyclical depression is that the decline is greatest in the production of durable grows. In some cases, temporarily disturbing factors such as crop infinences may obscure relations of this character, but the better one erops on the formation of prices and on activity (and this is statistically possible). The shorter will be the period during of employment to be due to a recession in the domestic cycle. of exclusive or, possibly, quota restrictions on introve. Here 

should bring about rapidly the proper understanding of the situation. The importance of such studies will be clear from these examples.

The consequences of a somewhat delayed reaction are less serious, provided that the delay is not more than a few months. It is true that by such delay no counterweight to the depression is given for a few months, but the chances are small that by this fact in itself the depression would assume very serious proportions. To prove this point, it will be necessary to refer again to our examples; with their help we can show that a short increase in the lag of expenditure with respect to income, provided that it is accompanied by a considerable reduction in the marginal propensity to spend as a result of a policy of compensating government expenditure, will lead to movements that are not dangerous in nature.

This may be illustrated by a calculation similar to those we used in our previous models. For this purpose we use again Example III", assuming, as in that example, that the marginal propensity to spend equals 0.1 but assuming now that the lag between income and expenditure will not be one quarter but two quarters. According to the process with which the reader will by now be familiar, the accompanying figures will then be found.

## EXAMPLE III"



The arrows from the income figures to the corresponding expenditure figures are now drawn to reflect a lag of two quarters. It will be noticed that the fluctuations of income are not affected unfavorably but even slightly favorably by this change. But if the lag were increased very much more, the movements would again become entirely different.

The proposition is often advanced that a business-cycle policy, to be successful, must start in one definite phase of the cycle. In its generality we must reject this proposition, if only because of its vagueness. In which phase the policy should be initiated will depend on the type of business-cycle policy and the objective aimed at, and in some cases it will be indifferent at what stage of the cycle the policy is begun.

Possible differences in objective are most important in this connection. We may mention two objectives which are mutually exclusive, namely, stabilization at an average level of activity and stabilization at a peak level of activity. If the first objective were pursued, it might reasonably be thought that the proper

