Chapter 27

FLUCTUATIONS IN THE RATE OF INVESTMENT—I. FIXED CAPITAL

When there is a disequilibrium between savings and investment, this is much more often due to fluctuations in the rate of investment than to sudden changes in the rate of savings, which is, in normal circumstances, of a fairly steady character. To understand, therefore, the genesis and the severity of the disequilibria which we have analysed in volume I, it is chiefly necessary to consider what causes the rate of investment to fluctuate and to estimate the order of magnitude of such fluctuations. In this chapter and the two following, we shall treat in turn the causes and the degree of fluctuations of investment in fixed capital, working capital and liquid capital. These chapters are in the nature of a digression, which is doubtfully in place in a treatise on money but has to be included because the fluctuations in the rate of investment have not been treated, sufficiently for my purpose, elsewhere.

In the case of fixed capital it is easy to understand why fluctuations should occur in the rate of investment. Entrepreneurs are induced to embark on the production of fixed capital or deterred from doing so by their expectations of the profit to be made. Apart from the many minor reasons why these should fluctuate in a changing world, Professor Schumpeter’s explanation of the major movements may be unreservedly accepted. He points to

the innovations made from time to time by the relatively small number of exceptionally energetic business men—their practical applications of scientific discoveries and mechanical inventions, their development of new forms of industrial and commercial organisation, their introduction of unfamiliar products, their conquests of new markets, exploitation of new resources,
THE APPLIED THEORY OF MONEY

shifting of trade routes, and the like. Changes of this sort, when made on a large scale, alter the data on which the mass of routine business men have based their plans. But when a few highly endowed individuals have achieved success, their example makes the way easier for a crowd of imitators. So, once started, a wave of innovation gains momentum.¹

It is only necessary to add to this that the pace, at which the innovating entrepreneurs will be able to carry their projects into execution at a cost in interest which is not deterrent to them, will depend on the degree of complaisance of those responsible for the banking system. Thus whilst the stimulus to a credit inflation comes from outside the banking system, it remains a monetary phenomenon in the sense that it only occurs if the monetary machine is allowed to respond to the stimulus.

Fluctuations such as those just considered are due to a change in the readiness to invest at a given rate of interest. Besides these we also have fluctuations in the rate of investment due to a change on the side of the rate of interest. In a manner which we have already examined in chapter 13, a change in the rate of interest will affect the advantages of owning a particular piece of fixed capital so long as the income derived from it remains unchanged. But there will be no reason for this income to be changed until the supply of fixed capital has been changed relatively to the demand for it. The process of changing the supply of fixed capital, until the income derived from it is again in equilibrium with the rate of interest, amounts, however, to the same thing as a change in the rate of investment.

Thus, whenever the rate of interest changes for reasons other than a change in the demand schedule for the use or enjoyment of fixed capital, it is reasonable to expect a change in the rate of investment.

It is worth while to note in passing that the transition, except when the change required is small, is likely to be easier in respect of an increase than of a decrease in the supply of fixed

¹ This convenient summary of Professor Schumpeter's views is taken from Wesley Mitchell, Business Cycles, p. 21.
THE INVESTMENT RATE: FIXED CAPITAL

capital. For the rate of obsolescence of existing fixed capital sets a limit to the rate at which the total supply of it can be decreased; and since different kinds of fixed capital will be affected unequally (for there is not the same elasticity of demand for all of them), the actual maximum rate of decrease will be determined within still narrower limits.

I. THE STATISTICAL INDICATIONS

When we turn, however, to the relevant statistics to find some exact measure of the degree of these fluctuations, we find that they are few and unsatisfactory. There is no single set of figures which measures accurately what should be capable of quite precise measurement—namely, the rate at which the community is adding to its investment in fixed capital. The best we can do, therefore, is to take a number of partial indicators and to judge as well as we can from their combined results.

It might have been supposed that the volume of new issues on the investment market would provide a reasonably accurate index. But this total does not adequately represent the rate of investment in houses, which are largely financed in other ways than through the new issue market; yet house-building is probably larger than any other one kind of investment. On the other hand, many so-called new issues merely represent the transfer of existing assets from one party to another; whilst in the case of holding, finance and investment companies there may be a large element of duplication. Moreover, even in the case of those classes of investment which are mainly financed by bond issues, there is a lack of synchronisation between the date at which the bonds come on to the market and the date at which the corresponding investment takes place. Thus bond issues are not a good index of the short-period fluctuations in the types of investment which they finance. The fluctuations in the rate of investment may, therefore, be either greater or less than those in the rate of issue. Nevertheless, fluctuations in
the volume of new issues is one of the partial indicators of which we must take account.

