Chapter 7

THE MEANING OF SAVING AND INVESTMENT FURTHER CONSIDERED

I

In the previous chapter, *saving* and *investment* have been so defined that they are necessarily equal in amount, being, for the community as a whole, merely different aspects of the same thing. Several contemporary writers (including myself in my *Treatise on Money*) have, however, given special definitions of these terms on which they are not necessarily equal. Others have written on the assumption that they may be unequal without prefacing their discussion with any definitions at all. It will be useful, therefore, with a view to relating the foregoing to other discussions of these terms, to classify some of the various uses of them which appear to be current.

So far as I know, everyone agrees in meaning by *saving* the excess of income over what is spent on consumption. It would certainly be very inconvenient and misleading not to mean this. Nor is there any important difference of opinion as to what is meant by expenditure on consumption. Thus the differences of usage arise either out of the definition of *investment* or out of that of *income*.

II

Let us take *investment* first. In popular usage it is common to mean by this the purchase of an asset, old

https://doi.org/10.1017/UPO9781139524278.013 Published online by Cambridge University Press

or new, by an individual or a corporation. Occasionally, the term might be restricted to the purchase of an asset on the Stock Exchange. But we speak just as readily of investing, for example, in a house, or in a machine, or in a stock of finished or unfinished goods; and, broadly speaking, new investment, as distinguished from reinvestment, means the purchase of a capital asset of any kind out of income. If we reckon the sale of an investment as being negative investment, i.e. disinvestment, my own definition is in accordance with popular usage; since exchanges of old investments necessarily cancel out. We have, indeed, to adjust for the creation and discharge of debts (including changes in the quantity of credit or money); but since for the community as a whole the increase or decrease of the aggregate creditor position is always exactly equal to the increase or decrease of the aggregate debtor position, this complication also cancels out when we are dealing with aggregate investment. Thus, assuming that income in the popular sense corresponds to my net income, aggregate investment in the popular sense coincides with my definition of net investment, namely the net addition to all kinds of capital equipment, after allowing for those changes in the value of the old capital equipment which are taken into account in reckoning net income.

Investment, thus defined, includes, therefore, the increment of capital equipment, whether it consists of fixed capital, working capital or liquid capital; and the significant differences of definition (apart from the distinction between investment and net investment) are due to the exclusion from investment of one or more of these categories.

Mr Hawtrey, for example, who attaches great importance to changes in liquid capital, i.e. to undesigned increments (or decrements) in the stock of unsold goods, has suggested a possible definition of investment from which such changes are excluded. In this case an excess of saving over investment would be the same thing as an undesigned increment in the stock of unsold goods, i.e. as an increase of liquid capital. Mr Hawtrey has not convinced me that this is the factor to stress; for it lays all the emphasis on the correction of changes which were in the first instance unforeseen, as compared with those which are, rightly or wrongly, anticipated. Mr Hawtrey regards the daily decisions of entrepreneurs concerning their scale of output as being varied from the scale of the previous day by reference to the changes in their stock of unsold goods. Certainly, in the case of consumption goods, this plays an important part in their decisions. But I see no object in excluding the play of other factors on their decisions; and I prefer, therefore, to emphasise the total change of effective demand and not merely that part of the change in effective demand which reflects the increase or decrease of unsold stocks in the previous period. Moreover, in the case of fixed capital, the increase or decrease of unused capacity corresponds to the increase or decrease in unsold stocks in its effect on decisions to produce; and I do not see how Mr Hawtrey's method can handle this at least equally important factor.

It seems probable that capital formation and capital consumption, as used by the Austrian school of economists, are not identical either with investment and disinvestment as defined above or with net investment and disinvestment. In particular, capital consumption is said to occur in circumstances where there is quite clearly no net decrease in capital equipment as defined above. I have, however, been unable to discover a reference to any passage where the meaning of these terms is clearly explained. The statement, for example, that capital formation occurs when there is a lengthening of the period of production does not much advance matters.

