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Vol XXVI
No. 2

ISSN 0019-5014

APRIL-
JUNE
1971

INDIAN JOURNAL OF AGRICULTURAL ECONOMICS



INDIAN SOCIETY OF
AGRICULTURAL ECONOMICS,
BOMBAY

BOOK REVIEWS

Economic Theory as Applied to Agriculture, G. D. Agrawal and P. C. Bansil, Vikas Publications, Delhi, 1971. Pp. viii + 253. Library Edition Rs. 25.00. Student Edition Rs. 15.00.

In Agricultural Economics, textbooks dealing with the application of economic theory to Indian agricultural problems are rare. The need for such books is felt because new agricultural colleges and universities are being opened. As is evident from the Preface, the authors seem to be fulfilling four objectives in the book under review. These are (i) to meet the increasing demand for agriculturally trained personnel in view of the lack of suitable literature with Indian illustrations, (ii) to facilitate the understanding of the intricate problems of agriculture, in the realm of economic theory to an average citizen, (iii) to discuss at one place the major economic problems with particular reference to Indian agriculture, and (iv) to make the study of agricultural economics easy and stimulating for the students, politicians and all those interested in the economic development of the country.

With these lofty aims, the authors start with the usual definition of economic science as a study of behaviour of human beings in relation to the process and problem of social adjustment in respect of scarce goods. The divisions and sub-divisions of agricultural economics and its scope are discussed. However, some statements which are not so meaningful are made. For example, the authors say, "it is profitable to process farm produce on large scale in a factory if only to reap the benefits of the scale," and conclude "thus, in addition to 'production economics,' 'marketing economics' has also assumed importance in recent years." (p. 5.) On the same page while discussing distribution, the authors state: "Profits are rewards reaped by the entrepreneur for his adventure, risk-bearing, and uncertainty bearing." Then without even mentioning different theories of distribution developed since the time of Wicksell, the authors boldly assert: "These are some of the principles which govern the distribution of wealth in the society." Apparently not satisfied with this, the authors emphasize the importance of economics of distribution by giving a rather political colour and state: "With the rise and spread of leftist ideologies and greater attention being paid to the uplift of agrarian societies, the economics of distribution has received more importance." (p. 6.) Again as the authors intended, they should have discussed the nature of the sub-division of 'Economics of distribution' only.

After having discussed the economics of consumption as a part of Agricultural Economics (p. 5), they again (pp. 7-8) emphasize consumption as a basic part of Agricultural Economics and in their enthusiasm they talk several things which seem out of place. For example, they say : "Again the nature of consumption standards does in no small way depend upon the design of *distribution*..... And modern economic analysis informs us that consumption is linked with *planning* in ways more than one. In fact, all planners have to take stock of the desired standards of living, and consumption levels depend upon the performance of the planners." It hardly needs any explanation that the level of consumption to a great extent is a function of the level of income and hardly of the performance of the planners.

In discussing the difference between static and dynamic analysis, the authors neglect altogether the discussion on time element which makes an analysis static or dynamic.¹ Instead very vaguely they say: "When these static assumptions (tastes and income remain unchanged) are shed away, and the economy is studied under progressive conditions, the approach is dynamic.....Conclusions of static analysis are no doubt valid in Agricultural Economics. Still, there is need for dynamic analysis and this is being increasingly applied for obvious reasons." (p. 9.) The authors do not say what they really mean by 'progressive conditions' and 'obvious reasons.'

In Chapter 2, there does not seem any consistency between the title and the discussion that follows. Though the title is 'Agriculture as a Productive Activity,' the authors discuss the contribution of agriculture to the national economy, its peculiarities, its contribution to national incomes of different countries (Table 1) and give a descriptive account of occupational distribution. This is followed by a brief discussion of 'agriculture as a varied activity' including that of Denmark agriculture. Then in continuation they say "Table 2 will give an idea of the distribution of fibre crops like cotton.... and livestock in the major producing areas of the world." The source and time reference of Table 2 are not given. In fact this table appears to be out of place.

