OBJECTIVES OF TREND POLICY AND BUSINESS-CYCLE POLICY

IN ORDER to describe the objectives of trend policy and business-cycle policy, we shall start out by sketching the general economic development which, in our view, should be considered as the ideal result of these policies. Some divergence of opinion is possible, of course, with respect to what might be considered the ideal development; it is inevitable that opinions here are somewhat subjectively colored. We shall have an opportunity to compare our opinion with that of others on the most important controversies in this field.

We sketch, first, the ideal development for a country without foreign trade, that is to say, either for the world as a whole or, by approximation, for a large area which is nearly autarchic. We shall indicate only the broad outlines of the economy, paying no attention to details. The main aspects of the economy are determined by the following magnitudes: (1) the volume of production, (2) the level of prices, (3) the quantity of money, (4) the distribution of income among broad groups of the population, (5) the distribution of income among consumption and investment, and (6) the extent of the government's participation in the economy, that is, the level of taxation and the level of the government debt.

THE VOLUME OF PRODUCTION

The volume of production should be as large as possible and should be achieved by the use of all productive factors (labor, capital, and nature) which are prepared to offer their services. Involuntary unemployment of the factors of production, in particular of labor, should be avoided as far as possible. In addition,

the number of working hours should approximate as nearly as possible the desires of the majority of those working. In selecting the number of working hours, workers should have before them this alternative: either longer working hours and a correspondingly higher wage or shorter hours and a correspondingly lower wage. If the alternative is put in this way, the working day selected will probably not deviate much from eight hours. If productivity increases further in the future, a further reduction in working hours is likely to be preferred.

Will there be a sufficient quantity of capital goods and of nature for the employment of all those who are prepared to work? With respect to the long-run development this question answers itself. An equilibrium is possible for any quantity of each of the factors of production; this equilibrium will be found by the price mechanism. In a country that is rich in capital, the rate of interest will be low; hence each enterprise will invest a relatively large amount of capital per worker. In a country that is poor in capital, a high rate of interest will produce a correspondingly economical use of capital. Similar considerations apply to the use of land. The distribution of activity over the different branches of industry will also be influenced by the price of capital and the price of land.

The objectives set out imply that we cannot accept as objectives of economic policy (a) the fluctuations as shown by the business cycle or (b) stabilization of the volume of production and employment at a level lower than that corresponding to full employment. One may consider stabilization at a level of (approximately) full employment as an objective of businesscycle policy by itself or as an objective of a combination of business-cycle and trend policy. Many of those who consider the stabilization of fluctuations around the average level of a cycle as the objective of business-cycle policy in the narrow sense would at the same time advocate a structural policy that would raise this level as a whole. We shall have to analyze further whether these two objectives are compatible; we think that they are; and it is then clear that stabilization at the high level is preferable to stabilization at an average level. Throughout, it should be realized that stabilization does not imply a development over time which is horizontal but rather one which show a trend movement depending on various factors which we have discussed.

THE LEVEL OF PRICES

If at a given moment it were possible to start with a completely clean slate, without any link with the past, the level of prices would be indifferent; as is well known, a simultaneous increase of all prices in the same proportion would entail not change in the volume or in the composition of production. However, if prices are bound to the past, as is the case in reality, the level of prices is not indifferent. Great changes in either direction are then undesirable, among other things because they lead to large profits for some, large losses for others. They would, moreover, promote speculative activity.

The primary requirement with respect to the relation between prices is, speaking generally, the existence of such a relation between the prices of the products and those of the factors of production that the marginal enterprise just breaks even. This means, in approximate terms, that the level of wages should be equal to the marginal productivity of labor and means similar requirements for the other factors of production.

Considerations of a similar nature apply to the prices of individual commodities. They should be at such a level that they guarantee equilibrium between the quantity supplied and the quantity demanded; but since we discuss primarily the main outlines of the economy, we shall not deal with this question here. For the great majority of commodities, this equilibrium will be established rather easily and automatically if cyclical movements are eliminated. Only for a few commodities with a long period of production or a long lifetime need this objective be pursued separately (see chaps. viii and xiv).

With respect to the movements of the general level of prices, sharp movements in either direction are, as we have stated, undesirable. They lead to speculative profits or losses which in the long run have always most undesirable consequences. Smooth and slow movements are therefore required. Since a slow decline of prices would lead to some, even though small, book losses on commodity stocks and hence would exercise a re-

straining influence on economic activity, a slow increase or stability would probably be most desirable for the economy.