III

We come next to the divergences between saving and investment which are due to a special definition of income and hence of the excess of income over consumption. My own use of terms in my *Treatise on Money* is an example of this. For, as I have explained on p. 60 above, the definition of income, which I there employed, differed from my present definition by reckoning as the income of entrepreneurs not their actually realised profits but (in some sense) their 'normal profit'. Thus by an excess of saving over investment I meant that the scale of output was such that entrepreneurs were earning a less than normal profit from their ownership of the capital equipment; and by an increased excess of saving over investment I meant that a decline was taking place in the actual profits, so that they would be under a motive to contract output.

As I now think, the volume of employment (and consequently of output and real income) is fixed by the entrepreneur under the motive of seeking to maximise his present and prospective profits (the allowance for user cost being determined by his view as to the use of equipment which will maximise his return from it over its whole life); whilst the volume of employment which will maximise his profit depends on the aggregate demand function given by his expectations of the sum of the proceeds resulting from consumption and investment respectively on various hypotheses. In my *Treatise on Money* the concept of *changes* in the excess of investment over saving, as there defined, was a way of handling changes in profit, though I did not in that book distinguish clearly between expected and realised results.[1] I there argued that change in the excess of

[1] My method there was to regard the current realised profit as determining the current expectation of profit.

investment over saving was the motive force governing changes in the volume of output. Thus the new argument, though (as I now think) much more accurate and instructive, is essentially a development of the old. Expressed in the language of my *Treatise on Money*, it would run: the expectation of an increased excess of investment over saving, given the former volume of employment and output, will induce entrepreneurs to increase the volume of employment and output. The significance of both my present and my former arguments lies in their attempt to show that the volume of employment is determined by the estimates of effective demand made by the entrepreneurs, an expected increase of investment relatively to saving as defined in my *Treatise on Money* being a criterion of an increase in effective demand. But the exposition in my *Treatise on Money* is, of course, very confusing and incomplete in the light of the further developments here set forth.

Mr D. H. Robertson has defined to-day's income as being equal to *yesterday's* consumption *plus* investment, so that to-day's saving, in his sense, is equal to yesterday's investment *plus* the excess of yesterday's consumption over to-day's consumption. On this definition saving can exceed investment, namely, by the excess of yesterday's income (in my sense) over to-day's income. Thus when Mr Robertson says that there is an excess of saving over investment, he means literally the same thing as I mean when I say that income is falling, and the excess of saving in his sense is exactly equal to the decline of income in my sense. If it were true that current expectations were always determined by yesterday's realised results, to-day's effective demand would be equal to yesterday's income. Thus Mr Robertson's method might be regarded as an alternative attempt to mine (being, perhaps, a first approximation to it) to make the same distinction, so vital for causal analysis, that I have tried to make by the contrast between effective demand and income.[1]

IV

We come next to the much vaguer ideas associated with the phrase 'forced saving'. Is any clear significance discoverable in these? In my *Treatise on Money* (vol. I, p. 171, footnote [JMK, vol. V, p. 154] I gave some references to earlier uses of this phrase and suggested that they bore some affinity to the difference between investment and 'saving' in the sense in which I there used the latter term. I am no longer confident that there was in fact so much affinity as I then supposed. In any case, I feel sure that 'forced saving' and analogous phrases employed more recently (e.g. by Professor Hayek or Professor Robbins) have no definite relation to the difference between investment and 'saving' in the sense intended in my *Treatise on Money*. For whilst these authors have not explained exactly what they mean by this term, it is clear that 'forced saving', in their sense, is a phenomenon which results directly from, and is measured by, changes in the quantity of money or bank-credit.

