

Working Paper No.170

PRICES, SUBSIDIES AND ACCESS TO FOOD

K N RAJ

Centre for Development Studies, Ulloor,
Trivandrum 695 011

May 1983

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Dharm Narain's scholarly work as an economist was focussed mainly on two inter-related sets of issues concerning Indian agriculture: (a) the sources of growth in crop output, distinguishing carefully between price and non-price factors, and (b) their policy implications, taking particularly into account the crucial role of foodgrains for meeting minimum subsistence needs. As is well known, he was among the first to analyse systematically and in depth the nature and extent of the response of farmers through shifts in land allocation to changes in the relative prices of different crops; as also of the character of the marketed surpluses from agriculture and the probable impact on them of changes in its terms of trade. Later, in the context of the new opportunities opened up by high-yielding varieties, particularly of wheat and rice, Dharm Narain became increasingly concerned with a broader range of questions: why productivity in Indian agriculture was not growing more rapidly than it was, whether and to what extent productivity increase could be accelerated through changes in relative price (of inputs and/or of outputs), and what precisely were the non-price factors to which particular attention needed to be paid. The light thrown on these issues through some of the important papers he presented in the course of the 1970's are still among the most insightful contributions we have in this field. Unfortunately it was right in this period of mature reflection, based on the very considerable scholarship and experience he had already accumulated, that he suddenly took ill and passed away; his work on these questions has remained therefore

* This is the text of the Dharm Narain Lecture (for 1982) delivered under the auspices of the Delhi School of Economics and the Institute of Economic Growth on February 25, 1983.

essentially incomplete.

We are not of course totally in the dark as to the directions in which his enquiries were leading him. Some of his substantive findings clearly indicated the importance he attached to non-price factors in agricultural growth, such as the critical role of family labour and irrigation in promoting cropping intensity, the constraints on crop diversification imposed by the subsistence requirements of a rapidly growing population, and the limited scope for accelerating fertilizer use in the absence of technological progress through mere changes in relative prices. In fact, in this context, he had stated his position quite unambiguously, that "an ~~over~~-simplistic and therefore excessive preoccupation with price can do more harm than good by distracting attention from the harder but more important tasks which belong in the non-price world of achieving technological breakthroughs and relaxing such real constraints as stand in the way of their becoming a reality on the farmers' fields".^{1/}

This did not mean of course that prices were of no great consequence. That would be an absurd position for anyone to take, and it could not possibly be countenanced by Dharm Narain who, after all, was the first to demonstrate so persuasively the scale and degree of responsiveness of Indian peasants to changes in relative price. In fact he was concerned deeply not only with the normal allocative role of prices but with the positive contribution that a skilfully designed price policy could make to agricultural growth. This was indeed his major intellectual preoccupation at the time he passed away, as he was

1/ Dharm Narain, "Growth of Productivity in Indian Agriculture", Occasional Paper No.93, Department of Agricultural Economics, Cornell University, June 1976, published in Indian Journal of Agricultural Economics, Vol.XXXII, No.1, January-March 1977.

then engaged in a fairly major study on the subject of agricultural price policy, equity and growth.

I have had the privilege of looking through some of the working notes Dharm Narain left behind on this subject, thanks to the courtesy of his wife, Shakuntala Mehra. Anyone who has known his ways of carefully examining and re-examining every proposition from different angles, and not hesitating to modify any of them at any stage, will not want to cite these notes in support of any particular position; for that would be not only unfair but dishonest. However, it would be, I think, no breach of trust or of professional ethics if I take this opportunity to indicate some of the questions he was clearly addressing himself to.

Any discussion on agricultural price policy within a developmental framework had to go into at least three sets of issues: the effects of relative price changes on agricultural production pattern, the income distribution effects of relative price changes, and the possible role of such price changes in accelerating agricultural growth in the context of technological change. In the absence of technological change in agriculture (particularly in food production), upward shifts in demand reflecting growth in national income, population, etc., it was obvious, could induce exaggerated increases in agricultural prices and cause adverse income-distribution effects. The case for promoting technological change to accelerate agricultural growth without such adverse effects was therefore self-evident.