THE QUANTITY OF MONEY

The most desirable quantity of money is determined by the most desirable quantity of cash of each household and business enterprise. If, in the absence of sharp price movements or of threats of other disturbances in the economy, no special cash reserves are desired, the most desirable amount of cash for each economic unit will be proportional to the volume of payments it has to make during the period for which the cash should serve. Thus, for the economy as a whole, the most desirable amount of money will be proportional to the total value of turnover or to the total value of national income provided that (a) there are no changes in the payments plan during each payment period and (b) there is no change in the relative proportion of the various types of households.

A more detailed analysis would produce a number of other conditions, but we may limit ourselves here to the most important ones. Some examples may be given with respect to the two points mentioned. The payments plan of a worker's family, for instance, may be defined by the time and the magnitude of payments made by that family. Usually these payments are characterized by great regularity, e.g., the grocer is paid on Saturday, the landlord on Monday, the baker daily, etc. Generally speaking, each week a new amount of income will be received, most of which will be spent during that week. The average cash of a worker's family would therefore represent a small proportion of its yearly income. For a white-collar worker who is paid once or twice a month, the ratio of cash to income would be larger. If, therefore, the number of white-collar workers were to increase sharply compared to the number of manual workers, the average ratio of cash to annual income would also be changed considerably. But shifts of this nature, to which we referred under (b), usually occur only slowly.

In business, too, payment habits change only slowly. They might change not only in the periods of payment for wages, salaries, deliveries of raw materials, etc., but also by vertical in-

tegration of enterprises. All these changes occur only gradually. It may therefore be stated that the most desirable quantity of money is approximately proportional to the dollar value of total turnover, that is, approximately proportional to the product of an index of prices and the volume of production. In a stabilized economy, therefore, it would have to increase slowly.

THE DISTRIBUTION OF INCOME

With respect to the distribution of income, there are primarily social objectives relating to the personal distribution, such as the realization of a more equal distribution and perhaps the limitation of nonlabor income. These questions touch our subject only laterally and we may leave them out of account.

Apart from the effect of the distribution of income on its use, to which we shall refer in the next section, the functional distribution is a matter of great importance. If the ideal economic development is to take place under a system of free enterprise, it will be necessary, as we have noted, that wage rates shall be such that the marginal firm can still exist. In other words, the wage rate should not exceed the marginal productivity of labor. We shall come back later to these and similar equilibrium conditions.

We return to more direct questions of how economic movements should be influenced when we consider how the wage rate and the rate of interest should vary over time. The equality of the wage rate and the marginal productivity of labor would imply that the wage rate should move proportionately to the level of prices and the marginal productivity of labor.¹

THE USE OF INCOME

With respect to the distribution of the national income over consumption and investment, two objectives should be put forward:

- a) Fluctuations in these two magnitudes should be avoided as much as possible; this is the business-cycle objective. If total production and the level of prices are approximately stabilized,
- 1. If the production function is an exponential function, as Douglas believes, the marginal productivity of labor would be proportional to the average productivity of labor.

the distribution of income over consumption and saving will also be stable since, as we have noted, there is a pronounced regularity in the use of income for large groups of the population. Stability in income will contribute to stability in new investment; but it will not in itself stabilize reinvestment; here the echo principle may still make itself felt. It might be necessary, therefore, to limit the fluctuations in reinvestment separately.

b) It is desirable that all savings be used in investment because otherwise there would be a prolonged, structural depression accompanied by continuous hoarding. The volume of investment depends in part on technical possibilities; it is conceivable that in a country which is at the peak of technical development, the number of investment possibilities is limited. In a country which is not at the peak, there will probably always be technical possibilities. If investment possibilities are limited, it would make no sense to maintain savings at a level in excess of these possibilities. It may then be necessary to apply corrections to the use of national income and to direct a larger proportion toward consumption.

If technical possibilities do not impose limitations, a choice is possible between allocation of a smaller proportion of national income to consumption, thus permitting a faster annual rate of growth of productive capacity, and allocation of a larger part of national income to consumption with a correspondingly slower growth of the volume of capital. The choice between these two possibilities will be affected by the relative appreciation of present and future welfare; in the past, this choice has been so affected primarily by the opinions of individual persons concerning their personal welfare rather than by the community's views of the total welfare of the community. A concrete and numerical choice in this matter would be particularly difficult to make.

GOVERNMENT

The most desirable size of the government economy, in comparison to the rest of the economy, depends on a number of factors not all of which belong in the field of trend policy and business-cycle policy. We may mention technical considerations

with regard to certain needs that can best be satisfied by the community, strategic considerations that may require a larger influence of the government on the economy than would be warranted on purely economic grounds, etc. In view of such considerations, no objective can be set in this field solely on the basis of the trend and cyclical aspects of economic policy.

