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Book Review

Distortions of Agricultural Incentives. Edited by Theodore W. Schultz. Bloomington, Ind. (USA), and London: Indiana University Press. 1978. Name and Subject Indices. viii + 343 pp.

This book is based on the contributions of a workshop sponsored in 1977 by the Midwest Center of the American Academy of Arts and Sciences. It has been organized into six topical sections: Constraints on Agricultural Production; Resources and Environment; Distortion of Incentives; International Markets; Agricultural Research; Education and New Institutions; and, finally, the Quest for Equity. Each section carries several articles, in some cases with comments on some of them. Most of the articles focus on agricultural price and income policies followed in developing countries during the recent past, analysing their effects on the adoption of superior innovations, capital investment, efficient resource allocation, income distribution and, above all, farm productivity.

Economic policies to achieve economic growth, followed in low-income countries since the early fifties, have been characterized by a bias for industrial development. This bias was perpetuated through generous supplies to the industrial sector of raw material and food at artificially low prices, which clearly hurt the farmers. The underpricing of farm products and other government policies distort farmers' incentives for investment in new innovations. Prof. Schultz, in his article, "On Economics and Politics of Agriculture" at the beginning of the first section, describes the general process distorting farmer's incentive and the adverse effects such distortions have on the effectiveness of the agricultural sector as a means of accelerating the pace of economic development. He argues that there exists a strong "political market" in low-income countries, which calls for constant government intervention in the open market to ensure industrial workers cheap food procured at low prices to accelerate industrial development. Such political motivations clearly interfere with free market operation and undermine the entrepreneurial role of the farmers in maximizing farm production by discouraging the use of superior innovations. This entirely plausible theme runs through the entire book.

Along with the pricing policies, management deficiencies have equally constrained farm output growth, not the least by putting a damper on innovative activities of the farmers. Periera, in the article entitled "The Changing Patterns of Constraints on Food Production in the Third World", reinforces this theme by pointing out that an inappropriate combination of human and technical resources, rather than the shortage of capital, is a binding constraint on efficient farm production in low-income countries. He observes that in the long run an intensive cultivation of the scarce farm land, heavy chemical crop protection and the organization of efficient management of the modern large-scale technology for crop production should be followed by low-income countries as an optimal strategy for achieving an efficient combination of scarce resources. The use of "low input technology", – that is small tractors, fractional tubewells, etc. – which is being increasingly emphasized for small-farm sector, should not be pushed too far as it is liable to hinder the development of efficient innovations in the long run. Although human and material resources are often combined inefficiently, Periera is not altogether convincing in maintaining that there is no shortage of capital in the subsistence farm sector in the low-income countries.

Steppler, in the article entitled "Natural Resources and Unsolved Environmental Problems", which takes up the entire second section, has identified three constraints, namely, climatic, physical soil characteristics and biological constraints, which determine farm production. He points out that farm production is highly susceptible to an appropriate manipulation of these constraints. He argues that climatic factors, like temperature, precipitation, day-length, etc. are immutable constraints whereas soil fertility, salinity and waterlogging of land and the biological constraints of developing suitable plant varieties can be manipulated. It follows that maximum efforts should be made to ease biological constraints through intensive agricultural research to raise farm productivity in developing countries. True, even the most advanced countries in the world have not overcome all the above-mentioned constraints; yet the low-income countries have failed even more in this respect because of their low research capabilities. For instance, three countries do not yet have even the minimum necessary crop strains consistent with their environments.

The third section represents a very useful analysis of the various economic policies adverse to agriculture and of economic losses to the society in general and to the farmers in particular. Hopper, in "Distortions of Agricultural Development Resulting from Government Prohibitions", lists different direct and indirect government restrictions that discourage application of chemical crop sprays, farm mechanization, farm size growth and export of new seeds and deny farmers the advantages of economies of scale in farm output, hampering thereby the diffusion of superior innovations. Besides, a variety of policies regarding licences, quotas and market allocations indirectly depress agricultural output in poor countries. Furthermore, the restricted transfer of new agricultural technology among countries has contributed to a rather subdued progress in farm production in those countries. Brown, in his article on "Agricultural Pricing Policies in Developing Countries", has covered a range of price policies and their impact on farm productivity and farmers' income. He has analysed how prices of farm commodities, kept artificially low relative to industrial goods, have moved the terms of trade against the farm sector over the years. The developing countries have managed to supply food to industrial workers and urban consumers at low prices through procurement and market price controls. Such interventions frequently have very adverse effects on efficiency, production and income distribution. Low food and agricultural prices increase the real income and employment of the urban poor but they adversely affect farm production. Similarly, government policies concerning budget, saving and investment, and balance of payments have tended to discriminate against agriculture, inducing a net transfer of resources from the farm sector to the non-farm sector. Consequently, the flow of resources out of the agricultural sector has tended to impoverish farmers and exacerbate income distribution in these countries. Why have these countries been following price policies that distort incentives and hurt the agricultural sector?

