Economic Theory in Input-Output Framework

Rajas Parchure

Input-Output (I-O) analysis has usually been considered as a set of techniques to collect, classify and organise the data on inter-industrial transactions that are involved in the production activities of an economic system and test hypotheses that emerge from economic theories. The possibility that it is itself a component of economic theory is not always taken seriously in mainstream economics. This paper uses I-O analysis to describe the supply situation and confronts it to the linear expenditure system that represents the final demand situation. What is obtained is a general equilibrium model that is an alternative to neoclassical general equilibrium models.

I Introduction

Closed input-output models incorporate household consumption in two ways, viz., (a) by including the consumption vector in the input coefficients matrix, and/or (b) by including some of the consumption coefficients in the input matrix and including the consumption-income relationship of others in the final demand vector. In this paper we propose a model in which household consumption demand is kept entirely outside the input matrix. In effect households are neither wholly nor even partially treated as industries so that all interactions between industries and households can only take the form of independent market forces of demand and supply; the forces of demand being conditioned by consumer habits, conventions, tastes, preferences, income, prices, supply, technology and profits¹.

It might not be apparent from the foregoing that the motivation for this paper is to virtually rewrite the theory of market processes (that is to say the processes by which markets co-ordinate demands and supplies, and determine the prices and allocation of resources between industries) using input-output analysis as the principal theoretical engine. When the theory of market processes is written is this way, the problem of income determination cannot be separated from the problem of determining prices and outputs, which is in sharp contrast with standard neoclassical theory that considers income to be given when dealing with the activity of resource allocation. Quite naturally, when it comes to applying the theory to such subjects as the theory of international trade or the theory of public goods, conclusions follow that are in sharp contrast to propositions of the standard neoclassical theory.

Rajas Parchure, RBI Professor of Finance, Gokhale Institute of Politics and Economics, Pune 411004, Maharashtra, India, Email: rajasparchure@gmail.com.

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