The discussion of 'Factors of Production' in Chapter 3 starts with jumbled statements such as "A fisherman goes to the sea, spreads his net and catches fish.... A farmer tills the soil, gathers the harvest." (p. 20.) Similarly, the services of a policeman are mentioned as a factor of production. Reference is made of Adam Smith and J. B. Say without referring to their work. (p. 22.) Following Wiser, but without mentioning his work, the authors classify factors of production into two, viz., specific (with a single use) and non-specific (having a number of uses). Without specifying the assumptions and the nature of a production function, the authors state "...non-specific factors of production can claim a payment equal to their marginal productivity...." (p. 23.) The combination of enterprises and factors of production and type of farming are also discussed. Here, the authors could have actually demonstrated the application of economic theory by using data for enterprise and resource combination. In Chapter 4, while discussing 'Natural Resources' and land in particular some obvious statements are made which are as follows: "The demand for food and farm products rises with the growth of population and economic progress. Even a baby has to be fed." (p. 29.) In this chapter also, the authors could have demonstrated the use of economic theory in agriculture. Partial budgets using the principle of added cost and added returns could have been easily used in the discussion on 'selection of land' (p. 37) and 'land appraisal.' (p. 40.)

Chapter 5 is entitled as 'Labour: The Human Basis.' Labour is classified according to the work performed and period of employment; factors affecting supply and demand are also discussed. Reference to Adam Smith and Marshall is made throughout the chapter though without giving reference to their work.

1. J. R. Hicks: *Value and Capital*, Oxford University Press, New York, U.S.A., 1939, p. 115 and W. J. Baumol: *Economic Dynamics—An Introduction*, MacMillan Company, New York, U.S.A., Second Edition, 1959, pp. 3-8.

'Combination of labour' (p. 51) is said to refer "to employment of the right number of labourers of different kinds in such proportions that they are just sufficient to carry out the operation without any loss in the output of work in a given time." Similarly, efficiency of labour is defined in a too general way. The discussion on factors affecting the efficiency of labour (pp. 53-57), selection of labour (pp. 57-58), and requisite qualifications of the manager (pp. 59-60) is descriptive and obvious. Although the authors suggest that the economic principles underlying the choice and combination of enterprises, minimization of costs and maximization of returns, etc., must be understood by an efficient manager (p. 59), these principles using farm data are never discussed in the whole book. The discussion on training of labour and farm work, the need for close supervision and some shortcomings (perhaps in labour management) appears to be redundant.

Chapter 6 is devoted to a discussion of the law of diminishing returns with the use of data (hypothetical or actual?). The discussion on the stages of production with graphical presentation of data is, however, conveniently omitted. The chapter ends with a section on 'population and agriculture' with hardly any discussion of the relationship.

The discussion on Chapters 7 and 8—'Capital and Its Forms' and 'Agricultural Structure' is too general, descriptive and without application of economic theory. Most of the discussion on pages 24-26 is repeated on pages 85-86. Without giving any illustration on the application of economic theory to the data on Indian agriculture, the authors state: "The wise cultivator applies the principle of choice in the selection of crops and enterprises." (p. 85.) No empirical evidence has been given to justify statements on diversified farming (p. 87) and dry farming. (p. 92.) With reference to the 'modes of farming,' the statement "farming is more or less a way of life . . ." (p. 93) contradicts the earlier statement "Agricultural production is . . . assuming the characteristic of a business rather than a way of life . . ." (p. 3.) The discussion on the economic systems (p. 95) with reference to J. D. Black is repetition of the discussion under 'land systems.' (p. 43.)

The interpretation of the Ricardian theory of land rent in Chapter 9 is ambiguous and confusing. For example, the output price in the long run is said to be equal to the cost including profits; but which cost and under what assumptions? At the end of this chapter, 'the modern theory of rent' is discussed. However, one could not know from the discussion what actually is modern theory? and how is it different from the Ricardian theory? Rather one gets curious to know the policy implications of the statements like "Rent also owes its origin to the marginal productivity of land." (p. 108.)

Different wage theories are described in a rather sketchy way in Chapter 10. While attempting to illustrate the marginal productivity theory, the authors equate the marginal productivity of a worker with his utility! (p. 116.)