It is evident that a change in the volume of output and employment will, indeed, cause a change in income measured in wage-units; that a change in the wage-unit will cause both a redistribution of income between borrowers and lenders and a change in aggregate income measured in money; and that in either event there will (or may) be a change in the amount saved. Since, therefore, changes in the quantity of money may result, through their effect on the rate of interest, in a change in the volume and distribution of income (as we shall show later), such changes may involve, indirectly, a change in the amount saved. But such

[1] *Vide* Mr Robertson's article 'Saving and Hoarding' (*Economic Journal*, September 1933, p. 399) and the discussion between Mr Robertson, Mr Hawtrey and myself (*Economic Journal*, December 1933, p. 658) [*JMK*, vol. XIII].

changes in the amounts saved are no more 'forced savings' than any other changes in the amounts saved due to a change in circumstances; and there is no means of distinguishing between one case and another, unless we specify the amount saved in certain given conditions as our norm or standard. Moreover, as we shall see, the amount of the change in aggregate saving which results from a given change in the quantity of money is highly variable and depends on many other factors.

Thus 'forced saving' has no meaning until we have specified some standard rate of saving. If we select (as might be reasonable) the rate of saving which corresponds to an established state of full employment, the above definition would become: 'Forced saving is the excess of actual saving over what would be saved if there were full employment in a position of long-period equilibrium'. This definition would make good sense, but a sense in which a forced excess of saving would be a very rare and a very unstable phenomenon, and a forced *deficiency* of saving the usual state of affairs.

Professor Hayek's interesting 'Note on the Development of the Doctrine of *Forced Saving*'[1] shows that this was in fact the original meaning of the term. 'Forced saving' or 'forced frugality' was, in the first instance, a conception of Bentham's; and Bentham expressly stated that he had in mind the consequences of an increase in the quantity of money (relatively to the quantity of things vendible for money) in circumstances of 'all hands being employed and employed in the most advantageous manner'.[2] In such circumstances, Bentham points out, real income cannot be increased, and, consequently, additional investment, taking place as a result of the transition, involves forced frugality 'at the expense of national comfort and national justice'. All the nineteenth-century

[1] *Quarterly Journal of Economics*, November 1932, p. 123.
[2] *Loc. cit.* p. 125.

writers who dealt with this matter had virtually the same idea in mind. But an attempt to extend this perfectly clear notion to conditions of less than full employment involves difficulties. It is true, of course (owing to the fact of diminishing returns to an increase in the employment applied to a given capital equipment), that *any* increase in employment involves some sacrifice of real income to those who were already employed, but an attempt to relate this loss to the increase in investment which may accompany the increase in employment is not likely to be fruitful. At any rate I am not aware of any attempt having been made by the modern writers who are interested in 'forced saving' to extend the idea to conditions where employment is increasing; and they seem, as a rule, to overlook the fact that the extension of the Benthamite concept of forced frugality to conditions of less than full employment requires some explanation or qualification.

V

The prevalence of the idea that saving and investment, taken in their straightforward sense, can differ from one another, is to be explained, I think, by an optical illusion due to regarding an individual depositor's relation to his bank as being a one-sided transaction, instead of seeing it as the two-sided transaction which it actually is. It is supposed that a depositor and his bank can somehow contrive between them to perform an operation by which savings can disappear into the banking system so that they are lost to investment, or, contrariwise, that the banking system can make it possible for investment to occur, to which no saving corresponds. But no one can save without acquiring an asset, whether it be cash or a debt or capital-goods; and no one can acquire an asset which he did not previously possess, unless *either* an asset of equal value is newly produced *or* someone else parts with an asset of that value which he previously had. In the first alternative there is a corresponding new investment: in the second alternative someone else must be dis-saving an equal sum. For his loss of wealth must be due to his consumption exceeding his income, and not to a loss on capital account through a change in the value of a capital-asset, since it is not a case of his suffering a loss of value which his asset formerly had; he is duly receiving the current value of his asset and yet is not retaining this value in wealth of any form, i.e. he must be spending it on current consumption in excess of current income. Moreover, if it is the banking system which parts with an asset, someone must be parting with cash. It follows that the aggregate saving of the first individual and of others taken together must necessarily be equal to the amount of current new investment.