Reed, in his essay on "Government Price Policies for Wheat, Rice and Tractors in Colombia", has tested four hypotheses: bureaucratic behaviour, political economy, internal revenue considerations and urban bias with respect to Colombia to determine what makes the low-income countries follow policies unfavourable to the farm sector. He argues that internal revenue requirements rather than the urban bias and bureaucratic behaviour have influenced the price policies of wheat, rice and tractors in Colombia. Next, Barker in "Barriers to Efficient Capital Investment in Agriculture", discusses various institutional factors that obstruct an efficient capital investment in many promising alternatives, especially irrigation. It is argued that the institutional barriers are formidable and that they often considerably influence the use of capital-intensive technology. Since the use of such technology is inconsistent with the native resources of the developing countries, it results in an inefficient use of resources. Inefficiencies in capital use are further accentuated by such policies as low interest rate, market wages higher than the opportunity cost of labour, and overvalued exchange rate in the less developed countries.

It should be clear that it is easy to introduce policies that distort incentives but their withdrawal is a different matter. Abel, in his article, suggests that the situation can be alleviated by discontinuation of overvalued exchange rate policies as well as adoption of price increases on poor harvests, support prices on temporary overproduction and, finally, an integration of imports and exports with the domestic price programme.

The fourth section of the volume, entitled "International Markets", comprises only one article contributed by D. Gale Johnson on "International Prices and Trade in Reducing the Distortions of Incentives". Johnson points out that almost all the low-income countries fail to take advantage of external trade in their pursuit of stable domestic prices at a level lower than the international prices by manipulation of imports and exports of farm products. They impose taxation on farmers through procurement and export duties which induce wrong cropping patterns by discouraging crops that enjoy a comparative advantage. In order to avoid implicit commodity taxation, farmers direct resources to those crops which are not subject to procurement. Since procurement schemes cover mostly important farm crops, they cause a reduction in farm income by a shift from high-market-value crops to low-market-value crops.

The next section on "Agricultural Research, Education and New Institutions", contains useful information on the current status of agricultural research, education and extension, the role of investment in human capital for agricultural development and the emergence of social institutions in low-income countries. The discussion by Evanson describes how the absence of high-standard research institutes has restrained research activity in low-income countries, how so little research resources get allocated to research activities, why optimum scale of research has been hard to detect, why simple adaptive rather than new technology-producing research systems are followed there, and in what pursuits the short-run comparative advantage of the international research institutes, like the International Rice Research Institute and the International Wheat and Maize Research Institute, lies. Evanson is right in his analysis that low-income countries are currently facing an acute shortage of sophisticated research capacity, especially for producing germ plasm for evolution of more productive crop varieties. This is where the international research institutes can effectively help the low-income countries. He is also right in asking these renowned institutes to expand their research base to cover rough foodgrain crops over rice and wheat which thrive even under such less favourable conditions as are found in most of the less developed countries. Welch explains in his paper on "The Role of Investment in Human Capital in Agriculture" why returns to education, which constitutes investment in human capital, vary in response to the pace of technological change and sources of new information regarding management of resources and price fluctuations. He argues that the educated farmers are more productive than their uneducated counterparts because of differences in their capacity to use information efficiently. The next article by Ruttan in this section reports the occurrence of demand for new institutional innovations. The view is that the need of institutional innovations intensifies when factor prices change with an acceleration in economic growth. These innovations contribute to greater equality in access to political and economic resources and increase their productivity.

The last section contains only one article in which Schuh examines the impact of four sets of pricing and rural development policies in three countries, India, Brazil and Chile. These countries followed compulsory foodgrain procurement, "vent-for-surplus" model of economic growth and land reforms respectively, as the basic needs and equity approaches to lessen poverty, unemployment and malnutrition for their masses. Foodgrain procurement schemes, accompanied by restrictions on their inter-regional movements in India, favoured the urban segment of the population but accentuated shortage in deficit rural areas, which, in turn, exacerbated income distribution in various sectors of the economy. In Brazil, industrial exports were encouraged at the cost of agricultural products by an overvalued exchange rate. Land reforms and rural development programmes have similarly misdirected the investment of national resources. Why these policies have failed to achieve their objectives is probably due to the fact that these countries sought to solve the problems relating to factor markets by interfering with product markets through official price controls. In other words, they did not pay adequate attention to the problems of input marketing – fertilizer, credit, irrigation, etc. – but interfered with the free operation of the product market through the introduction of often conflicting rules and regulations.

The organization of the book into sections with articles of a common theme is its very attractive feature whereby the reader is enabled to learn various related issues. The articles are almost completely free of formal models, complicated derivatives and equations. In all, there is only one mathematical expression in the text (p. 129) and three equations and one identity in footnotes (pp. 137, 278 and 284). The relegation of the bulk of the numerical data to the appendices of the articles is still another point of merit. Thus, the book gives absolutely no aura of "technocratic sterility" as is common with many books on technical subjects. The level of sophistication and the degree of originality in all the papers are impressively high and uniform. The reader's interest does not flag as he reads through this enjoyable book. Besides, the book reflects an international perspective in terms of analysis of different policies followed in different low-income countries and of their effect on the performance of their farm sectors.

However, the present reviewer feels that the value of the book would have been substantially enhanced if each section were followed by an integrated recapitulation of the conclusions of the various articles. While some sections comprise a single article, concise versions of the summaries for other sections could afford the readers an opportunity to grasp most of the issues without perhaps toiling through all the articles. Nevertheless, the book constitutes a valuable collection of articles bringing out the impact of agricultural pricing policies on different aspects of the economies of the developing countries.

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