But how far can higher product prices help to accelerate shifts in technology, particularly through the compensation so offered for the risks and uncertainties involved and the probability of loss? Moreover, once such technological changes are achieved and substantial

increases in production take place, would normal downward adjustments in product prices be permitted or would such political and other institutional rigidities come in the way of such adjustments? And what about the interim period, when higher prices play a positive role in relation to technological progress but could create serious problems for the lower-income groups who cannot afford to pay these higher prices for their minimum subsistence requirements? How long may this "short run" interim period be, and what if it turns out to be a decade or more? These are the kind of questions that troubled Dharm Narain.

Such questions would not have been so worrisome for a person less concerned with issues of equity. For while Dharm Narain saw very clearly the vital role of technological progress in agriculture for raising productivity, he was also deeply aware of the vulnerability of the poor, particularly within the rural economic and social framework, and the high probability of much of the burdens of adjustment being thrown on them unless policies were designed carefully enough to prevent it. One ray of hope in this context was the possibility of a high rate of growth of foodgrain output itself helping to lower the relative price of grain and raising the real income of the poor; and hence his particular concern whether and how far support prices, once raised for promoting shifts in technology, would come in the way of a subsequent softening of market prices for the consumers. His fears, we know only too well from experience, were by no means unwarranted.

The ~~questions~~ Dharm Narain was addressing are no doubt the one most crucial to agricultural price policy and, difficult though it may be to find fully satisfactory answers to them, we cannot possibly evade them. In fact, the more recent tendencies that have surfaced in regard to agricultural production in different parts of the country, and

the developments on the price front, underline more clearly than ever before the need to face these issues squarely, neither letting their complexity intimidate us nor allowing ourselves the luxury of over-simplification. If Dharm Narain is not with us to guide us through this maze with his cool, sensitive mind and sharp insights we can help ourselves by at least recalling the extremely high and scrupulous professional norms he would have brought to this task.

Precisely for this reason, it is not my intention to utilize this lecture for offering any firm answers to the many questions we are now confronted with in regard to agricultural prices. That would require much closer study and reflection than I have been able to devote to them. I shall therefore attempt no more than to indicate very briefly some specific issues concerning agricultural prices which, it appears to me, have been perhaps a little too over-simplified to receive the kind of systematic analysis they deserve.

A first set of issues I would like to draw attention to concerns the question of terms of trade between the agricultural sector and the non-agricultural sector. Discussions on this question have suffered from both deficiencies in the statistical series computed for this purpose and, even more seriously, from a larger conceptual failure to view changes in the relative prices of the concerned commodities and services within a social accounting framework that brings out clearly the corresponding changes in the quantum and pattern of resource flows into and out of agriculture. Let me explain.

On the statistical aspect, Kahlon and Tyagi have made an important contribution drawing attention to the serious limitations of the existing official terms of trade series on account of limited coverage, use of

improper weights, inappropriate price indicators, etc.^{2/} It is obvious that non-agricultural commodities of no great consequence to the agricultural sector figure prominently in this series, while the large trade margins in both the buying and the selling operations in the rural sector are ignored by the reliance on wholesale price indices in the case of agricultural as well as non-agricultural commodities. However, when offering an alternative series, not only have Kahlon and Tyagi failed to examine how the movements of the so-called "farm harvest prices" compare with the movements of the wholesale prices but they have not even asked themselves the question to what extent different categories of farmers succeed in securing the reported harvest prices and how much of their marketed output is in fact sold at these prices. The result is that we do not still know for certain whether the net barter terms of trade improved for agriculture in the first phase of the Green Revolution, 1967-68 to 1974-75 (as would appear from a series constructed earlier by Thamarajakshi) or actually deteriorated (as would seem from the alternative series worked out by Kahlon and Tyagi). I need hardly add how serious this lacuna is, considering that we have to have a clear understanding of earlier experience and of the inferences one can draw therefrom.

