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BOOK REVIEWS

Some Aspects of Long-Term Co-operative Agricultural Finance (A Study of Two Areas in Gujarat), Agro-Economic Research Centre, Sardar Patel University, Vallabh Vidyanagar, December, 1971. Pp. xvi + 176. Rs. 15.00.

With the advent of recent break-through in Indian agriculture long-term investments have attained a premium position inasmuch as returns on these investments have improved and this has, in turn, accelerated the demand for money capital (credit), as owned funds fall short of the investment requirements. Though the latter still play a predominant part, as is revealed by the present study also, the demand for borrowed funds is picking up quite rapidly. It is, therefore, quite opportune for the Union Ministry of Food, Agriculture, Community Development and Co-operation to have entrusted the appraisal of the working of Land Development Banks in different States to the Agro-Economic Research Centres in the country. The present study of Gujarat State Co-operative Land Development Bank, one of the successful and forward looking institutions in the country, was undertaken by the Agro-Economic Research Centre of Sardar Patel University at Vallabh Vidyanagar. The study is a joint product of the Team headed by N. S. Jodha and M. L. Bhat.

The study is based on the field investigation of the Bank's two branches each in the districts of Baroda and Junagadh and a sample of 144 borrowers at these branches selected from among the Bank's borrowers during 1966-67 and 1967-68 and spread over 70 villages in contiguous clusters. The years 1966-67 and 1967-68 were selected with a view to gauge the impact of various procedural changes introduced by the Bank during 1966-67 which were expected to be reflected in the Bank's working during 1967-68. A comprehensive schedule designed to bring out information which may throw light on the performance of the Land Development Bank (LDB) and also indicate the areas where improvement is warranted was canvassed among the sample borrowers and this report is the result of the analysis of information so collected from the borrowers as well as from the Bank records.

The analysis reveals that the Bank has made rapid strides in the field of long-term financing in quantitative terms as well as coverage and towards this success, its historical origin, unitary structure which also combines certain democratic elements duly injected with care and awareness and its enlightened leadership have contributed to no mean an extent. Starting with a couple of districts in Saurashtra region in September, 1951, by 1968, the Bank had opened its branches in 181 out of 186 talukas of Gujarat State. In this process the Bank covered nearly 71 per cent of the villages. However, though its total membership reached 6.32 lakhs in 1967-68 this constituted only 28 per cent of the total land holders of the State. The Bank had advanced Rs. 7267.72 lakhs as long-term loans to 3.69 lakh persons from its beginning to June 30, 1968.

The study has, however, observed certain snags in the working of the Bank. Its branch committees formulated by election with a view to provide a forum for expression of regional aspirations are not composed of competent members. With the result the supervisor, a Bank employee, plays an effective role in the branch level decisions. Though this may be quite in keeping with the banking protocol and financial discipline, the promotional role of a financing institution of the LDB type may get affected. The study also finds some gaps in the staffing pattern of the LDB. The Bank has attained good expertise in legal and administrative matters but not in technical scrutiny and feasibility studies, an essential requirement for any institution connected with long-term financing. Its reliance on the State governmental machinery for consultancy may not prove very useful as the latter itself is lacking in quality. This lacuna is also reflected in its rather insignificant availment of refinance facilities from the Agricultural Refinance Corporation (ARC). Though the ARC's terms for refinance to the LDB are non-developmental, the fact remains that as on June 30, 1969 the Bank could get refinance for 16 schemes only, the amount aggregating Rs. 8.50 crores. This is very insignificant in view of the requirements for diversification of agriculture in the State. The study under review has rightly suggested strengthening of the technical wing of the Bank so that good schemes are formulated by the Bank and little time is taken between submission of the scheme and its approval by the ARC.

The study has also observed that the procedures of lending followed by the Bank are still tardy. Though the recovery position, on the whole, was satisfactory, cases of diversion of funds were noticed, the diversion being either on account of over- or under-financing and/or lack of follow-up measures taken by the Bank.

The success of the LDB to no less extent can be ascribed to the support it has received from the State Government. Apart from extending guarantees to the Bank's borrowing programmes, on which mainly depends its business transactions, the State has directly contributed to the LDB funds by subscribing to its shares and by purchase of debentures, especially when support from other agencies was not forthcoming. The Bank is planning to strengthen its resources through sale of rural debentures so as to minimize its reliance on institutional borrowings which have certain conditions attached and also to mobilize rural savings. However, its plan to link the allocation of funds to the branches will affect their performance regarding the sale of rural debentures for realisation of this objective may mean that the remedy will be worse than the disease. One would have expected the authors of the study to go deep into the problem to explore feasibility. The rate offered by the bank at $6\frac{1}{4}$ per cent for 7 years' redemption is too low and the members will not be attracted toward this form of investment unless it is made obligatory to them on other accounts. Under the circumstances, the linking of fund allocation to branches to the sale of rural debentures will starve them of funds. The

Bank is paying $7\frac{1}{2}$ per cent to $8\frac{1}{2}$ per cent interest for obtaining interim finance from commercial banks by way of overdraft facility, etc. Its rural debenture programme may not succeed unless the terms are made more attractive.