But the magnitude of the government's share in the economy also has a direct bearing on business-cycle and trend policy. Thus, if it is desired to manipulate government expenditure as a means of business-cycle policy, such expenditure must have a certain minimum size to constitute an instrument of sufficient influence. If it is further believed that incomes should be subjected to heavy taxation in order to restrict savings, a certain minimum size of the government economy is again implied. Activities of the government on a scale which prevailed in the nineteenth century, when less than 10 per cent of the national income was paid in taxes, would provide an insufficient point of application for trend or business-cycle policy. During World War II, on the other hand, the extent of government activities was larger than was necessary for active business-cycle policy. For the future, an optimum should be found somewhere between these two extremes; it would appear that the 1938 situation was not far removed from this optimum for most European countries.

In addition to the question of desirability, that of possibility should also be considered. The possibility of collecting taxes depends on the wealth of the country, its taxation system, the tax rates, etc. It is probable that there is a limit to the total yield of taxation which lies far below total national income because taxation itself can exercise an unfavorable influence on economic activity. There is no doubt a point beyond which any increase in taxation would reduce national income. Experience would indicate that it is possible in peacetime to set aside at least one-fourth of the national income for governmental purposes; in wartime, a larger proportion can be taken, although this requires means other than taxation. The ratio of taxes to national income in the United States in 1929, 1938, and 1947 is set out in Table 15.

OPEN ECONOMY

We may now consider the objectives of trend policy and business-cycle policy for a country that depends to a significant extent on trade with other countries. Such a country has much less freedom in the choice of its economic development than do countries with a closed economy. One might go so far as to say that a country which depends to a large extent on foreign trade need not and cannot have a cyclical policy of its own. If the world cycle is stabilized, the cycle in a country with an open

TABLE 15

THE RATIO OF TAXES TO NATIONAL INCOME

	1929	1938	1947
BILLIONS OF 1	DOLLARS		
1. National income	87.4	67.4	202.5
 2. Taxation: a) Federal b) State and local 	3.77.3	4.8 8.3	38.8
Total	1.1.0	13.1	51.9
PER CEI	VT		
3. Taxation as per cent of national income.	12.6	19.4	25.6

economy will also be stabilized; and if the world cycle is not stabilized, a small country with an open economy will not succeed in stabilizing its own business cycle anyway. Similar observations might be made with respect to the trend: the speed of development, it might be said, is also entirely determined by the rate of growth of the world economy.

But these fatalistic views are exaggerated and therefore dangerous. They are dangerous in particular because almost all countries in the world depend heavily on international trade, and each country might therefore push onto others the responsibility for an undesirable cyclical or trend movement. In this way a better international economic policy could never be achieved.

The variables which for a country with an open economy are indeed practically given are the prices of imported commodities in terms of foreign currency, the prices of export commodities in terms of foreign currency (for countries exporting world staples), and the world demand curve for the country's exports. An autonomous economic policy for such a country would still leave the following possibilities to regulate its own cycle: (a) the manipulation of the rate of exchange, thus adjusting the price level in national currency of international commodities and regulating the supply price in foreign currency of nonstaple international commodities, and (b) the regulation of domestic demand for commodities, which may provide a compensation for possible fluctuations in a foreign demand.

The policy under (a) in particular might be applied in a depression by depreciation, which would soften the internal fall of prices and stimulate exports; and the policy under (b) might be applied through the government's increasing its demand in a period of depression. In periods of boom the opposite policy should then be followed. In addition to exchange policy, the direct regulation of imports might also be applied. In this way, a country with a large foreign trade can yet follow a business-cycle policy of its own. The objectives of this policy would in principle be the same as those of countries with a closed economy; but it is now less certain that these objectives can be entirely realized. A good example of such an independent antidepression policy is that followed by Sweden from 1931 to 1935.

Similar considerations apply to trend policies. By exchangerate policies and the stimulation of savings, it is possible to some extent to set a rate of development in one country which is independent of that in other countries. An important example of this is the development in Japan after 1931.

In small countries, however, the necessity to maintain a certain equilibrium in the balance of payments brings in another inevitable objective of their business-cycle and trend policy. This necessity will be the more rigid as the country concerned has less international reserves; if such reserves are completely

absent (as they were in Germany after 1934), the country must balance its current international payments. But when a country disposes of certain gold and foreign-exchange reserves, it can permit itself an import surplus in periods of depression and can thus achieve a greater degree of cyclical stability. It would then be necessary to restore the reserves in boom periods, in order to make possible the application of the same policy in a succeeding depression.

