A NEW THEORY OF DEPRECIATION OF PHYSICAL ASSETS

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1. The various methods employed for the computation of the depreciation of a physical asset are as many devices for recovering, by means of a yearly charge to production during the life-time of the asset, its reduction in value. The methods differ according to the answers given to such questions as the following: Should the yearly charge be based on original cost or on replacement value? Should the yearly charge be uniform over the life-time of the asset? If not uniform, should the depreciation charge be proportional to the actual reduction in market value, or, in the case of new plant, should such charges be minimized or wholely deferred during the earlier years when the plant is trying to establish itself? Should interest be disregarded, or should the yearly charges to production be accumulated with interest? If interest is to be considered, should the rate be the effective rate on the capital employed in the business, or the commercial rate? All these questions and others have received careful consideration.[1]

Quite as important as those already mentioned are two other considerations, which have been generally ignored or overlooked. There is first the rather obvious fact that depreciation is inseparably tied up with the question of repairs. Depreciation is greatest when the asset is new, when repair charges are negligible, and it diminishes as repair costs grow. The problem of depreciation, therefore, cannot be adequately treated aside from repairs. Within certain limits depreciation may be compensated by repairs. The yearly depreciation charge to production, therefore, should not be based on original cost or renewal cost alone, but on original cost plus costs of repairs during the life-time of the asset.

In the second place, the life-time of an asset is not a constant

[1] See Saliers, E. A., Depreciation, Principles and Applications, New York (1922).