The study reveals that the LDB advances have been unevenly distributed among different districts and different sections of the cultivators. It is stated that of the total advances up to 1967-68, more than 25 per cent had gone to only two districts, namely, Rajkot and Junagadh. If three more districts, namely, Bhavnagar, Jamnagar and Mehsana were included the share of these five districts exceeded 50 per cent of the total LDB advances. As the authors suggest, one of the reasons for the concentration was historical. On account of land reforms enacted in the then Saurashtra, every tenant had to become member of the Bank to avail of the credit facilities for purchase of occupancy right from the landlords. But the influence of this once over external factor could have been segregated and the comparison could have been made regarding the progress due to advances other than for acquisition of ownership rights in land and at two or three points of time so as to discern the trend in districtwise distribution of the LDB portfolio. Table 3.5 reveals that the component of debt redemption and purchase of new agricultural land has been steadily going down. This also gives an indication that if adjusted for the factors under consideration, the distribution of portfolio may not be so disparate as suggested in the analysis.

However, the pertinent problem remains; why lending by the LDB was poor in prosperous areas of South Gujarat? The authors have given the following possible reasons: preponderance of small farmers who were put in disadvantageous position because of land-based lending policy of the Bank and the areas being prosperous do not have demand for credit. This explanation is not very convincing. Though holdings in the area are small, the value of land per acre is higher in the area on account of soil fertility and other factors compared to the same in districts of Rajkot, Junagadh, Bhavnagar, etc. So the value of security as a determinant factor for fixation of credit limits by the Bank may not work very unfavourably especially in view of the fact that the Bank capitalises part of the proposed investment expenditures while imputing value of land. With regard to lack of demand for credit in the area one would wish that the authors had analysed the matter further. The authors have cited results of their continuous village studies to support this hypothesis. But the explanation does not seem to have an appeal in view of the fact that land use pattern in the region is being diversified at a rapid rate. Besides, the region has by no means reached an optimum as far as the prevailing capital structure is concerned. Take for example Baroda district; Table 1.2 reveals that the number of wells per village was 5.26 in the district against 25.50 for Gujarat State, the cultivated land per well and per pump-set being 150.87 and 460.07 acres against 89.87 and 191.71 acres respectively for the State as a whole. This is but one indicator. The demand for long-term credit can be on many other accounts such as

tractors, dairy, poultry, etc. It is difficult to believe that with so much disadvantageous position in the case of the indicators compared here, the demand for credit could not be generating in the region which is forward looking, innovative, etc., especially in view of the fact that the supply of funds is available at lower rate of interest and the farmers have alternative avenues to earn higher returns on their savings. Is it that some other institutions have developed in this region on account of comparative cost advantages and/or higher rates of return which have substituted demand for long-term credit for creation of irrigation potential? Development of water market can be one of such forms of institutional substitution and the farmers may find availment of water custom services having higher rate of return than creation of independent irrigation facility as such. If this is so the demand for short-term credit rather than long-term credit may increase. Secondly, under such circumstances the suppliers of long-term credit may have to find other avenues where demand may be forthcoming and if their lending operations are not diversified to include other activities such as dairy, poultry, horticulture, etc., for which there may be tremendous scope in the region their lendings will remain stunted. And it is exactly this that seems to be happening in the case of the LDB operations in the region. The limiting factor is not lack of demand for credit but lack of resilience in the institution supplying credit on account of such constraints as lack of expertise, infra-structure, etc. A further probe into the problem may reveal interesting results which may be useful in building conceptual blocks for the formulation of theory of credit in the context of changing agriculture and may also provide guidelines to the financing agency concerned.