The marginal productivity, the Keynesian liquidity preference and Bains' loanable fund theories are discussed in Chapter 11 entitled 'Interest and Profits.' The authors consider Keynesian theory as 'modern'; they say, "without going into the details of these motives (for holding cash) we may agree with Keynes that the rate of interest varies inversely with liquidity preference. (p. 120.) The authors,

however, do not seem to be satisfied with this 'modern explanation' and say, "the farmer is not interested in the theoretical framework. But the agricultural economist is : hence it is proper to visualize how interest is actually determined in the sphere of agriculture." (p. 121.) This is discussed with reference to time. "Longer the time, higher the rate of interest." But instead of discussing determination of interest in agriculture with theoretical rigour, they move on to the causes of the high rate of interest in agriculture stating vaguely some of the causes like "several formalities have to be observed and several types of accounts kept under the legislation, all sorts of malpractices creep in." (p. 121.) In the later part of this chapter, the discussion on 'profits in agriculture' and 'theories of profits' is too general and contradictory. For example, the authors state: "Under progress, profits appear to be going down" (p. 124) and in the same paragraph they say, "with the progress and modernization of agriculture it is possible that profits may rise." (p. 124.) Diagrammatic presentation of some of the theories would have strengthened the contents of the chapter.

Chapter 12 is devoted to 'Marketing of Farm Products' and Chapter 13 to 'Prices in Agriculture.' Nearly one-third of the discussion on 'Prices in Agriculture' in Chapter 13 (pp. 148-150) is repetitive of Chapter 12. In both these chapters the authors could have, with the help of empirical data, used economic theory to explain some of the important concepts.

Chapter 14 on 'Agricultural Finance' seems to be too general. Instead of applying economic theory to help solve financing problems of agriculture, the authors discuss the kinds of credit, peculiarities of agricultural credit and essentials of sound credit policy.

'The Farm Co-operatives' in Chapter 15 could have been discussed on a practical plane by throwing light on the actual performance of the co-operative sector, its problems and future prospects in the face of current thinking on the subject in the country.

From co-operatives, the authors suddenly move on to 'Some Aspects of Consumption' in the next chapter. One might wonder the logical sequence of this chapter and also its relevance when important concepts such as demand for agricultural commodities, estimates of elasticities and their policy implications have not been discussed. Then comes Chapter 17 on 'Agricultural Trading,' which does not contain any empirical data in support of some of the contentions though it is disproportionately large in size. While discussing 'Taxation and the Farmer' in Chapter 18 the authors ramble throughout. How economic theory could be applied to determine tax in the agricultural sector and on agricultural incomes is not discussed. The work done by Indian workers such as Ved Gandhi on agricultural taxation is not even referred.

Chapter 19 on 'Agricultural Planning' is an example of poor drafting and still poorer editing. For example, while discussing the contributions of the agricultural sector to 'agricultural planning' (pp. 222-223), three contributions are mentioned. This is followed by a paragraph on 'objectives of agricultural plans;' the subsequent paragraphs do not clearly show whether they pertain to the aspects of contribution or the 'objectives' or both. Further, while discussing 'demand estimates' and targets the authors talk about the demand and price

elasticities, without making any reference to the estimational formulae. And then they advise : "While applying these refined formulae, one has to be very selective in the use of basic material." (p. 226.) Again without elaborating the elasticity coefficients, nutritive norms and 'end use approach,' the authors say: "The target for oilseeds has to be based on human requirements determined like foodgrains according to the elasticity coefficients and nutritive norms . . . on the basis of 'end use' approach. (p. 228.) A brief discussion on the successes and failures of different Five-Year Plans in the country would have been educative.