On the conceptual side, for failure to see inter-sectoral trade as part of a larger network of resource flows, there has been a tendency to assume that any deterioration in the terms of trade of agriculture is necessarily detrimental to it and that any improvement is indicative of a policy favourable to it. This is patently incorrect, as such

^{2/} A. S. Kahlon and D. S. Tyagi, "Inter-Sectoral Terms of Trade", Economic and Political Weekly, Vol. XV, No. 52, December 27, 1980.

shifts in terms of trade may be accompanied by more than offsetting changes in the direct transfer of resources to agriculture through government or financial institutions. Clearly there can be situations in which direct investment in irrigation by the government is a more efficient method of increasing agricultural output and incomes than by operating on product or input prices. Moreover, once higher support prices have the effect of bringing about a shift in technology that helps to boost foodgrain production rapidly, it is possible to visualize a process of adjustment of grain prices in the downward direction coinciding with large imports of industrial consumer goods by the more prosperous farmers and the opportunity being used by the government to impose higher indirect taxes on 'luxury' goods as part of a programme of resource mobilization for self-sustained development. Not only is it therefore essential to look at the entire pattern of resource flows between the agricultural and the non-agricultural sectors, and the nature and direction of the changes in them over time,^{3/} but little can be said about the appropriateness or otherwise of changes in the terms of trade of agriculture without examining which are the commodities or services whose prices are affected. Some price ratios may be strategically important in the context of agricultural growth, some others when viewed from the equity angle.

One of the price ratios that could have considerable strategic importance for agricultural growth is obviously that of fertilizer to

^{3/} Attempts to look at resource flows between the agricultural and non-agricultural sectors in such a broader frame can be found in Sudipto Mundle, Surplus Flows and Growth Imbalances (Allied Publishers, 1981) and in Ashoka Mody, Sudipto Mundle and K N Raj, "Resource Flows from Agriculture and Industrialization: A Comparative Analysis of Japanese and Indian Experiences", paper prepared for the Conference on Japan's Historical Development Experience and the Contemporary Developing Countries: Issues for Comparative Analysis, held at the International Development Center of Japan, Tokyo on January 6-8, 1982.

product prices. Many countries subsidize chemical fertilizers very heavily to promote their intensive application by farmers and thereby encourage the wider adoption of high-yielding varieties requiring such intensive application. However, in India over the last few years, the rising costs of feedstocks have been allowed to get reflected in the sale price of fertilizers, as a result of which the price of urea for instance has risen by nearly two-thirds since 1980; and even though procurement prices for grain (announced by the Agricultural Prices Commission) have also been raised over this period, the ratio has moved adversely from the point of view of the producers. At the same time, the total quantum of fertilizer consumption in India, after rising sharply from about $2\frac{1}{2}$ million tonnes per annum in the first half of the 1970s to over $5\frac{1}{2}$ million tonnes in 1980-81, has increased very little since then. All this has coincided with a period during which foodgrain output has failed to rise above the earlier peak of 132 million tonnes touched in 1978-79, despite substantial additions to irrigation potential in the subsequent years. The experience of this period raises therefore another set of specific issues on price policy in agriculture in the context of growth.

It is fairly obvious that the failure of agricultural production to respond adequately to the expansion in irrigation potential is traceable largely to a number of non-price factors such as inadequacies in the distributional network and the problems of land and water management posed by the fragmentation of operational holdings. The failure of foodgrain output to rise above the 1978-79 level can also perhaps be attributed to a large extent to the play of the weather factor affecting different parts of the country. Nevertheless some doubt must remain as to whether, allowing for all the non-price factors, the adverse movement in the relative price of fertilizer to product prices has also

not had some impact on production by affecting the rate of adoption of high-yielding varieties (particularly of rice) and the intensity of application of fertilizers.