Another problem where gaps are confronted is with respect to loaning performance of the Bank vis-a-vis small farmers. The authors suggest that small farmers who constituted more than 35 per cent of the total land holders in the selected branches had not benefited from the LDB in *proportion either to their number or their needs*. One does not know how the number of small holders in the selected branch is estimated. Is it on the basis of the villages covered by the branches, *i.e.*, their command area? If that is so, was there any difference in terms of coverage of small farmers in the areas in the vicinity of the branch offices compared to the remote area? We also do not know about the need for credit and demand for credit in different sections of the farmers: However, Table 5.10 suggests that the new assets acquired during the last three years (1965-66 to 1967-68) constituted 57 per cent of the total value of assets of the borrowing group upto Rs. 1,000 and 77.44 per cent of the investment expenditure towards this was met out of the owned funds. The rate at which new assets were accumulated by this group is not very much below the same obtaining in other groups where the extent of borrowing far exceeded the deployment of owned funds. The rate of acquisition of new assets in this as well as other borrowing groups upto Rs. 5,000 has perhaps hit the economic constraint which can be broken only if their farm economy gets diversified through development of subsidiary or supplementary occupa-

tions. But the limited range of the LDB loaning operations may have acted as an institutional constraint in this context. We have limited knowledge about such and other phenomena that may be obtaining on the financing front in Indian agriculture. Who are the borrowers? Why do they borrow? What determines the extent to which they borrow? What is the behaviour pattern of decision making with respect to financing certain investments in different size-groups? How do they combine owner and non-owner sources of money capital? Most of the studies on credit have brought out the phenomenon of external capital rationing and have more or less singularly arrived at a conclusion that the financing institutions, co-operative or commercial, have bypassed non-viable regions. The extent to which external capital rationing is influenced or is a function of internal capital rationing has not been given due attention with the result that we have knowledge about part of the phenomenon only.

Of course, it is difficult to amalgamate all the different aspects of problems of credit in one study especially when it is partly structured and has a time constraint. However, the authors have done a good job in making it useful both to the policy maker as well as researchers and if the same standard is maintained by other Agro-Economic Research Centres entrusted with similar task, both the policy-makers and researchers will have enough inputs to feed in formulation of generalized approach to problems of credit in changing agriculture.

TARA SHUKLA

Food Grain Marketing in India : Private Performance and Public Policy,¹ Uma J. Lele, Cornell University Press, Ithaca, New York, U.S.A., 1971. Pp. xviii + 264. £ 5.95. \$ 12.50.

For a long time, agricultural marketing was a neglected subject in India. The 1960s, however, witnessed a change. A spate of literature appeared in quick succession, mostly in defence of the performance of the private trade.² These studies examined a few facets of marketing agricultural commodities in India, and developed a systematic and scientific methodology for analysing the economic performance of the marketing system viewed from those selected facets.

The burden of most of these studies has been that the private marketing system in farm commodities in India has all along functioned efficiently in

1. The views expressed in this review are those of the author and not of the organization in which he is employed.

2. To mention a few among these : A.R. Kulkarni : *The Behaviour of Prices of Groundnut Pods in Some Regulated Markets in Maharashtra*, Ph.D. dissertation, University of Poona, 1962; Zaibun Jasanwalla : *Marketing Efficiency in Indian Agriculture*, Allied Publishers, Bombay, 1966; Ralph Cummings, Jr. : *Pricing Efficiency in the Indian Wheat Market*, Impex India, New Delhi, 1967; Uma J. Lele, "Traders of Sholapur" in *Developing Rural India* by John W. Mellor, Thomas F. Weaver, Uma J. Lele and Sheldon R. Simon, Cornell University Press, Ithaca, 1968; and M. G. Pavaskar and V. Radhakrishnan : *Cost of Marketing Cotton*, Bombay, 1970.

economic terms. The assembling as well as the terminal markets in different commodities disclose close textbook conditions of perfect competition. There are no legal or economic barriers on new firms from entering the market, nor is there any evidence of collusion among the traders to exploit the farmers and consumers. The inter-market price differences do not tend to be greater than the transport costs and, therefore, there exists in all commodity markets what may be termed as a perfect market integration. The seasonal fluctuations in prices are consistent with storage costs, and hence the returns from speculative holdings of stocks are zero. And finally, the marketing and processing margins invariably tend to coincide with the actual marketing and processing costs, yielding, as a result, no exploitative profits to the traders.

If these studies would have been carried out solely with a view to testing empirically some or even all of the foregoing hypotheses with respect to one or more of the farm commodities, one could have scarcely found any alibi to dispute their findings. There can really be no two opinions among the economists that most of these studies have forcefully established the different hypotheses which they set out to test.

But having established these hypotheses with painstaking and sophisticated analysis of vast mass of statistical data on market arrivals, prices and stocks gathered from carefully selected markets in the country, these studies have generally proceeded, somewhat hastily, to conclude from such analysis that there is apparently no reason for disturbing the present system of agricultural marketing in the country and substituting it by the much dreaded full-fledged public distribution system. Though one may wholeheartedly agree with their analysis in so far as the empirical testing of the foregoing set of hypotheses goes, it is rather difficult to understand how the policy implications suggested by such studies necessarily follow from their findings of the competitive efficiency of the existing marketing system.

