

CONCEPT OF MAINTAINING CAPITAL INTACT

THE concept of 'maintaining capital intact' has been discussed by the prominent economists like Prof. A. C. Pigou, Prof. Hayek and Prof. Jicks. Before discussing this concept, let us first consider the concept of capital as defined by the economists. Prof. A. C. Pigou defines capital as 'capital consists at any given moment of a definite inventory of physical things. What these are, depends in part on how the general interplay of demand and supply has worked in the past. But at any given moment they are constituted by an unambiguous physical collection'¹ Taking this concept of capital implying inventory of physical things' at a given moment, Prof. Pigou further defines the concept of maintaining capital intact. In order that capital may be kept intact, if any object embraced in this collection becomes worn out or is thrown out (scrapped), it must be replaced by 'equivalent' objects.'² It means that the given inventory of physical things at any date, if it is maintained intact in the sense that if any object is worn out is replaced by an equivalent object, it refers to the concept of 'maintaining capital intact'.

Prof. Pigou has criticised the approach of Prof. Hayek as given in his book. 'The Pure Theory of Capital'. According to Prof. Hayek the notion of maintaining capital intact has no strict meaning except in a stationary state and moreover, it is a concept of which the economist has no need.

Prof. Hayek has in fact, considered some practical problems before giving such remarks. He points out that capital is not perfectly homogenous in the sense that it does not consist of a single type of article only so that the quantity of capital is not perfectly self-contained. Since in actual life, 'capital is not homogenous; it is heterogenous, consisting of a great number of different sorts of things. But how exactly is an inventory of diverse items to be conceived as a 'physical magnitude'? Clearly it can only be so conceived if we treat the given quantities of its several items as all *equivalent* to so many units of one

item; and the only plausible way of doing this is to equate a unit of B to a unit of A when it is worth a unit of A. But the relative values of A and B and of all other things, so far from being independent of the equilibrating process, are determined through that process.² On this basis, Prof. Hayek argues that capital will not be maintained intact if there is a change in the relative values of two components even if the inventory of physical things is maintained intact over a period of time. He thus concludes that 'the maintenance of these physical constituents unaltered need not entail that capital is maintained intact. This concept has no clear or sensible meaning.'⁴

But Prof. Pigou does not take into account the changes in the values of the physical components of capital. He maintains that 'if between dates 1 and 2 a unit of A disappears, capital will be maintained intact provided that a new unit of A is introduced irrespective of what the relative values of A and B have become and irrespective of the cost of production of A. If it is decided for any reason not to provide a new unit of A, but to provide instead some units of B, the number of units of B required to make up for the loss of the unit of A must then clearly be the number that at date 2 is worth—which is equivalent to saying is, expected to yield the same income as—one unit of A.'⁵

This, in fact, is a simple example. But in actual practice, capital consists of, not of two, but of many kinds of goods. Moreover, wearing out of assets and their replacement is a continuous process and the relative values of the assets undergo frequent variations over a period of time. Hence, the concept of maintaining capital intact should be related to the length of the accounting period which is usually, as we know, one year.

Prof. Hayek replied in a note⁶ on maintaining capital intact to Prof. Pigou's comments. Prof. Hayek has commented on the meaning of 'maintaining capital intact' as defined by Prof. Pigou. Prof. Hayek states that we cannot disregard obsolescence as a factor in discussing the concept of capital maintenance. The very fact that 'the physical inventory of goods in the capital stock is unaltered' does not maintain the capital intact if a particular asset has become obsolete even though it is in good physical condition. Prof. Hayek has explained this by taking an imaginary case of three entrepreneurs, who invest at the same time in equipment of different kinds but of the same cost and the same potential physical duration of ten years with the

