Chapter 18

THE GENERAL THEORY OF EMPLOYMENT RE-STATED

I

We have now reached a point where we can gather together the threads of our argument. To begin with, it may be useful to make clear which elements in the economic system we usually take as given, which are the independent variables of our system and which are the dependent variables.

We take as given the existing skill and quantity of available labour, the existing quality and quantity of available equipment, the existing technique, the degree of competition, the tastes and habits of the consumer, the disutility of different intensities of labour and of the activities of supervision and organisation, as well as the social structure including the forces, other than our variables set forth below, which determine the distribution of the national income. This does not mean that we assume these factors to be constant; but merely that, in this place and context, we are not considering or taking into account the effects and consequences of changes in them.

Our independent variables are, in the first instance, the propensity to consume, the schedule of the marginal efficiency of capital and the rate of interest, though, as we have already seen, these are capable of further analysis.

Our dependent variables are the volume of employment and the national income (or national dividend) measured in wage-units.

The factors, which we have taken as given, influence

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our independent variables, but do not completely determine them. For example, the schedule of the marginal efficiency of capital depends partly on the existing quantity of equipment which is one of the given factors, but partly on the state of long-term expectation which cannot be inferred from the given factors. But there are certain other elements which the given factors determine so completely that we can treat these derivatives as being themselves given. For example, the given factors allow us to infer what level of national income measured in terms of the wage-unit will correspond to any given level of employment; so that, within the economic framework which we take as given, the national income depends on the volume of employment, i.e. on the quantity of effort currently devoted to production, in the sense that there is a unique correlation between the two.[1] Furthermore, they allow us to infer the shape of the aggregate supply functions, which embody the *physical* conditions of supply, for different types of products;—that is to say, the quantity of employment which will be devoted to production corresponding to any given level of effective demand measured in terms of wage-units. Finally, they furnish us with the supply function of labour (or effort); so that they tell us *inter alia* at what point the employment function[2] for labour as a whole will cease to be elastic.

The schedule of the marginal efficiency of capital depends, however, partly on the given factors and partly on the prospective yield of capital-assets of different kinds; whilst the rate of interest depends partly on the state of liquidity-preference (i.e. on the liquidity function) and partly on the quantity of money measured in terms of wage-units. Thus we can sometimes regard our ultimate independent variables as consisting of (1) the three fundamental psychological

[1] We are ignoring at this stage certain complications which arise when the employment functions of different products have different curvatures within the relevant range of employment. See chapter 20 below.

[2] Defined in chapter 20 below.

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factors, namely, the psychological propensity to consume, the psychological attitude to liquidity and the psychological expectation of future yield from capital-assets, (2) the wage-unit as determined by the bargains reached between employers and employed, and (3) the quantity of money as determined by the action of the central bank; so that, if we take as given the factors specified above, these variables determine the national income (or dividend) and the quantity of employment. But these again would be capable of being subjected to further analysis, and are not, so to speak, our ultimate atomic independent elements.

The division of the determinants of the economic system into the two groups of given factors and independent variables is, of course, quite arbitrary from any absolute standpoint. The division must be made entirely on the basis of experience, so as to correspond on the one hand to the factors in which the changes seem to be so slow or so little relevant as to have only a small and comparatively negligible short-term influence on our *quaesitum*; and on the other hand to those factors in which the changes are found in practice to exercise a dominant influence on our *quaesitum*. Our present object is to discover what determines at any time the national income of a given economic system and (which is almost the same thing) the amount of its employment; which means in a study so complex as economics, in which we cannot hope to make completely accurate generalisations, the factors whose changes *mainly* determine our *quaesitum*. Our final task might be to select those variables which can be deliberately controlled or managed by central authority in the kind of system in which we actually live.

II

Let us now attempt to summarise the argument of the previous chapters; taking the factors in the reverse order to that in which we have introduced them.

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There will be an inducement to push the rate of new investment to the point which forces the supply-price of each type of capital-asset to a figure which, taken in conjunction with its prospective yield, brings the marginal efficiency of capital in general to approximate equality with the rate of interest. That is to say, the physical conditions of supply in the capital-goods industries, the state of confidence concerning the prospective yield, the psychological attitude to liquidity and the quantity of money (preferably calculated in terms of wage-units) determine, between them, the rate of new investment.