As it is, the need for State trading in major farm commodities, especially foodgrains, arises in most under-developed economies due not so much to the lack of competitive pricing efficiency under their established private trade systems as to the all-too-evident failure of such competitive price systems to ensure allocative efficiency and distributive justice. It is distressing to observe that this simple rationale of the public distribution policy in agricultural commodities is often lost sight of by most scholars who oppose it solely because their empirical analysis has disclosed that the private trade system has not impaired the competitive pricing efficiency.

In this context, it was somewhat refreshing to read Uma Lele's observations in the Introduction to her book under review that "even if the market is highly efficient, it may have certain unacceptable features, *e.g.*, it may operate in a manner that causes a great deal of year to year instability in the price level. Or the market may provide a price level which adversely affects the growth of the industrial or the agricultural sector." Disappointingly, however, far from examining whether the

different foodgrains markets in the country have these or other unacceptable features, she proceeds to examine, like all others, the same set of hypotheses listed earlier with respect to the three major foodgrains, namely, rice, wheat and jowar, and concludes that the private trade in these foodgrains "operates efficiently within the technological and policy confines" and hence instead of taking over the private trade, "the scarce governmental resources should be allocated to areas where private resources are not likely to flow abundantly."

Unfortunately, aside from the regional, seasonal and vertical price integration in foodgrains under the private trade system, Lele has offered little convincing evidence of either allocative efficiency or the distributive justice of that system in an economy like ours riddled with wide disparities in incomes and purchasing power. A competitive price *ipso facto* does not guarantee such efficiency or justice.

In India, as the recent drought situation in several parts of the country has unmistakably revealed, agriculture is still a gamble in the uncertain monsoon, the tall claims to the Green Revolution notwithstanding. While the demand for foodgrains necessarily has a fairly low price elasticity, the supplies fluctuate from year to year depending on the vagaries of weather. As a result, the free market prices tend to fluctuate widely too. These essentially supply oriented market prices, though quite competitive, little serve the cause of allocative efficiency. On the other hand, more often than not, such competitive prices cause unwarranted shifts in acreage and production, which aggravate rather than reduce the imbalances between supply and demand.

Moreover, one suspects that the supply response to prices in an underdeveloped economy like ours is really not so significant as is often made out by a few publicised studies confined to selected areas and selected commodities. Unfortunately, many of those engaged in this kind of work are prone to publicise results which favour such supply response and not otherwise. As it is, in foodgrains, production for subsistence is still the rule in most growing areas in India, while production for the market is the exception. And even for those farmers who are engaged in the cultivation of cash crops, the alternative choice of crops is not infrequently limited in view of the physical constraints imposed by the soil-climatic complex and inadequate facilities of irrigation. In these circumstances, not only the supply response to free market prices is necessarily restricted, but the market competition also loses much of its import despite the alleged 'free entry into the grain trade.'

But while the allocative efficiency of the competitive price system in Indian agriculture is highly dubious, its distributive efficiency is indisputably low. Perhaps no doubt, as Uma Lele observes, under free trade system, the regional price spreads are "generally commensurate with the costs of movement between the primary and terminal markets." Similarly, may be the seasonal price movements, "when considered in relation to the costs of storing grain from the harvest until the off-seasonal peak, suggest that storage is not

always profitable, because the off-seasonal price rise does not always cover storage costs. Heavy losses in some years are balanced by gains in others." These gains of the competitive price system, however, are slender relative to the social costs and the economic injustice which it tends to promote by perpetuating the existing frightening economic disparities.

No one disputes the need for adequate returns to the industry to ensure its steady growth. But when it comes to agriculture, those who oppose the public distribution system expect the farmers to accept meekly the competitive market price, unmindful of whether such prices are adequately remunerative or not. While cost of production is regarded as the most important determinant in fixation of prices of industrial commodities of both agricultural and non-agricultural origin, no one seems to have as yet cared to examine whether the prices received by the farmers, competitive though they may be, really cover or not their cost of production. Such micro-studies in selected areas and farm commodities could shed far more light on the distributive efficiency of the free trade system than the macro-level analysis of the inter-market price parities.