The notion that the creation of credit by the banking system allows investment to take place to which 'no genuine saving' corresponds can only be the result of isolating one of the consequences of the increased bank-credit to the exclusion of the others. If the grant of a bank credit to an entrepreneur additional to the credits already existing allows him to make an addition to current investment which would not have occurred otherwise, incomes will necessarily be increased and at a rate which will normally *exceed* the rate of increased investment. Moreover, except in conditions of full employment, there will be an increase of real income as well as of money-income. The public will exercise 'a free choice' as to the proportion in which they divide their increase of income between saving and spending; and it is impossible that the intention of the entrepreneur who has borrowed in order to increase investment can become effective (except in substitution for investment by other entrepreneurs which would have occurred otherwise) at a faster rate than the public decide to increase their

https://doi.org/10.1017/UPO9781139524278.013 Published online by Cambridge University Press

savings. Moreover, the savings which result from this decision are just as genuine as any other savings. No one can be compelled to own the additional money corresponding to the new bank-credit, unless he deliberately prefers to hold more money rather than some other form of wealth. Yet employment, incomes and prices cannot help moving in such a way that in the new situation someone does choose to hold the additional money. It is true that an unexpected increase of investment in a particular direction may cause an irregularity in the rate of aggregate saving and investment which would not have occurred if it had been sufficiently foreseen. It is also true that the grant of the bank-credit will set up three tendencies —(1) for output to increase, (2) for the marginal product to rise in value in terms of the wage-unit (which in conditions of decreasing return must necessarily accompany an increase of output), and (3) for the wage-unit to rise in terms of money (since this is a frequent concomitant of better employment); and these tendencies may affect the distribution of real income between different groups. But these tendencies are characteristic of a state of increasing output as such, and will occur just as much if the increase in output has been initiated otherwise than by an increase in bank-credit. They can only be avoided by avoiding any course of action capable of improving employment. Much of the above, however, is anticipating the result of discussions which have not yet been reached.

Thus the old-fashioned view that saving always involves investment, though incomplete and misleading, is formally sounder than the new-fangled view that there can be saving without investment or investment without 'genuine' saving. The error lies in proceeding to the plausible inference that, when an individual saves, he will increase aggregate investment by an equal amount. It is true, that, when an individual saves he increases his own wealth. But the conclusion that he also increases aggregate wealth fails to allow for the possibility that an act of individual saving may react on someone else's savings and hence on someone else's wealth.

The reconciliation of the identity between saving and investment with the apparent 'free-will' of the individual to save what he chooses irrespective of what he or others may be investing, essentially depends on saving being, like spending, a two-sided affair. For although the amount of his own saving is unlikely to have any significant influence on his own income, the reactions of the amount of his consumption on the incomes of others makes it impossible for all individuals simultaneously to save any given sums. Every such attempt to save more by reducing consumption will so affect incomes that the attempt necessarily defeats itself. It is, of course, just as impossible for the community as a whole to save *less* than the amount of current investment, since the attempt to do so will necessarily raise incomes to a level at which the sums which individuals choose to save add up to a figure exactly equal to the amount of investment.

The above is closely analogous with the proposition which harmonises the liberty, which every individual possesses, to change, whenever he chooses, the amount of money he holds, with the necessity for the total amount of money, which individual balances add up to, to be exactly equal to the amount of cash which the banking system has created. In this latter case the equality is brought about by the fact that the amount of money which people choose to hold is not independent of their incomes or of the prices of the things (primarily securities), the purchase of which is the natural alternative to holding money. Thus incomes and such prices necessarily change until the aggregate of the amounts of money which individuals choose to hold at the new level of incomes and prices thus brought about has come to equality with the amount of money created by the banking system. This, indeed, is the fundamental proposition of monetary theory.

Both these propositions follow merely from the fact that there cannot be a buyer without a seller or a seller without a buyer. Though an individual whose transactions are small in relation to the market can safely neglect the fact that demand is not a one-sided transaction, it makes nonsense to neglect it when we come to aggregate demand. This is the vital difference between the theory of the economic behaviour of the aggregate and the theory of the behaviour of the individual unit, in which we assume that changes in the individual's own demand do not affect his income.