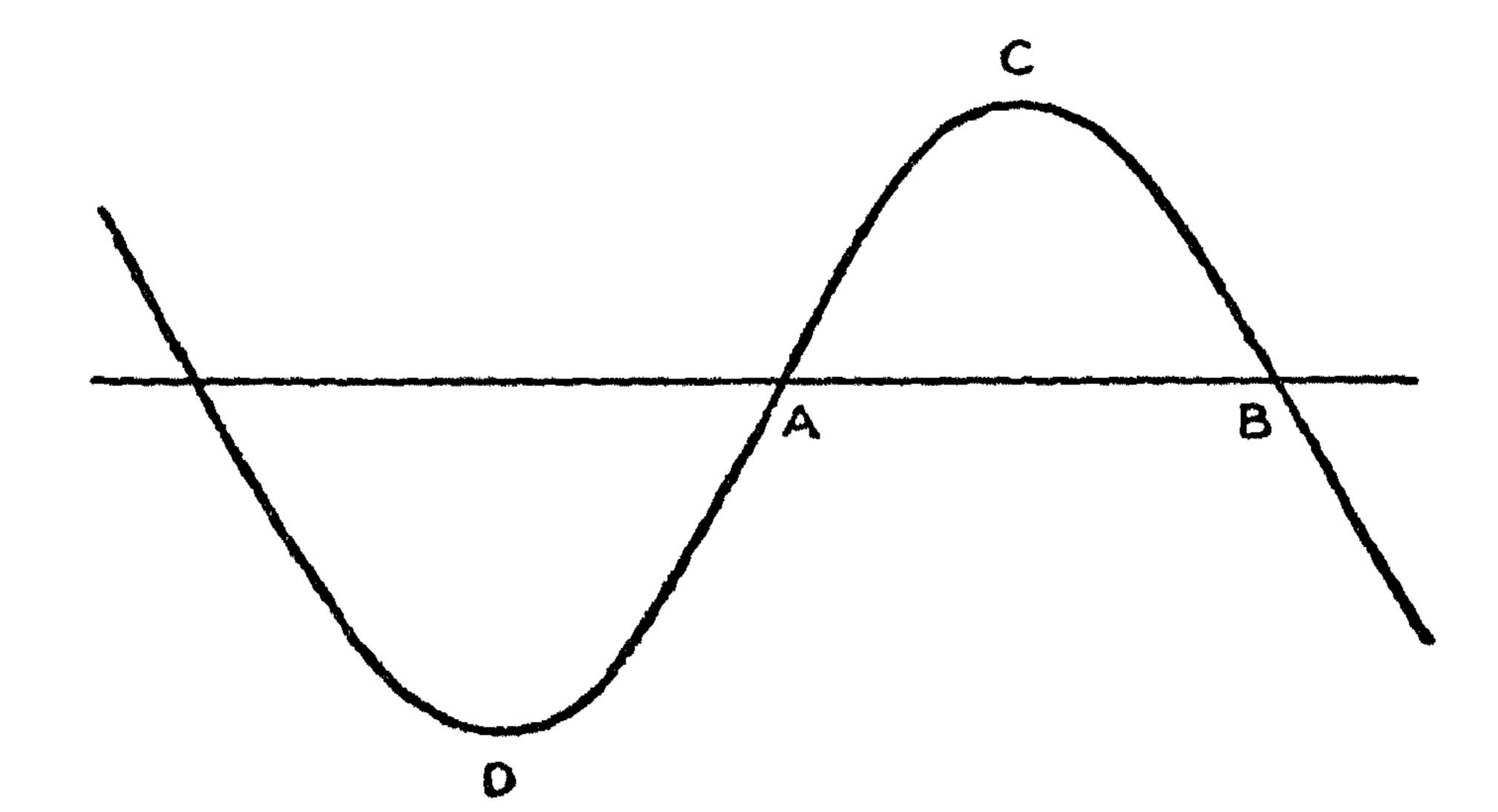


Fig. 55.—Alternative starting points for business-cycle policy

moment to initiate a policy would be when the activity curve is at its normal level. There are two such points in every cycle, namely, in Figure 55, points A and B-A in the recovery and B in the recession. Let us assume that the policy is started in A by restrictionist measures of such a character that production will follow the equilibrium line AB from there on out. This would achieve the objective with respect to production. But production cannot be considered independently of the other economic variables. At the time when production is at its normal level, certain other variables, such as the wage rate and the rate of interest, or the size of productive capacity, will not be at their normal levels. Certain further adjustments will therefore have to occur before the normal situation applies to all variables. These adaptations may in certain circumstances take the form of fluctuations, although probably minor fluctuations, if

production itself is stabilized. Such fluctuations would indicate, nevertheless, that the business-cycle objective had not been immediately achieved, although this would not in itself be a very serious objection.

If it were desired to have an adaptation to the equilibrium development with the minimum of fluctuations, business-cycle policy should start before point A. The question, however, is how much before this point. This question can be answered only if one knows with sufficient accuracy the mechanism of cyclical movements, as we discussed that in our examples in chapter xiii. Only on the basis of a knowledge of this mechanism is it possible to decide whether adaptation will involve fluctuations or not. We cannot go too deeply into this question here. It will be clear to the reader, however, that the magnitude of the lags in the mechanism is a matter of fundamental importance in this connection. To take a very simple example: if it were desired to control the hog cycle by a regulation of the number of hogs to be fattened, the supply of marketable hogs and thereby the price would not be affected until more than half a year after the start of that policy.

Those who argue that, in order to obtain a gradual adaptation of production to the equilibrium level, the policy should necessarily start as early as the depression (that is to say, in point D) appear to assume a mechanism with very long lags. This point of view is somewhat akin to that of Hayek, who attributes investment maturing near point C, which involves an unduly large amount of capital, to an unusually low rate of interest in point D. We believe, however, that such long lags are exceptional and that it would be satisfactory to initiate the policy shortly before point A.

We must repeat, however, that the point at which a policy should be started depends on the objective and the nature of the particular policy; it will, moreover, often be more or less indifferent in which phase of the cycle a certain policy is started. It should not be believed that it will generally be possible to achieve the desired equilibrium development immediately. During the business cycle there is no single point that represents an equilibrium situation in all respects; for that reason, any

adaptation will require a certain time. This applies also if the objective of business-cycle policy is selected, as we would select it, as the maintenance of a high rather than an average level. It is even more true in that situation that one cannot consider this policy as a continuation of one particular phase of the business cycle. The total volume of output at the peak of the cycle may be most in accordance with out objectives, but its composition and the level of prices are not optimal, and further adaptation will be required to reach a situation that is fully in accordance with the objectives of the policy.