This is not all. With widely divergent incomes and absurdly large disparities in purchasing power of both households and regions *inter se*, a competitive price system in an economy of shortages often gives rise to below-subsistence consumption for a large section of the population. Such a system obviously promotes movement of farm crops, not so much from the surplus areas to the deficit areas as from the economically backward regions to the rich and prosperous areas. Even within a region, it gives rise to pockets of scarcity in areas of plenty and vice-versa. Little wonder, we witness today the ghastly sights of conspicuous consumption and shameful waste of food in the houses of the rich and the elites, co-existing with the abject starvation and hunger in the neighbouring huts and slums of the poor.

It is this distributional inefficiency of the competitive price system particularly in the sphere of marketing of agricultural crops like foodgrains, which makes mockery of its utility. The system ensures neither remunerative incomes to the growers nor more egalitarian distribution of consumption. What is more distressing is that it does not even assure the barest survival of the vulnerable sections of the society. A competitive market price is indeed a sad consolation to the half-starved poor. It is really adding insult to their injury. In these circumstances, what we need is not a competitive price nor a price integration, but perhaps a differential system of prices and efficient public distribution policy to cater effectively to the needs of the backward regions and the people in the low income brackets. The past experience suggests that nothing short of State trading and complete rationing in foodgrains could serve this purpose. Hence, rejection of the policy of State trading in foodgrains only seems to betray either ignorance or deliberate neglect of the major inherent shortcomings of the competitive price system.

The failure to realise the shortcomings of the competitive price system arises from the blind adoption of a few criteria of marketing efficiency borrowed from agricultural marketing studies developed in the West, particularly the U.S.A. These criteria are based on the hypothesis that free and competitive market is necessarily a guarantee of allocative efficiency and consumer satisfaction. The hypothesis can perhaps claim validity in the developed countries with high average standards of living and less disparities in incomes. But the situation is far different in developing economies like India where a large proportion of the population lives almost near or even below the minimum subsistence level. Therefore, without testing the foregoing hypothesis in the Indian economic conditions, it is really absurd to assess the marketing efficiency in such farm crops as foodgrains by using criteria which rely for their validity entirely on such a hypothesis.

What is more relevant to a marketing efficiency analysis in foodgrains is not whether regional price disparities were smaller in conditions of free mobility and a free flow of grain than under movement restrictions and transport bottlenecks as Lele observes, but whether the per capita availability of foodgrains between regions showed significant differences under different conditions of both trading and movement of foodgrains. More importantly, it is necessary to analyse whether the availability of foodgrains in terms of both quantity and price ensured the minimum needs of different regions and especially of the vulnerable sections therein, as measured by the food habits and the incomes of the respective regions and local populations. Unfortunately, the marketing efficiency studies developed on the borrowed Western economic thought and price analysis models shed little light on these vital issues. Little wonder, despite their unqualified verdict in favour of free food-grain trade, such studies have failed to receive credence beyond the limited circle of academicians brought up under the shadow of American economics. The fate of Lele's study, though more comprehensive and far-reaching in terms of selection of commodities and markets, would be no exception. As it is, the battle for the private trade in foodgrains is already lost in view of the recent government decision to take over the wholesale trade in foodgrains.

These observations apart, one cannot help admiring Lele for spending "over a year travelling in the market areas, collecting data, observing practices, and, most important, establishing close rapport with the traders themselves." As John Mellor rightly observes the strength of her work "lies in the unusual combination of empirical analysis based on tens of thousands of price observations, collected in the detail which is only possible at the market level itself, and the intuitive knowledge which comes from wide observation and experience in the markets and interviews with hundreds of traders at all market levels." Her study bears ample testimony to an excellent intensive and extensive field research, and a systematic and rigorous analysis of spatial seasonal and vertical prices of major foodgrains. Though her case for free private trade in foodgrains fails to convince, her statistical findings of price

behaviour are beyond reproach. But when all is said and done, one cannot resist the feeling that the task of measuring the marketing efficiency in food-grains, or for that matter in all agricultural commodities, is still incomplete.

M. G. PAVASKAR

Effects of Futures Trading on Prices, A. S. Naik, Somaiya Publications Private Limited, Bombay, 1970. Pp. viii + 156. Rs. 36.00.

There have been differing judgments among economists, administrators and the public about speculation and the effect of futures trading on prices of the traded commodities in India, the United States and other countries. Government action in our country in recent years in not permitting futures trading in many commodities like *gur*, rapeseed, groundnut, groundnut oil, groundnut oilcake, raw jute and cotton reflects the view that futures trading in these commodities, if allowed to continue, would accentuate price increases and destabilise prices. Economists studying futures markets believe that prejudices and lack of scientific approach have been responsible for banning of futures markets.

