TWO CONCEPTS OF CAPITAL-OUTPUT RATIOS AND THEIR RELEVANCE FOR DEVELOPMENT

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IN modern discussions about investment criteria the capital-output ratios for the various commodities have played a large role. It has been maintained that other things being equal the preference in investment should be given for those commodities which have a lower capital-output ratio.[1] With given capital resources it will naturally increase the national product more.

Several refinements to the general approach have been offered by various writers. For instance Kahn (10) has suggested that from the additions of the outputs due to the particular investment the alternative outputs sacrificed as a result of drawing some factors of production from other fields to this field have to be subtracted. Chenery (3) has suggested detailed corrections that have to be applied to the crude ratios to account for the various effects on the balance of payments as a result of the investment and the stream of outputs produced by it; so that corrected ratio may be "sufficient to rank projects in order of their social value, determine the marginal project from the total funds available, and exclude all lower ranking projects." (3)

Mahalanobis (14), on the other hand, has used it to determine the broad pattern of India's Second Five-Year Plan with the constraints of providing a given level of employment and a minimum given rate of growth of the national product. While Sen (21) has combined it with the Galenson-Leibenstein reinvestment criteria (8) to determine a choice of technique for a given time horizon.

In all these and other applications the implicit assumptions regarding the pattern of the foreign trade have largely not been noticed. In this paper it is proposed to bring it out in proper perspective and to determine the conditions when in the analysis of investment criteria the usual capital-output ratio or the alternative one given by Leontief (12, 13) is to be used. In the subsequent discussion, to simplify the arguments, the various qualifications and improvements brought out by various writers to the crude capital-output ratio have been ignored. However they can be easily in-

[1] A partial listing out of the large number of important writings on the subject is given below :

Buchanan, N.S. (2); Chenery, H.B. (3, 4); Eckstein, O. (7); Galenson, W. and Leibenstein, H. (8); Kahn, A.E. (10); Mahalanobis, P.C. (14); Mathur, P.N. (15); Muranjan, S.K. (18); Polak, J.J. (19); Sen, A.K. (21).