

AN APPLICATION OF DYNAMIC INPUT OUTPUT MODEL FOR PLANNING ^{1,2}

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I. *Introduction*

1. In a developing economy two types of techniques of production — traditional and modern — exist side by side. The process of development consists in the increasing use of the modern technological complex in the economy. In planning for economic growth one tries to increase this part of the economy, of the modern vintage, at as fast a rate as possible subject to the socio-politically determined minimum growth rates of various consumption sectors. For instance, it may be required that defence expenditure should expand at a certain rate and the rest of government consumption at a different rate while private consumption at some third rate. In such a framework each sector is associated with a consumption vector $Y_i(0)$ and a required rate of growth g_i . For each of these sectors the investment requirements can be separately calculated and, that, together with the given consumption vector will be the demand of that sector on the total availability of various commodities. When all these sectoral demands generated by socio-economic necessities have been met out of the total availability, we shall be left with a residual which can be used for investment in such a way that the rate of growth is maximised.³

2. Thus given various socio-economic demands on the national product the allocation of investment becomes a tailor-made problem for the application of Dynamic Input-Output model developed by Wassily Leontief in late forties [LEONTIEF, 1]. Below in Section 2,

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² The help of Mr. P. D. Parkhi who worked through the tedious calculations is gratefully acknowledged.

³ If no residual is left, either we shall have to be satisfied with growth of only socio-economically minimum necessary consumption or may have to take a political decision of reducing it further by tightening the belt.