Agriculture in a developing economy, which is intended to be discussed in the last chapter is hardly discussed. Instead the authors emphasize the need for empirical studies which do not really fit within the title of the book. It was also not necessary to emphasize the obvious role of agricultural economics. Without discussing the problems and possible solutions of the land problems, the authors say, "the problem of land has also engaged the attention of the Planning Commission since its inception. But are we," they ask, "any wiser for all this?" (p. 233.) The authors suggest (p. 235) the adoption of the Swedish, Finnish and German experience of 'point scale' method to minimize the chances of corruption in land evaluation—a suggestion worthy of being directed to the State Governments. In regard to the crop competitions and data so obtained the authors feel "pity that valuable experiments willingly carried out by thousands of farmers are not being put to a greater use." (p. 237.) But is it not equally a pity that this book does not demonstrate as to how such data could be used to determine the optimal allocation of farm resources?

The farm cost studies are said to contribute to increase in production and to effect economy in operating cost by making known the secrets of successful farming and management. (p. 237.) Earlier Farm Management studies have partially provided the farm cost data. The vaguely ambitious 'Comprehensive Scheme on the Cost of Cultivation' on an all-India basis recently sponsored by the Directorate of Economics and Statistics (Ministry of Agriculture) is intended to provide data to the Agricultural Prices Commission for fixing foodgrain prices and this might, perhaps, satisfy the authors (by making known the 'secrets of successful farming and management').

The authors appear to be unaware of the commendable job of the Programme Evaluation Organisation of the Planning Commission as is evident from their statement ". . . unfortunately, so far the country is lacking in . . . well developed organization of agricultural economists entrusted with the task of efficiency-audit of results and achievements of the agricultural programme." (p. 240.) The suggestions put forward at the end of the chapter seem redundant.

This review is intended to provide some guidelines for necessary revision so as to remove the inconsistencies and shortcomings and thereby to improve its standard. Printing errors on pages 8, 28, 56, 103, 116, 138, 147, 165, 217, 220 and 223 could also be looked into and for an interested reader work of the economists whose names have only been mentioned could be referred. The price of the book seems to be on the high side particularly for the student community.

Co-operative Leadership and Management, C. Dinesh, Studies in Co-operation No. 9, Vaikunth Mehta National Institute of Co-operative Management, Poona, 1970. Pp. 92. Rs. 8.00.

This empirical study which is an enquiry into co-operative sociology, tries to focus attention on some of the basic factors like caste, income, age, educational qualifications, political affiliations, etc., involved in the evolution of co-operative leadership. The author has selected on a purposive basis two credit and eight marketing co-operative institutions in Dharwar district (Mysore State), and four credit, three marketing and three processing co-operative institutions in Kolhapur district (Maharashtra State). A selection of 14 leaders from Dharwar and 19 leaders from Kolhapur was also made purposively, who were interviewed with a questionnaire (published as an annexure to the report) which covered historical, environmental as well as functional aspects of the respondents' activities. After explaining the objectives and methodology in section I, the author gives socio-political and economic structure and a brief account of the growth of co-operative movement in the two selected districts in sections II and III. Sections IV to VII form the main report and deal with an analysis of data collected, while in section VIII the author has attempted to draw a few conclusions on the basis of the study.

The author claims this to be a 'basic study' in the field of co-operative sociology which would help in developing concepts to be applied in similar studies elsewhere. It is a fact that in India almost all the publications on co-operation are mere narrations of developments (mostly in co-operative credit) since 1904 and faithfully refer to the 'Rochdale' principles and end up quoting some sentence or the other either from the Report of the All-India Rural Credit Survey or more recently the All-India Rural Credit Review Committee. Few attempts have been made to fathom in depth a particular aspect of the co-operative movement; fewer to study the impact of social structure on the movement. By attempting a study of the nature and character of the co-operative leadership, its role in actual operations and management of the institutions, the author has made a valuable addition to the available literature on the state of affairs of co-operative movement in the country.

On the strength of information collected and analysed in sections IV to VII of the report, the author observes that the motive of the leadership in the co-operative movement has undergone a change. "The social service and philanthropic attitudes of pioneering leaders had been completely replaced by the spirit of enterprise and self-aggrandisement of the present leadership.... (p. 64.) He strongly feels that "legislation allowing only functional experts as chairmen of the developed co-operative institutions, namely, banking experts as chairmen of banks, marketing experts as chairmen of marketing societies, etc., would be a good beginning." It may be noted here that barely 2-3 years ago, under the social control scheme in respect of commercial banks the legislation provided for full-time paid banker-chairmen for commercial banks, in place of part-time industrialist chairmen. In view of the fast increasing operations of the co-operative institutions, it would be in the interest of the healthy growth of the movement to replace the present traditional leadership by functional leadership.