Much the greater part—probably not less than three-quarters—of the fixed capital of the modern world consists of land, buildings, roads and railways. Thus—turning from the financial side to the physical side—any statistics directly bearing on the activity of productive effort in these directions will be of some assistance. For the United States there is a set of statistics of this character which is very significant for our purpose—namely, the monthly values of building permits. Since the term ‘building’ includes in this connection construction and contracting works generally (including, I think, roads, sewers and the like), these figures go a long way towards giving us what we want. In Great Britain we have no comparable figures; but the volume of employment in the building and contracting industries, and the incomplete quarterly returns of building published in the Labour Gazette, give some indication of the volume of investment in these directions.

Since there are today comparatively few kinds of investment in fixed capital which do not employ a certain amount of iron and steel, some writers1 have argued that the consumption of these materials—for which fairly accurate figures are available over a long term of years—affords a reliable barometer of the rate of fixed investment. Since, however, technical methods change and different types of investment, even where they consume iron and steel, consume them in widely varying proportions (compare, for example, house-building with ship-building), it is better not to exaggerate the value of this indicator by itself, but to be content with including it as one amongst several.

The result of statistical enquiries along these various lines (vide Wesley Mitchell’s Business Cycles, passim, for a summary of the results) cannot, unfortunately, be reduced to tabular form, so as to allow us to make any satisfactory numerical estimate

1 Especially Hull and Spiethoff.
The investment rate: fixed capital

of the order of magnitude of the fluctuations in the rate of investment in fixed capital between one year and another. They are sufficiently definite, however, to make it clear that the fluctuations are substantial and that they are correlated with the phases of the credit cycle in quite as high a degree as our theory would lead us to expect.

II. Theories of the credit cycle based on fluctuations in fixed capital investment

Indeed the fact of fluctuations in the volume of fixed investment and their correlation with the credit cycle has long been familiar, and has been made by numerous writers the basis of a solution of the credit cycle problem. Whilst—if my theory is right—these solutions have been incomplete, particularly through their neglect of fluctuations in working capital, most of them, even when they have appeared to reach opposite results, seem to me to have had hold of some part of the truth. Some of them have attributed the cycle to under-saving and some have attributed it to over-investment. Take, for example, the following contrast made by Professor Wesley Mitchell (op. cit. p. 151): 'Professor Tugan-Baranovski contends that crises come because people do not save enough money to meet the huge capital requirements of prosperity. Professor Spiethoff holds that crises come because people put their savings into too much industrial equipment and not enough consumption goods.' If we interpret the first of these statements to mean that saving falls short of investment and the second to mean that investment runs ahead of saving, we see that the two authorities mean essentially the same thing—and also the same thing that I mean.

Accordingly I find myself in strong sympathy with the school of writers1—Tugan-Baranovski, Hull, Spiethoff and Schumpeter—of which Tugan-Baranovski was the first2 and the most original,

1 For a most excellent short summary of the views of this school see Wesley Mitchell, Business Cycles, pp. 20–31.
2 His theory was originally published in Russian in 1894.
and especially with the form which the theory takes in the works of Tugan-Baranovski himself, and of two American amateur economists (cranks, some might say), Rorty\(^1\) and Johannsen.\(^2\)

The fault of Tugan-Baranovski lay in his holding, or at any rate implying, that savings can in some way accumulate during depressions in an uninvested form and that this accumulated fund is then gradually used up during booms, and also in his suggesting that this failure of savings to become materialised in investments at a steady rate is due to the unequal distribution of wealth instead of to Schumpeter's 'innovations' in conjunction with a failure of the banking system to respond in such a way as to preserve the desirable degree of stability. But none of these writers clearly apprehend the direct effect on prices of disequilibria between savings and investment and the part played by the banking system. The pioneer work at this point is due to Mr D. H. Robertson (Banking Policy and the Price Level). Moreover, lacking a version of the quantity theory of money applicable to the problem of credit cycles, they have not got to the root of the matter or perceived that cycles due to a growth of working capital are at least as 'characteristic' as those primarily due to a growth of fixed capital.

---

\(^1\) Colonel Rorty's theory of 'over-commitments' is more directly applicable to cycles due to the growth of working capital at a rate in excess of savings. But it has the merit of recognising that it is of the essence of the problem in these cases that the purchasing power is created as soon as expansion begins, whereas the goods come along at a later date governed by the duration of the productive process.

\(^2\) Mr N. Johannsen originally published his theory in A Neglected Point in Connection with Crises, 1908, and followed it up with pamphlets in 1925, 1926 and 1928. His doctrine of 'Impair Savings', i.e. of savings withheld from consumption expenditure but not embodied in capital expenditure and so causing entrepreneurs who have produced goods for consumption to sell them at a loss, seems to me to come very near to the truth. But Mr Johannsen regarded the failure of current savings to be embodied in capital expenditure as a more or less permanent condition in the modern world due to a saturation of the capital market, instead of as a result of a temporary but recurrent failure of the banking system to pass on the full amount of the savings to entrepreneurs, and overlooks the fact that a fall in the rate of interest would be the cure for the malady if it were what he diagnoses it to be.