While this requires closer examination and one should avoid drawing any hasty conclusions, there is one particular feature of fertilizer consumption I would like to draw attention to in this context as it has some important implications for policy. It is that there is not only a high degree of regional concentration in fertilizer use (about 25 per cent of all the districts in the country accounting for about two-thirds of the total consumption) but the quantity of fertilizer applied per hectare of cultivated area is lower among small and marginal farms compared to the larger. As Hanumantha Rao has recently observed, very pointedly, "the proportion of households using fertilisers as well as the proportion of area fertilised is smaller among the small and marginal holdings than among large holdings", and "this is so despite the fact that in several States the proportion of area irrigated is higher among small and marginal farms than among large farms".^{4/} The intensity of cropping i.e. the proportion of gross cropped to net sown area is also invariably lower among the large farms when compared to small and marginal farms, as was clearly demonstrated by Dharm Narain in the last piece of research completed by him in collaboration with Shymal Roy.^{5/} While, therefore, small farmers tend to irrigate a higher proportion of sown area than larger farmers do, and expand their output per unit of net sown area by intensifying the input of family labour, large farmers appear to be economising on labour costs but

4/ C H Hanumantha Rao, "Consumption of Fertilisers in Indian Agriculture: Emerging Trends and Policy Issues" (Fifteenth Lal Bahadur Shastri Memorial Lecture, February 4, 1983).

5/ Dharm Narain and Shymal Roy, "Impact of Irrigation and Labor Availability on Multiple Cropping: A Case Study", International Food Policy Research Institute, November 1980.

"stepping up fertiliser use by opting for a land-use and cropping pattern which absorbs more fertilizers per cropped hectare and thus maximizes output per cropped hectare and per unit of labour".^{6/}

This suggests that, while the intensity of use of fertilizers in the larger farms could have proved sensitive to the sharp rise in their price, the net result need not have been adverse from the point of view of either growth or equity if appropriate measures could have been put through for diverting fertilizers to the small and marginal farms. Ideally, as Dharm Narain had concluded on the basis of his study of multiple-cropping, what is indicated are "land reforms designed to rectify the existing imbalance between the availability of land and labour", since that would promote more optimal use of land, labour, water and fertilizers. One must still hope that the political turmoil within the countryside can be turned to advantage in this way, at least by stages; but whatever the feasible pace of progress in that direction, there is a clear case for implementing immediately a policy of providing fertilizers to small and marginal farmers at subsidized prices and supported by appropriate credit and marketing facilities. Since the risks involved in the adoption of high-yielding varieties differ considerably from region to region for climatic reasons and on account of differences in the infrastructure, there is also clearly a case for considering whether the support prices guaranteed to farmers through government intervention should not differ to some extent from region to region. The precise criteria on which all this is worked out require no doubt very careful consideration.

A third set of issues that agricultural prices have a bearing on, but not received as yet the concrete attention they deserve despite

^{6/} Ibid. Hanumantha Rao.

all the political and academic discussion on mass poverty in the country, concern the vital question of access to food, more specifically the foodgrain needed by the rural poor for their sustenance. Amartya Sen has recently reminded us very forcefully of the millions of families (particularly among landless rural labourers) who remain hungry a lot of the time, of the nutritional inadequacies which at least a third of the rural population seems to suffer from, and therefore the socially callous foundations of the much-publicised self-sufficiency achieved in India in the sphere of foodgrains.^{7/} Though most of us are familiar with these facts they do bear repetition, if only to arouse the social conscience that is ultimately the stimulus to all economic reform.

Sen can however perhaps be criticised for seeming to over-simplify this problem of acute deprivation by implying that the answer lies in some form of public distribution of subsidized grain as practised in Sri Lanka for a while; and that even if this should cost as much as five per cent of the GNP (as it did in Sri Lanka at one stage) it should not pose a serious problem "as this would amount to less than just one year's growth of GNP at India's current rate of growth". Since the economy of Sri Lanka had been developed over decades by specialization in commercial crops for export on the basis of guaranteed supplies of grain from abroad, and foreign trade formed a high proportion of its national income, it was possible for the government to secure without much difficulty not only the physical command over grain supplies needed to maintain such a public distribution system but the fiscal resources required for the purpose through relatively moderate levies on exports and imports. In fact, nearer home under somewhat similar conditions,

^{7/} Cf. Amartya Sen, "Development: Which Way Now?" (Presidential Address at the Development Studies Association in Dublin, September 23, 1982); "How is India Doing?", The New York Review of Books, December 16, 1982; and "Food Battles" (Twelfth Caromandel Lecture delivered in Delhi on December 13, 1982).

