

A MODEL FOR OPTIMUM LOCATION AND FLOWS

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1. Introduction

With the growing realization of the concept and importance of space as an explicit factor in the process of economic change interest has grown in empirically highlighting the inter-spatial connections. Prof. Leontief observes : "The movement of commodities and services between separate geographic areas and the internal economic structure of such regions are mutually inter-dependent. A truly comprehensive theory would consider the spatial distribution of economic activities to be an integral aspect of a single system of economic relationships".¹ Being short of a "truly comprehensive" theory, partial equilibrium models were suggested, which, in general, may be called 'inter-regional input-output models'. Leontief's² inter-regional input-output scheme, Isard's³ model of space-economy and Chenery's⁴ expansion of international trade sector in a national model are important examples of this type. One general characteristic of these models is that the pattern of interregional flows is assumed to be constant. In other words, such models generally assume a given location pattern, and address themselves to the determination of levels of production and trade consequent to some exogenous changes. In developing economies, on the other hand, we have to think of levels of production and interregional flows simultaneously with the establishment of a suitable location pattern which presents many alternatives. A linear-programming cum inter-industry approach is most suitable for this purpose.

¹ LEONTIEF, WASSILY, "Interregional Theory", *Studies in the Structure of American Economy*, New York, Oxford University Press, 1953, p. 93.

² *Ibid.*, pp. 93-115.

³ ISARD, WALTER, "Interregional and Regional Input-Output Analysis: A Model of a Space Economy", *The Review of Economics and Statistics*, Vol. 33, 1951, pp. 318-328.

⁴ CHENERY, HOLLIS B., "Interregional and International Input-Output Analysis", *The Structural Interdependence of the Economy*, Ed., Tibor Barna, John Wiley, New York, 1954, pp. 341-356.