Under these circumstances it is very heartening to see a distinguished member of the Indian Civil Service and former Chairman of the Forward Markets Commission critically evaluating the functioning of a few important futures markets and their price effects following scientific methodology. As Chairman of the Commission, Naik had the opportunity of studying first hand the functioning of futures markets in this country. This study of the author and of others in the same field should make the Government of India re-examine whether the banning of futures markets and the restrictive actions they have pursued are justified.

The Forward Markets Review Committee appointed by the Government of India in April, 1966 under the Chairmanship of Professor M. L. Dantwala with Naik as one of the members upheld the need for futures trading in commodities even under conditions of short supply. The Government does not appear to have been persuaded either by that report or other studies on the subject. Can we now hope, that the scientific studies including the present one, which have come out during the last few years would influence the Government to re-examine the case on its merits?

Naik has examined futures trading in three major commodities, *viz.*, groundnut, linseed and hessian. The empirical evidence flowing from his study does not indicate any adverse price effects of futures trading.

After discussing the evolution of futures trading, Naik presents in his book a methodological account of the effect of futures trading on prices.

He puts forward three hypotheses for empirical testing. These are : (i) seasonal price variations in agricultural commodities are reduced through futures trading, (ii) both intra-seasonal and short-term price fluctuations are reduced, (iii) the long-term trend of commodity prices are uninfluenced by futures trading.

For analysing the effects of futures trading on seasonal price variations, the average monthly ready prices of the three selected commodities are expressed in constant rupees by dividing the average ready price each month by the corresponding All-Commodity Wholesale price index for that month. The deflated prices are expressed as seasonal price indices by dividing each month's ready price by the corresponding year's twelve months' average price. Naik compares the seasonal index numbers for the three commodities between periods *with* and *without* futures trading. In addition, the amplitude and coefficient of price variations in the two periods have been compared. The results indicate that the amplitude of seasonal price fluctuation was smaller for groundnut and hessian in the period of futures trading. The evidence in respect of linseed is not clearcut. Naik devotes considerable attention in his study to comparing the monthly and weekly ranges in ready prices between years *with* and *without* futures trading. He also examines the possible influence of futures trading on the long-term trend of commodity prices. During the period covered by his study, 1951-52 to 1965-66, there was a continuous rise in the prices of the three commodities. This rise took place both during the period of futures trading and without it. The rise in prices were mainly on account of relative shortage of supply, caused by factors like growing population, rising money incomes and had specifically nothing to do with the effect of futures trading on prices within an agricultural year. Naik devotes an interesting chapter to manipulations and prices distortions caused by market operators. He rightly points out that such manipulations have been few, they are short lived and the futures price comes to its true level after the manipulation is over.

The conclusion that Naik reaches through his detailed empirical study is that the price effects of futures trading in the three commodities were largely beneficial. This reviewer trusts the book will receive the attention that it deserves.

L. S. VENKATARAMANAN

Projections of Demand and Supply of Agricultural Commodities, National Council of Applied Economic Research, New Delhi, 1970. Pp. vii + 92. Rs. 18.00.

Projections of demand and supply of agricultural commodities are helpful in formulating policy decisions in a country embarked on planned economic development. They also render a monitoring function for judging the impact

of policies. In our country the Ministry of Food and Agriculture, the Perspective Planning Division and the National Council of Applied Economic Research have provided projections for aggregate demand and supply of agricultural commodities. In addition, individual research workers have also provided demand and supply projections for certain commodities and regions. Recently, there was a seminar organized by the Indian Society of Agricultural Economics which brought together a number of studies on demand and supply projections and the relevant techniques for making projections.*

The National Council of Applied Economic Research published a report on long-term projections of demand and supply of selected agricultural commodities for the period 1960-61 to 1975-76 in 1962. Since the living conditions of the people and agricultural technology have both changed in India, the National Council has sought to revise the projections made by them for the period beyond 1970 covering the period up to 1980-81.

Aggregate consumer demand for foodgrains depends on food habits, prices, population level and aggregate income. A convenient assumption made in most demand projections is that relative prices do not change for the period the projection is made. The aggregate demand for foodgrains for any period is estimated generally on the basis of knowledge relating to the rate of growth in population and the rate of growth in per capita income and the magnitude of income elasticity of demand. Aggregate demand estimates can also be made alternatively on the basis of minimum nutritional requirements. Estimates based on nutritional requirements have been presented by the Ministry of Food and Agriculture in their *Agricultural Projections in India*.