Kerala has also been able to operate a fairly comprehensive public distribution system with beneficial effects on the low income groups in both urban and rural areas; in this case the task has been even easier, as the supplies of grain have been secured mainly from the Central Government and the difference between procurement (or import) prices and the issue prices has not had to be borne by the State Government.

The problems involved assume however many complex dimensions when the quantity of grain that has to be secured forms a high proportion of the total grain output in the country, when the financial resources available to the government are not large enough for subsidizing grain on any significant scale along with all the other competing demands on them, and when there are fairly serious foreign exchange constraints on the scale of grain imports that can be normally sustained. These are of course obvious propositions, and Sen is unlikely to disagree. But then the failure to tackle the problem of endemic hunger must be traced to its deeper roots in the economic structure and cannot be characterized merely as a reflection of the low priority attached to it in the elitist morality and politics of the country (though no doubt that is also involved). We need to find feasible solutions, not perhaps as satisfactory as those that were evolved in China after the Revolution, but at least second or third-best solutions of the kind that can be implemented within the existing political system; and economists cannot shun this task, for without a minimum of economic logic no solution can be viable for any length of time.

One of the obvious merits of the system of food security provided in China was that, except in the urban sector, it did not rest to any large extent on procurement and distribution of grain

through the machinery of government. For that reason the scale of subsidies involved for the government appears to have been also relatively small. In the countryside the organisation of productive activity within the commune and the methods evolved for the distribution of the income so realized ensured both the mobilization of idle labour and the provision of basic minimum requirements. The viability of the system depended of course on the effectiveness of the incentives for productive activity within this form of organization; the circumstances in which it came under pressure, and has since given way to what is now described as the 'responsibility' system, raise therefore a number of questions for which adequate answers are not available as yet.^{8/}

How China continues to provide a food security system after dismantling in effect the commune form of organization should be certainly of greater relevance to us than how it has operated it in the past.

Whatever the solution found in China it is clear that in India we cannot even make a beginning with a system of food security in the countryside unless we are able to build into it some way of increasing the purchasing power of the most deprived sections of the rural population. With the elimination of private ownership of land, and the presumably equal access to land that rural families will continue to have even after the displacement of the commune form of organisation, the task of providing adequate purchasing power to the rural poor is bound to be easier in China than in India. What we need to explore therefore are both ad hoc methods of supplementing the purchasing

^{8/} For some tentative hypotheses on the circumstances in which the commune form of organization was first accepted and later came under pressure from within, see my paper on "Agricultural Growth in China and India: Role of Price and Non-Price Factors" in Economic and Political Weekly, Vol.XVIII, No.3, January 15, 1983.

power of the poorest as far as possible within the existing economic framework in the immediate short run, as also modes of land and water management that would over the longer run make it possible to utilize their labour on an increasingly productive basis consistently with such rights of private ownership as have the legitimacy of social and political sanction.

A somewhat different, though perhaps complementary, approach to this problem of food security was worked out some years ago by Gulati and Krishnan.^{9/} This was designed to ensure that a bare minimum of 100 Kgs. of cereals per capita per annum^{10/} would on the average be made available, through a comprehensive public distribution system covering both urban and rural areas, to about one-half of the total population of the country at prices "substantially lower than the prevailing market prices". It was also assumed that the required supplies of grain would have to be secured from producers within the country through an equitable system of procurement in which "(a) farmers similarly placed are treated similarly regardless of whether they belong to surplus or deficit states, and (b) whatever 'burden' procurement implies it is imposed progressively". This was an extremely useful exercise, even if it only served to indicate the quantum of cereals that would have to be annually procured for the purpose (no less than 25 million tonnes at the 1973 population level), the problems involved in procurement on this scale, and the probable order of magnitude of the subsidies needed to operate the system if the elements of progressive taxation of producers incorporated in the proposal were to be

9/ I S Gulati and T N Krishnan, "Public Distribution and Procurement of Foodgrains: A Proposal", Economic and Political Weekly, Vol. X, No. 21, May 24, 1975.