But an increase (or decrease) in the rate of investment will have to carry with it an increase (or decrease) in the rate of consumption; because the behaviour of the public is, in general, of such a character that they are only willing to widen (or narrow) the gap between their income and their consumption if their income is being increased (or diminished). That is to say, changes in the rate of consumption are, in general, *in the same direction* (though smaller in amount) as changes in the rate of income. The relation between the increment of consumption which has to accompany a given increment of saving is given by the marginal propensity to consume. The ratio, thus determined, between an increment of investment and the corresponding increment of aggregate income, both measured in wage-units, is given by the investment multiplier.

Finally, if we assume (as a first approximation) that the employment multiplier is equal to the investment multiplier, we can, by applying the multiplier to the increment (or decrement) in the rate of investment brought about by the factors first described, infer the increment of employment.

An increment (or decrement) of employment is liable, however, to raise (or lower) the schedule of liquidity-preference; there being three ways in which it will tend to increase the demand for money, inasmuch as the value of output will rise when employment increases even if the wage-unit and prices (in terms of the wage-unit) are unchanged, but, in addition, the wage-unit itself will tend to rise as employment improves, and the increase in output will be accompanied by a rise of prices (in terms of the wage-unit) owing to increasing cost in the short period.

Thus the position of equilibrium will be influenced by these repercussions; and there are other repercussions also. Moreover, there is not one of the above factors which is not liable to change without much warning, and sometimes substantially. Hence the extreme complexity of the actual course of events. Nevertheless, these seem to be the factors which it is useful and convenient to isolate. If we examine any actual problem along the lines of the above schematism, we shall find it more manageable; and our practical intuition (which can take account of a more detailed complex of facts than can be treated on general principles) will be offered a less intractable material upon which to work.

III

The above is a summary of the General Theory. But the actual phenomena of the economic system are also coloured by certain special characteristics of the propensity to consume, the schedule of the marginal efficiency of capital and the rate of interest, about which we can safely generalise from experience, but which are not logically necessary.

In particular, it is an outstanding characteristic of the economic system in which we live that, whilst it is subject to severe fluctuations in respect of output and employment, it is not violently unstable. Indeed it seems capable of remaining in a chronic condition of sub-normal activity for a considerable period without any marked tendency either towards recovery or towards complete collapse. Moreover, the evidence indicates that full, or even approximately full, employment is of rare and short-lived occurrence. Fluctuations may start briskly but seem to wear themselves out before they have proceeded to great extremes, and an intermediate situation which is neither desperate nor satisfactory is our normal lot. It is upon the fact that fluctuations tend to wear themselves out before proceeding to extremes and eventually to reverse themselves, that the theory of business *cycles* having a regular phase has been founded. The same thing is true of prices, which, in response to an initiating cause of disturbance, seem to be able to find a level at which they can remain, for the time being, moderately stable.

Now, since these facts of experience do not follow of logical necessity, one must suppose that the environment and the psychological propensities of the modern world must be of such a character as to produce these results. It is, therefore, useful to consider what hypothetical psychological propensities would lead to a stable system; and, then, whether these propensities can be plausibly ascribed, on our general knowledge of contemporary human nature, to the world in which we live.

The conditions of stability which the foregoing analysis suggests to us as capable of explaining the observed results are the following:

(i) The marginal propensity to consume is such that, when the output of a given community increases (or decreases) because more (or less) employment is being applied to its capital equipment, the multiplier relating the two is greater than unity but not very large.

(ii) When there is a change in the prospective yield of capital or in the rate of interest, the schedule of the marginal efficiency of capital will be such that the change in new investment will not be in great disproportion to the change in the former; i.e. moderate changes in the prospective yield of capital or in the rate of interest will not be associated with very great changes in the rate of investment.

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(iii) When there is a change in employment, money-wages tend to change in the same direction as, but not in great disproportion to, the change in employment; i.e. moderate changes in employment are not associated with very great changes in money-wages. This is a condition of the stability of prices rather than of employment.

(iv) We may add a fourth condition, which provides not so much for the stability of the system as for the tendency of a fluctuation in one direction to reverse itself in due course; namely, that a rate of investment, higher (or lower) than prevailed formerly, begins to react unfavourably (or favourably) on the marginal efficiency of capital if it is continued for a period which, measured in years, is not very large.