The National Council has provided two sets of aggregate demand projections, one based on time-series data and the other on cross-section data. The time-series data used for the purpose relate to the period 1950-51 to 1965-66. Time-series estimates of income elasticity of demand for the different commodities have been arrived by regressing estimates of per capita availability of a commodity on per capita national income (current income) and annual average current price. The National Council has defended their use of data on current income and actual prices instead of constant income and deflated prices because they could find no appropriate deflator for the income and price series. They have justified their position by indicating that the elasticity magnitude would not diverge much whether we use the current or the deflated series. Such an explanation appears to be unsatisfactory; on methodological grounds it would have been more appropriate for the estimates to be made using deflated series. The projected per capita demand for any year has been obtained from knowledge of base year per capita demand, percentage increase in per capita income and estimate of income elasticity of demand. Aggregate demand for any year has been obtained as the product of estimates on per capita demand and population for that year.

* Seminar on Demand and Supply Projections for Agricultural Commodities, Seminar Series-XI, Indian Society of Agricultural Economics, Bombay, December, 1972.

The demand projections based on cross-section data have been arrived at by the use of NCAER's All-India Consumer Expenditure Survey conducted in 1964-65 relating family expenditure on different goods and services to family income, number of consumption units in the family, level of education, activity status of head of the family, and level of development of the place of living of the family. The specific assumptions made in making the demand projections have been that the annual compound rate of growth in per capita real income will be 2.5 per cent and in population 2.4 per cent per annum, that relative prices would remain constant over the period studied, the population distribution would not undergo significant changes and that the level of education and the proportion of population exposed to development activities would go up by specified percentages, *viz.*, 10-15 per cent and 50-60 per cent respectively.

The National Council has pointed out the difficulties in making supply projections because of limitations of our knowledge on production functions, weather forecasting and future level of prices of agricultural inputs and outputs. In our country the problem of making supply projections has been further complicated by the fact that new technological innovations were introduced only recently and the rate of acceptance of the new technology by farmers is not known. Under the circumstances extrapolating production levels on the basis of past trends would be unsatisfactory. The National Council, therefore, has attempted to project supplies of the selected agricultural commodities on judgment relating to future growth rates and production response coefficients.

The National Council has provided alternative sets of supply projections, one based on the assumption that the growth rate in production of the selected commodities in the future would be the same as was in the period 1949-50 to 1964-65. Projections based on this growth rate have been referred to as the lowest possible level of domestic production that would be obtained over the projected period. These projections do not take into account the introduction of the new technology and the rate of its adoption. An alternative set of projection based on projected increase in gross area under cultivation and the allocation of the projected gross area, irrigated and non-irrigated, to different crops has been made. For the purpose of the projection, the likely area under the high-yielding varieties and knowledge regarding technical coefficients have also been taken into consideration. On the basis of demand and supply projections for the year 1975-76 and 1980-81, the National Council has inferred that from 1975-76 there would be an overall surplus production in cereals and foodgrains. They also forecast substantial surplus in cereals and pulses from 1980-81.

The forecast made by them three years ago seem to be, considering the present state of the economy, over-optimistic. It is difficult to believe, considering the present limitations on input supplies, that the surpluses fore-

cast by the National Council would emerge. For this they need not be blamed; projections, covering distant periods, for an entire economy, cannot be made with any great degree of accuracy.

The National Council has provided long-term projections which should be distinguished from short-term forecasts. The analytical tools for long-term projections and short-term forecasts are not basically different, since factors affecting demand and supply have to be considered in either case. Long-term supply projections, however, require much deeper insight and judgment on technological changes, rate of adoption, changes in Government policies with regard to land reforms, agricultural taxation, irrigation, public investment to improve the quality of land, etc. Similar considerations arise on the side of long-term demand projections which need consideration of possible changes in preferences and in the distribution of income, etc.

The reviewer would like to emphasize that somewhat greater attention needs to be paid to short-term forecasting that can be of immense value to Government in decision making. To illustrate, the Government of India has for many years followed the policy objectives of procuring and distributing foodgrains to ensure more equitable per capita shares in the country. The achievement of this objective requires fairly correct estimate of surpluses and deficits in the various States arrived at through short-term forecasting. Such an appraisal made in advance, would enable the Government machinery to follow a programme of procurement and distribution to mitigate the imbalances of per capita availability in the deficit States and by the poorer sections of the people. Short-term demand and supply forecast would also be most useful to Government in following an appropriate storage policy.

L. S. VENKATARAMANAN

Agricultural Development and Population Growth—An Analysis of Regional Trends in U.P., R. N. Tewari, Sultan Chand and Sons, Daryaganj, Delhi, 1970. Pp. x + 226. Rs. 25.00.