10/ This was no more than the per capita annual cereal consumption of the bottom-most decile of the rural population in 1964-65 (as estimated from the 19th Round of the National Sample Survey).

prove infeasible or counter-productive. But one of its serious limitations was an assumption that, if cereals were made available at a "reasonably low price", even the most vulnerable sections of the rural population would have adequate income to purchase them.^{11/}

From this angle there is little doubt that the kind of approach that was suggested earlier by Dandekar, resting primarily on schemes of employment guarantee linked with productive public works,^{12/} offers a more feasible and promising line of attack. It raises no doubt a host of problems, particularly for ensuring a regular supply of grain for payment in kind (as under the Maharashtra scheme that has now been in operation for some time) and the formulation of appropriately productive proposals for using such labour as is forthcoming in each area. Some of the ideas put forward by Minhas^{13/} for combining such mobilization of labour with some form of land reform involving consolidation of holdings as well as schemes for the improvement of land and water management are however of obvious relevance here. All this will of course need to be supplemented by special measures to take care of the basic needs of destitutes, disabled persons, etc. who cannot be helped through mere provision of employment opportunities.

Though no great progress has been made along these lines, and "callousness or hardened conscience towards poverty" (which Dandekar pointedly referred to) continues to be a fact of life, it would be both

11/ Cf. "Food Distribution and Procurement: A Comment", Economic and Political Weekly, Volume X, No.29, July 19, 1975.

12/ V M Dandekar and Nilakantha Rath, Poverty in India (1971), Chapter VII.

13/ B S Minhas, "Rural Poverty, Land Redistribution and Development Strategy: Policy", Sankhya: The Indian Journal of Statistics, 1974, Vol.36, Series C, Parts 2 and 4.

unfair and incorrect not to recognize the valuable lessons that have been learnt in India over the last decade in the operation of such schemes on a limited scale in different parts of the country. Perhaps the greatest achievement in West Bengal during this period has been in this sphere of rural public works on the basis of food for work, and if it could not progress even further along this line it was only because it was denied the necessary supplies of grain. There have been also a number of other experiments in mobilizing idel labour for productive investment in rural areas, such as through a Labour cum Development Bank set up in one of the districts in Kerala.

Though there are still many problems of overcome, and no doubt they are likely to appear even more formidable as the scale of such activity is expanded, there is little doubt that the path indicated by these various experiments is the most promising of the avenues open to us now for confronting the challenge posed by mass deprivation in our country. There is also scope for further experimentation on still more radical lines depending on the way political activity is developed in active pursuit of this kind of social objective. The willingness to mobilize all possible effort in this direction, through either political parties and regimes or through social organization of various kinds, and facing and resolving step by step the extremely difficult problems that will have to be sorted out, must in fact be regarded as the ultimate acid test of radicalism in this context. Elitist morality and politics will no doubt continue, particularly since there are many ways of disguising it both in theory and in practice, but the question is whether there are still not enough strong and vital forces in the country that can be developed to counter them within our existing political framework and offer alternatives that command wider sanction and

support among our people.

Dharm Narain, after raising a number of problems concerning Indian agriculture in one of his lectures, had concluded with a simple and very characteristic confession: "it would be pretentious on my part", he pleaded, "to imply that I have their answers - answers that we may wait upon collective work and wisdom to supply". In the course of my long association with him the one thing I learnt most were the virtues of being both down-to-earth and intellectually honest and unpretentious. The least I can do therefore is to close this lecture in his memory with a similar disclaimer offered with no less awareness of both the complexity of the problems I have dealt with and the limits of my own understanding.