(i) Our first condition of stability, namely, that the multiplier, whilst greater than unity, is not very great, is highly plausible as a psychological characteristic of human nature. As real income increases, both the pressure of present needs diminishes and the margin over the established standard of life is increased; and as real income diminishes the opposite is true. Thus it is natural—at any rate on the average of the community—that current consumption should be expanded when employment increases, but by less than the full increment of real income; and that it should be diminished when employment diminishes, but by less than the full decrement of real income. Moreover, what is true of the average of individuals is likely to be also true of governments, especially in an age when a progressive increase of unemployment will usually force the State to provide relief out of borrowed funds.

But whether or not this psychological law strikes the reader as plausible *a priori*, it is certain that experience would be extremely different from what it is if the law did not hold. For in that case an increase of investment, however small, would set moving a cumulative increase of effective demand until a position of full

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employment had been reached; while a decrease of investment would set moving a cumulative decrease of effective demand until no one at all was employed. Yet experience shows that we are generally in an intermediate position. It is not impossible that there may be a range within which instability does in fact prevail. But, if so, it is probably a narrow one, outside of which in either direction our psychological law must unquestionably hold good. Furthermore, it is also evident that the multiplier, though exceeding unity, is not, in normal circumstances, enormously large. For, if it were, a given change in the rate of investment would involve a great change (limited only by full or zero employment) in the rate of consumption.

(ii) Whilst our first condition provides that a moderate change in the rate of investment will not involve an indefinitely great change in the demand for consumption-goods our second condition provides that a moderate change in the prospective yield of capital-assets or in the rate of interest will not involve an indefinitely great change in the rate of investment. This is likely to be the case owing to the increasing cost of producing a greatly enlarged output from the existing equipment. If, indeed, we start from a position where there are very large surplus resources for the production of capital-assets, there may be considerable instability within a certain range; but this will cease to hold good as soon as the surplus is being largely utilised. Moreover, this condition sets a limit to the instability resulting from rapid changes in the prospective yield of capital-assets due to sharp fluctuations in business psychology or to epoch-making inventions—though more, perhaps, in the upward than in the downward direction.

(iii) Our third condition accords with our experience of human nature. For although the struggle for money-wages is, as we have pointed out above, essentially a struggle to maintain a high *relative* wage,

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this struggle is likely, as employment increases, to be intensified in each individual case both because the bargaining position of the worker is improved and because the diminished marginal utility of his wage and his improved financial margin make him readier to run risks. Yet, all the same, these motives will operate within limits, and workers will not seek a much greater money-wage when employment improves or allow a very great reduction rather than suffer any unemployment at all.

But here again, whether or not this conclusion is plausible *a priori*, experience shows that some such psychological law must actually hold. For if competition between unemployed workers always led to a very great reduction of the money-wage, there would be a violent instability in the price-level. Moreover, there might be no position of stable equilibrium except in conditions consistent with full employment; since the wage-unit might have to fall without limit until it reached a point where the effect of the abundance of money in terms of the wage-unit on the rate of interest was sufficient to restore a level of full employment. At no other point could there be a resting-place.[1]

(iv) Our fourth condition, which is a condition not so much of stability as of alternate recession and recovery, is merely based on the presumption that capital-assets are of various ages, wear out with time and are not all very long-lived; so that if the rate of investment falls below a certain minimum level, it is merely a question of time (failing large fluctuations in other factors) before the marginal efficiency of capital rises sufficiently to bring about a recovery of investment above this minimum. And similarly, of course, if investment rises to a higher figure than formerly, it is only a question of time before the marginal efficiency of capital falls sufficiently to bring about

[1] The effects of changes in the wage-unit will be considered in detail in chapter 19.

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a recession unless there are compensating changes in other factors.

For this reason, even those degrees of recovery and recession, which can occur within the limitations set by our other conditions of stability, will be likely, if they persist for a sufficient length of time and are not interfered with by changes in the other factors, to cause a reverse movement in the opposite direction, until the same forces as before again reverse the direction.

Thus our four conditions together are adequate to explain the outstanding features of our actual experience;—namely, that we oscillate, avoiding the gravest extremes of fluctuation in employment and in prices in both directions, round an intermediate position appreciably below full employment and appreciably above the minimum employment a decline below which would endanger life.

But we must not conclude that the mean position thus determined by 'natural' tendencies, namely, by those tendencies which are likely to persist, failing measures expressly designed to correct them, is, therefore, established by laws of necessity. The unimpeded rule of the above conditions is a fact of observation concerning the world as it is or has been, and not a necessary principle which cannot be changed.

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