Limitations similar to those with respect to cyclical policies apply with respect to the trend development of an open economy. Thus, in particular, the trend of prices can hardly differ from that in the rest of the world unless the economy would accept continuous appreciation or, more likely and more serious, continuous depreciation of its currency. The rate of growth of exports, and thereby that of imports, is also limited by conditions abroad. More independence is possible with respect to the percentage of national income saved, especially if the government is prepared to intervene in the capital market. Without such intervention, there will be a further link through the international capital market, and the rate of interest will fluctuate with rates abroad; even the level of taxation cannot be too divergent from that in other countries, at least not higher, because of the possibilities of capital flight. Only a country with very rigorous exchange controls, such as Germany after 1933, could disregard these difficulties.

MONETARY EQUILIBRIUM

The objective of business-cycle policy is often formulated as "monetary equilibrium," which is sometimes defined in this way, that all business and private households together would in each time period spend as much as they receive. In other words, for the economy as a whole there would be no hoarding, either negative or positive; the flow of income would not be interrupted or increased. Such a situation is also sometimes referred to as one in which there are no disturbances of equilibrium coming "from the side of money," in particular no disturbances due to "incomplete exchanges."

An incomplete exchange transaction is one in which commod-

ities are exchanged for money but money is not again exchanged for commodities. Such transactions would have no place in the theoretical model of an economy without money, such as that assumed by Walras, in which the only form of exchange is that of one commodity against another commodity. It is sometimes said that the objective of business-cycle policy should be the approximation of a situation which is reflected by equations like those of Walras.

This objective, however, should be taken with some grains of salt. There is, first, no objection to that deviation from "monetary equilibrium" which consists in a gradual increase of the quantity of money. To the contrary, it is desirable that the circulation of money should increase as the value of turnover increases. These increases should be gradual; as indicated above, the increase should be in the order of a few per cent a year, in accordance with the increases of the population and of productivity.

Second, the desire to approximate the situation expressed by the system of equations of Walras is in many respects impossible of fulfilment, as this system does not reflect many technical and institutional facts that are of great importance in reality, such as the definite lifetime of many commodities, the length of the period of production, and many other similar facts. It may be admitted, however, that in general the deviations from the equilibrium situation due to monetary factors are among the most important and that for this reason the objective of monetary equilibrium can be accepted as a first approximation.

Are the objectives set out in the preceding sections attainable? The first condition for this is that they do not contain logical or technical inconsistencies. A logical inconsistency would be present if we had assumed, for instance, that total income would have to be larger than the sum of all individual incomes. Other and more important possibilities of logical inconsistencies are conceivable. No such inconsistencies are present, however, in our objectives. A technical inconsistency might be present if we had assumed a relation between production and employment that was not compatible with the production function. But that type of inconsistency, too, we have avoided.

More conditions than these have to be fulfilled to render possible a development without a cyclical component. As we have seen in chapter xvi, the movements in the economy are the result of (a) changes in the data (disturbances) and (b) reactions of the economic mechanism to such disturbances.

Many of these disturbances, such as fluctuations in crop vields, wars, other calamities, or strikes, cannot be avoided. Hence, a complete stabilization of the business cycle is impossible. But much depends on whether the economy tends to develop these inevitable initial movements into large deviations from equilibrium by cumulative reactions or whether the response of the economy is an immediate tendency to reapproach the equilibrium situation. Depending on the nature of the relations among the economic variables (which reflect these reactions), the result may be either a movement of slight damping and a long period and therefore of a large amplitude or a heavily damped movement with a short period; in the latter case, disturbances will soon spend their force and do little harm. We have discussed the relationship between the 'elementary relations" and the form of economic movements in chapter xiii, particularly in developing our examples, and we shall have to make use now of the knowledge gained at that stage.

In order to achieve a more stable development, it will be necessary to adjust one or more of the relations among the various economic variables. For instance, investment will have to react differently to fluctuations in national income, or the wage rate will have to react differently to changes in employment, prices, etc. As a limiting case this change of reactions may mean that one of the variables is entirely stabilized. Specific forms of economic policy usually consist in the change of one relationship, sometimes in the stabilization of one variable. It cannot be said in advance whether this will yield stabilization of the entire economy. A definite answer could be given only on the basis of a computation in the manner developed in chapter xiii, a computation which is generally difficult, especially when the system of relations is complicated. In simpler systems limited to the most important relationships, as in Example I, it may be possible to arrive at a

conclusion by qualitative reasoning alone, provided that the reactions that have not been changed by economic policy, i.e., those that have been left free, do not run counter to the attempts toward stabilization.

In the chapters that follow we shall analyze first the effect on economic movements of individual forms of economic policy. In a final chapter (chap. xxiii) we shall take up the question as to what extent a combination of these individual forms of economic policy is desirable in order to achieve the best approximation to the objectives set.