only difference of the second machine likely to become obsolete at the end of the first year and the third machine with an even chance of lasting for the whole life of the machine or becoming obsolete very soon, proves that the first entrepreneur will possess the original capital at the end of the first year, whereas the second will have only one-tenth of it, and the third having an even chance of either losing it all or just having preserved it. Thus, he concludes that all foreseeable obsolescence must be taken care of in maintaining the capital intact. But he further states that not all obsolescencies to be made good before we consider any income as being 'net'. He excludes capital losses due to unforeseen and unforeseeable changes to be made good. This is because such unforeseeable capital losses will not affect the allowance for amortization of depreciable assets. He thus considers that only foreseen cases of obsolescence should be taken into account in actual practice. To conclude, he states that 'In such a world there is no reason to expect that the quantity of capital, in whatever sense this term be meant, will ever be kept constant, even though every individual owner of capital might do all in his power to avoid that involuntary 'splashing' on 'stinting' which capital accounting seeks to prevent'.⁷ Moreover, since the money value of capital does not remain constant, the ultimate purpose of maintaining capital intact 'has no direct or necessary connexion with changes in the quantity of capital, however measured, and that therefore no policy which aims at maintaining particular measurement of capital constant can fully achieve that purpose in all circumstances.'⁸ Thus according to Prof. Hayek, capital can be said to be maintained intact if alongwith the quantity of capital, the money value of capital also remains constant. If the second condition is not satisfied, the quantity of capital itself, even though remaining the same, need not necessarily enable to maintain the capital intact.

After this controversy between Prof. Pigou and Prof. Hayek, Prof. J. R. Hicks also attempted a note on 'Maintaining Capital intact'⁹ explaining the question of obsolescence and abnormal wear and tear in maintaining capital intact. Besides any normal wear and tear in the course of production being an element of true depreciation, 'any deterioration which the machine undergoes outside its utilization *does not* give rise to true depreciation; if such deterioration had been foreseen, the initial capital value would have been written down in conse-

quence; the deterioration is therefore not depreciation, but a capital loss. If a machine remains idle throughout the year, any deterioration, which it undergoes, is therefore not depreciation, but capital loss, and the use of productive resources to maintain the idle machine in good condition is net investment. . . . Obsolescence of the kind described in Prof. Hayek's example is true depreciation on our test; the fashion firm scraps its machinery in accordance with anticipations; it is not failure of foresight which makes the end-value less than the beginning-value. But most problems of obsolescence do arise from imperfect foresight. The allowance for obsolescence which firms reckon among their costs is for the most parts a reflection of their uncertainty about the value of their equipment at the end of the year; once this value is assumed known, the necessity for such obsolescence allowances disappears¹⁰. Thus Prof. Hicks also regards any foreseeable loss in value of the capital equipment, like obsolescence, as an element of true depreciation and unless it is provided for, capital will not be taken to be maintained intact. But any unforeseeable obsolescence or loss in value, he regards as nothing but capital loss. But in actual practice, it is not always easy to anticipate such losses in time, and thus all unforeseeable cases of obsolescence will cause capital loss.

After examining the views of these economists, it seems to conclude that capital in terms of quantity (or the physical sense) can be said to be maintained intact if any object on its being worn out or scrapped is replaced by an identical or an equivalent object. But in this sense, it does not take care of the changes in the values of the assets. This is consistent with Prof. Pigou's analysis. But since in actual practice, we have to show the values of the assets in the accounting statements, to that extent changes in value, may seem to be playing an important role. But since, conventionally, fixed assets are shown at the historical cost less the amortization allowance provided for as a charge against the profits, it does not take into account the likely obsolescence of the particular asset. It is only when a particular item becomes obsolete, it is naturally to be replaced by an improved item thus enabling to maintain the original capital intact. Thus it does not seem to be necessary to distinguish between foreseen and unforeseen obsolescence. The only thing is that if it can be foreseen, the management can plan to replace the asset, whereas if it is unforeseen, it will have to be replaced when the obsolescence takes place. If it is so,

obsolescence, foreseen or unforeseen, will represent nothing but capital loss and thus, foreseen obsolescence should not be treated as an element of true depreciation. Thus, capital will said to be maintained intact in its physical sense if there is a proper policy to replace the assets as and when they are worn out or become obsolete treating such obsolescence to be a capital loss.

REFERENCES

1. See 'Maintainng Capital Intact' By A.C. Pigou, Reprinted in the '*Reading in the Concept and Measurement of Income*' By Parker and Harcourt, 1969.
2. *Op. cit.*, p.123.
3. *Op. cit.*, p.124
4. *Op. cit.*, p. 124
5. *Op. cit.*, p. 125.
6. *Economica*, VIII [1941], pp. 276-80, reprinted in '*Readings in the Concept and Measurement of Income*', By Parker and Harcourt.
7. *Op. cit.*, pp.129-30.
8. *Op. cit.*, p.130.
9. *Economica*, IX [1942], pp. 174-9 as reprinted in *op. cit.*
10. *Op. cit.*, pp.136-137.