Our past experience in economic planning and its implementation has pinpointed serious gaps found in translating the economic plans into social and physical counterparts. This emphasizes the need for comprehensive planning at the regional level and the interpretation of the economic and social goals in terms of physical dimensions and evolving out of them a completely integrated and inter-related programme of development at all levels. Such planning could help to strengthen the economic basis of existing agglomerations thus fully utilizing the external economies present there.

Again the evaluation of the programmes undertaken during the first two Five-Year Plans clearly established that economic planning in India was

not able to remove the regional imbalances which posed a threat to our political values. There was thus some rethinking on the subject of development and the Planning Commission decided to adopt a regional approach to planning from the Third Five-Year Plan onward.

The regional approach to planning in Uttar Pradesh could not, however, be initiated earlier than the beginning of the Fourth Five-Year Plan by a broad demarcation of economically differential regions. The State has accordingly been divided into five broad regions, namely, (1) Eastern Uttar Pradesh, (2) Bundelkhand, (3) Central Region, (4) Western U.P., and (5) Hilly Region.

These natural regions of the State in which the present study has also been divided are now being utilized for distribution of economic activity with the intention of raising the level of development of backward areas of Eastern U.P., Bundelkhand region and the Hilly areas. The study by Tewari which is a revised version of his Ph. D. dissertation from the University of Udaipur in 1969 is an admirable piece of work on the subject providing intra-State and inter-regional analysis of the economic under-currents in one of the biggest States of India—U.P. It covers the most populous but at the same time most backward State, mainly dependent on agriculture and demonstrates a methodology to make use of the existing literature as well as empirical evidence for a detailed study of the type needed for the purpose of planning. Currently, the State Planning Institute of U.P. is proceeding with the work of organizing regional planning on a sound footing. One may or may not agree with all the suggestions given by the author, a study like this will, however, go a long way in filling the gap in the available literature on the subject and providing the basic guidelines for facilitating the work of the Planning Institute.

The principal topics discussed by Tewari are the formulation of indicators comprehensive enough for economic zoning, adjustments between and within, agriculture and demographic forces; measurement of regional trends in agricultural production, sources of change and the sufficiency of growth; causes and current generating and perpetuating regional economic imbalance and the problems involved for constructing a realistic National Food Budget.

Convinced that balanced regional development in a predominantly agricultural economy usually remained a myth unless the strategy of development is designed to meet the challenges at the State levels affording each region an opportunity to give its best, the study is devoted much to demonstrating the methodology for selective planning in agriculture. Selection of 'crop regions' and the recommended approach for integrated resource use planning are instances of the utilitarian aspects of the book. The author has sought to demolish the case of the then existing pattern of planning which lays stress on schemes rather than on regions (area) in the State.

Tewari's argument is that in most of the less developed districts there is no reason to expect a reduction of absolute numbers in the rural population in the near future. At this stage of development the economy of the State appears as disintegrated, isolated and like an island with varying degrees of economic achievement. He pleads for an interdependent economic region which would lead to progressive internal integration with wider markets for productive resources. He suggests that assured supply of water through irrigation and selectivity in agriculture planning as well as linking of targets to the regional needs and potentiality should be the core of future plans.

The author is quite modest when he concludes that the major objective of the study is to describe the trend, pattern and sufficiency of agricultural development vis-a-vis population growth from 1951 to 1966 in the regional framework of U.P. As an evaluation it endeavours to explain the economic behaviour of the agricultural sector at the macro-micro level. As a diagnosis, it does not claim to produce specific cures for unhealthy economic situations nor it attempts to forecast the course of development in the economic system, that is really the function of a prognosis. It is only a study of what has happened and ends with indicators for future policy formulation, on the need for formulating a more realistic agricultural development programme keeping in view the sub-State level economic under-currents.

The problems focussed by Tewari have now been highlighted in the post High-Yielding Varieties period when we observe that the growth of foodgrains or for that matter agriculture in the whole of U.P. is not very encouraging but the Western Region can very well be compared with its Northern neighbours—Punjab and Haryana—towards their contribution in the green revolution. Practically the whole of wheat procured by the Government for public distribution comes from Punjab, Haryana and Western U.P. If we go a step further, we observe that the per unit costs are also comparatively lower in this region as compared with Punjab and Haryana on the basis of the available data. Really speaking, Western U.P. can now be considered as a separate identity from the rest of the State. Regional studies of the type will thus be of great value and the present study by Tewari, although quite out of date, will be a source of inspiration for all those who are interested in discovering a way out of the appalling poverty of U.P. The study will prove useful as a reference to the policy-makers as well as economic analysts.

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