The author frankly states that "caste and income were (and, we might say, are) the two major determinants of the leadership structure . . . these were also the factors responsible for the growth of the co-operative movement." (p. 66.) Although traditional leadership did play an important role in the initial stages of the movement, the dangers of allowing them to continue could not be lost sight of. The author rightly suggests that "restrictions on holding positions of responsibility beyond a specified period might be useful in preventing concentration of leadership and vested interests." (p. 66.) The Maharashtra Government has recently passed such a legislation. The fury of the traditional leadership and the dramatic developments that followed the introduction of this Bill in the Maharashtra Legislative Assembly are still fresh in our memory and they reinforce the need for legislative action in other co-operatively well-developed States as well for, the leadership needs of developed co-operative institutions are vastly different from what the traditional leadership can provide. The author says that an indirect way of tackling this problem is "attracting educated youngmen into the co-operative field" However, he has not elaborated as to how this can and should be done.

Caste was one of the major determinants in recruitment. Education and training were totally ignored by the leaders with regard to recruitment. In Dharwar district, of the 65 managerial personnel, 54 belonged to the Lingayat community and in Kolhapur district of the 32, 9 belonged to Maratha caste and 7 to Lingayat-Jain group. The emphasis on caste was more pronounced in recruiting supervisory and subordinate staff." (p. 52.) In order to eradicate the evil of casteism in the recruitment of co-operative personnel and to forge an effective functional leader-manager relationship, rules regarding recruitment, promotions and other service conditions should be governed by legislation.

Although the study is confined to two districts only, it broadly reveals the state of affairs of the movement in the two States from which these districts are selected. The study underlines the need to recognize the importance of scientific management and the need to attach specialists in different fields to Deputy Registrar's office so as to enable the latter to provide the necessary guidance to the multi-sided growth of co-operative institutions.

The report has an attractive three colour cover and may be described as short but enlightening. It has a useful bibliography on leadership at the end. The otherwise good print of the report is marred by a few printer's devils. The spelling mistakes are annoying, see for instance, the spelling of 'credit' (p. 3, line 13), 'Tables' (p. 27, line 5), 'each' (p. 37, line 1), 'villages' (p. 43, line 2 and 4 from bottom), 'promoted' (p. 44, line 13), 'recruiting' (p. 52, line 13), etc.

The study is a timely one and more such studies need to be undertaken not only with a view to equipping the fast expanding co-operative sector with modern management techniques but also to stem the rot that has hindered the healthy growth of the movement in some parts of the country.

P. N. JOSHI

Modernising Indian Agriculture—Report on the Intensive Agricultural District Programme (1960-68), Vol. I, Expert Committee on Assessment and Evaluation, Ministry of Food, Agriculture, Community Development and Co-operation (Department of Agriculture), Government of India, New Delhi, 1969. Pp. xii + 130.

The Intensive Agricultural District Programme (IADP) emerged out of the recommendation of an expert team of the Ford Foundation in their report on 'Food Crisis.' The actual programme was planned by a second team of the Ford Foundation and was called a package programme for providing all inputs in a package form in a selective area. The programme was launched in 1960 in 15 selected districts which became laboratories for modernization of agriculture in the whole country. The positive and negative results have helped in finding a proper path for other areas; the positive results have a further pace-setting function through a demonstration effect for the rest of the country.

Ever since its inception the programme has been under constant scrutiny and evaluation and the present report is the fourth in the series, which however, covers the whole period 1961-1968. Volume I contains the main recommendation while Volume II gives the background material. The findings of the present study are based on (i) bench-mark and assessment survey of the Programme Evaluation Organisation, (ii) response received on a questionnaire used amongst a large number of knowledgeable persons, (iii) interviews with the District Collector, Project Officers and other staff at various levels, and (iv) on the spot study made by the Committee.

