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RAPPORTEUR'S REPORT

ON

INTER-SECTORAL LINKAGES

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Twenty-seven papers have been accepted for discussion under this topic in the Conference. These papers broadly fall in three groups: the first group deals with the question of resource flow between agriculture and non-agriculture, the second with the issue of terms of trade, and the third with that of input-output linkage between various sectors in the economy. Obviously, these three aspects are interrelated, and some of the papers quite naturally belong to more than one group. Yet it can be said that, judging by the number of papers, the three problems have received different degrees of attention—more precisely, in an ascending order. The theme of resource flow claims two papers, terms of trade seven and linkage the remaining eighteen.

The papers are highly interesting in terms of coverage, content and presentation. They throw new light on the on-going debates, and at the same time they also raise new questions. In all, they are an important contribution towards an understanding of a major problem the country now is facing. However, I have one regret: somewhere in the course of analysis the economists seem to have forgotten the human beings, the groups, and the classes, which are very much there behind the economic 'sectors'. I shall elaborate on it later.

Below we give certain highlights of the papers in each group and also the relevant issues which arise therefrom; these may well be the points around which further discussion may take place. The last section poses the question of inter-sectoral linkage in the perspective of the current socio-economic-political milieu of India.

RESOURCE FLOW

Dividing the economy into two sectors, namely, agriculture and non-agriculture, we can study the flows of goods and services between them. With two sectors, we get a 2×2 transaction matrix; the off-diagonal elements of the matrix are the inter-sectoral flows. Ashoka Mody makes an attempt to modify an earlier estimate of commodity flows, by taking into account the effect of indirect taxes.

M. M. Batra analyses the inter-sectoral flow of surplus from a different point of view, namely, financing of investment. He finds that between 1950-51 and 1960-61 the marginal rate of taxation was 11.5 per cent for agriculture and 20.6 per cent for non-agriculture. Within each sector there is significant variation in groupwise incidence of taxation. The marginal burden of taxation was only 7 per cent for the upper class in agriculture while it was as much as 13 per cent for the poorer class in the same sector. Similarly, in non-agri-

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culture the marginal taxation was 13 per cent for the upper class and 24 per cent for the poorer group. Batra recommends more vigorous effort to tax the rural rich who have doubly benefited from the new agricultural technology and from the improvements in terms of trade.

Inter-sectoral transactions may be said to have two accounts: current account and capital account. Flows of goods and services and factor payments are to be considered in current account, while investment, taxation, etc., may fall in the 'capital' account. The studies of Mody and Batra are in a way complementary, for while Mody talks of the current account, Batra addresses himself to the 'capital account' of inter-sectoral transactions. Yet we do not have a complete picture of all these transactions; perhaps the government sector has to be explicitly brought into the frame of analysis.

At the theoretical level there are certain interesting questions. What is really the meaning of 'flow of resources'? What are the implications of a positive net inflow into the agricultural sector? What should the government try to achieve in this context?

TERMS OF TRADE

International trade theory devotes considerable attention to the terms of trade between countries. The so-called net barter terms of trade is only one of the different forms of such index. Similarly, one can measure the terms of trade between commodity groups within a country. In India, the terms of trade between agriculture and non-agriculture have become a matter of intense controversy. M. S. Rathore, A. L. Nadda and V. K. Singh in their paper have given us a refreshing exposition of the issue. First of all, there are three alternative series of price data with base in the years 1952-53, 1961-62 and 1970-71, and they do *not* agree with regard to the movement of the terms of trade over time. There is therefore an urgency for exploring the nature and source of the difference between the three series of data. However, Rathore, Nadda and Singh confirm that the home market for industrial consumer goods has been shrinking.

G. S. Kainth, P. S. Grewal, T. Haque and A. S. Sirohi, and D. S. Sidhu and A. J. Singh in their papers discuss various aspects of the terms of trade for agriculture in India. The paper by P. C. Shukla and B. K. Misra has a distinction of its own for it goes into the price behaviour of one of the States in the country, namely, Uttar Pradesh. Similarly, N. L. Agarwal and J. P. Kumawat analyse what they call the farmers' terms of trade in Rajasthan; they compute the terms of trade for various crop groups, namely, cereals, pulses, foodgrains, oilseeds, fibre crops and cash crops.

The exercise of computing the terms of trade may be extended in another direction—by groups of farmers. Big, middle and small farmers do not equally gain from an improvement in the net barter terms of trade of any particular crop or a group of crops. What is more, the terms of trade may differ from group to group, since the purchases of various groups of farmers do not have the same commodity composition. Classwise terms of trade is an important area which remains to be explored in the literature so far.

INPUT-OUTPUT LINKAGE

Eighteen papers are devoted to explore the linkage of agriculture with the rest of the economy. The interdependence of agriculture and industry is fairly well-known. The distinguishing features of some of these papers lie in their attempt to discover the interrelationship at a relatively disaggregative level. A few examples may be given. Sreelekha Basu considers the role of forestry and forest-based industries—a somewhat neglected area of analysis. India has the dubious distinction of having one of the largest proportions of the territory under cultivation that spells ecological disasters in the form of land erosion, drought as well as flood, etc. It is heartening that Basu has drawn our attention to one of the important resources of the country; but one may have reservation about the frame of analysis she has adopted. J. S. Chawla and J. S. Arneja take up the case of dairy farming and its linkage with the rest of the economy in so far as income generation is concerned. S. D. Suryawanshi, P. M. Kapase and S. J. Patil deal with the sugar industry in Western Maharashtra. B. S. Murdia examines the linkages of a fruit and vegetable processing and preservation unit. P. K. Joshi's theme is the linkage between agricultural output growth and new technical inputs of industrial sector, in selected States of India.

H. G. Goswami has a highly interesting paper. He shows how a farm, which uses mechanized energy mainly for the purpose of irrigation, gradually takes up non-farm activities to utilize the excess capacity of the mechanized prime-movers. He has a sample of 30 farms with electrified or dieselised prime-movers and 30 without them, in the villages of two progressive blocks of Deoria district in Uttar Pradesh.

ANOTHER DIMENSION

While the papers are rightly eloquent about the positive side of the interrelationship between various sectors of the economy, one cannot afford to ignore another dimension where certain *conflicts* between different 'sectors' prevail. The pattern of agricultural growth in the last few years has given rise to a powerful farm lobby with its demands for higher procurement prices, subsidies on inputs and various other incentives. On the other hand, the industrial interests have an opposite set of demands: lower prices of foodgrains and agricultural raw materials, higher prices for industrial goods, and more public investment in industrial infrastructure. Every country comes to face this tussle between landed interests and industrial interests at a certain stage of economic development. Corn Laws were at the centre of such a confrontation in nineteenth century England; the history of the USA, Japan and Germany, for example, have witnessed similar inter-sectoral tension. How far the conflict of interests between 'farmers' and 'industrialists' in India is of significance can be properly analysed once we have a complete inter-sectoral transaction matrix, both on current account and on capital account, between agriculture and industry.