The report states that the programme has lived up to its promise in the setting in which it operated—"where effectively organised and improved technology was available it has been able to move agricultural production forward more rapidly than did earlier approaches and to reach a wider range of farmers, large, medium and small." Not only the tradition-bound Indian has shown readiness to accept innovations the new knowledge centres and production-oriented government policy and the new technological possibilities sparked by the high-yielding varieties provided a suitable climate for extension of the programme beyond the areas directly covered by these programmes.

It emphasizes the need for a better use of available facilities such as soil testing laboratories, operational research units, etc. For proper utilization of the inputs it has recommended an area-oriented and problem-solving adaptive research on the same basis as the exotic high-yielding varieties were adapted to conditions in the country by further research and adaptation.

There is need for administrative co-ordination at each level right from the Centre to the *Panchayati Raj* level. At the State level it has recommended intensive agricultural modernization cell in the Directorate of Agriculture and Intensive Development Committee at the Secretariat level under the chairmanship of the Agricultural Production Commissioner. At the district level it has emphasized the role of Project Officer of the level of Joint Director of Agriculture to co-ordinate all activities especially in animal husbandry, fishery and horticulture. At the grass-root level the Committee feels that the existing ratio of one VLW to

85,000 is too low when most of them have become demoralised and ineffective. This manpower should be properly equipped and motivated for spreading the process of modernization further. It has recommended for making him 100 per cent agricultural man or at least earmark 75 to 80 per cent of the VLW exclusively for agricultural modernization programme.

It has sounded that modernization process is not a once-for-all operation but a continuous process. The very process throws up new challenges both on the production and the marketing side of agricultural products and other productive inputs and consumer goods.

The Committee at one place has pointed out that 'alternatives for the use of resources and the consequences of such use must be evaluated and put before the policy makers' and that 'before any technology is adopted two questions must be answered—will it work? and will it pay?' But, the report has not given any indication if it had gone into the cost-benefit analysis of the programme at the marco district level or at the farm level. This is a necessary pre-condition for path-finding and pace-setting role of the experiments made in these laboratories.

However, the report is a useful contribution to the existing literature on modernization of agriculture in India providing a number of guide-lines for improvement of the programme.

D. C. SANCHETI

Taxation of Agriculture in India : A Critical Survey of Agricultural Taxes on Land, Income and Wealth, Research Publication Series-8, IMC Economic Research and Training Foundation, Sir Purshotamdas Thakurdas Research Wing, Indian Merchants' Chamber, Bombay, 1970. Pp. viii + 115. Rs. 20.00 or \$ 4.00.

There has been a spate of writings in India in recent years on the hypothesis of under-taxation of farm households vis-a-vis non-farm households. While the majority of writings have tried to establish this hypothesis on the basis of broad comparisons, some have no doubt subjected it to a rigorous empirical testing. Almost all of them have made out a case for increased agricultural taxation. The present study takes this case for granted. It does not purport to present any additional empirical relations relevant to the subject; it rather attempts to serve as a treatise which "only endeavours to piece together the available material on the subject in a connective and purposive manner."

At the outset, the study brings out briefly the functional role of agriculture in the process of development, in general and that played in the economic development of Japan, Russia, China and some other countries, in particular. This is followed by a discussion of the economic principles on the basis of which taxation of agricultural sector is being urged : principles of intra-sectoral and inter-sectoral equity, relative benefits of public expenditure, savings mobilization, etc. Empirical evidence on the intra-sectoral and inter-sectoral inequity is cited from many studies on the subject, but the emphasis is rightly given to those of Ved P. Gandhi and E. T. Mathew, which have dealt with the subject in a comprehensive

manner. The next three chapters examine the three bases of taxation on agriculture, namely, income, land and wealth. In the chapter on taxation of agricultural income, evidence is presented on how some prosperous States like Gujarat and Punjab have shown reluctance to impose the tax and how many others, which have already imposed the tax, are reluctant to implement it effectively. The chapter on taxation of agricultural land makes a critical assessment of various proposals for eliminating the drawbacks in the present system of land revenue assessment and making it a worthwhile instrument for taxing agriculture. Recent attempts made by State Governments to abolish land revenue on small holdings or surcharge thereon are also reviewed. In this regard, the suggestion made is that while land revenue on extremely uneconomic holdings may be withdrawn, a graduated surcharge on the rest of the holding should be imposed. While analysing the subject of agricultural wealth tax, three types of capital taxes, namely, capital levy, succession duty and special land tax have been considered and found to be unsuitable in the present Indian context. Instead, the proposal seeking the application of general wealth tax to agricultural wealth has been considered desirable.

If the purpose of the study was to make out a case for increased agricultural taxation on the basis of available empirical evidence, the purpose has been broadly served. Instead, if the study was to present a critical analysis of the subject of agricultural taxation, the reader has a right to expect much more than what is presented in the study.

Take, for instance, the commendable role of land tax in Japanese economic advancement. Besides the socio-political factors, two basic economic factors which made possible the stiff land tax in Japan were : a significant improvement in land and labour productivity and constancy, in absolute terms, in the size of agricultural labour force over a period of 50 years between 1872 and 1920. On the other hand, during the last three decades, India has experienced a large increase in agricultural labour force and a decline in labour productivity. It should be emphasized that notwithstanding the skewed distribution of land holdings, the quantum of additional marketable surplus obtainable is directly related to increases in labour productivity.

Secondly, it is accepted that the present direct tax burden on the non-farm sector is inequitous as compared with the burden on the farm sector. But, almost all the aggregative estimates referred to by the present study have included corporate taxation, which forms nearly 50 per cent of the direct tax burden on the non-farm sector and which is not surely comparable with direct taxes on households. No doubt, even on non-farm households, there is a progressive system of income tax and other direct taxes. This progressive system is valid because there is a progressive rise in incomes on the non-farm income scale. In other words, the revenue potential of such a progressive system of taxation depends upon the level and the extent of 'big' incomes in the system. A recent study made by the reviewer shows that more than 75 per cent of direct taxation in the non-farm household sector is borne by households having incomes above Rs. 25,000 per annum. On the other hand, estimates of income distribution show that the number of such top income households is insignificant in the farm sector. Therefore, the scope for the operation of high marginal tax rates in the farm sector is limited.

This does not mean that there is absolute equality in the distribution of direct tax burden among farm and non-farm households. But, in respect of non-farm households, there is a vast divergence between tax incidence as suggested by tax schedules and actual/effective tax incidence. For example, in a study by the reviewer on inter-class incidence of taxation, direct tax burden on income assessed by the tax authorities in respect of non-farm households earning more than Rs. 25,000 per annum worked out to about 41 per cent, whereas the effective incidence on the estimated income appropriated by these households worked out to only 18 per cent. Thus, the existing administrative and legal constraints considerably dilute the revenue potentiality of a progressive system of taxation in the non-farm sector. Assuming such administrative and legal constraints, the revenue potential should be further diluted in the farm sector because of the lack of 'big' incomes in the system, which gets reinforced by three factors : (i) land reforms and changes in land distribution; (ii) relatively large size of households with more than one worker and consequential scope for submitting more than one tax return; and (iii) scope for under-reporting of income inherent in farm practices.

This, again, does not imply that the farm sector in India is not capable of playing its due role in providing a larger quantum of savings than at present. But, firstly, the rationale for it should be based more on the needs of developmental finance than on the principles of inter-sectoral equity. Secondly, for extracting these additional savings from the farm sector, direct fiscal methods like taxes on income, land and wealth will have limited scope. While the existing direct tax structure in the farm sector needs to be rationalised for its own sake, many other fiscal and para-fiscal methods may have to be adopted for siphoning off larger surpluses from the farm sector.

A few critical comments offered above do not, however, detract from the study its usefulness as a timely contribution to the debate on the subject of agricultural taxation. The effort put in marshalling diverse information on the subject is commendable.

S. L. SHETTY

Agricultural Taxation in Gujarat, Mahesh T. Pathak and Arun S. Patel, The Council for Economic Education, Asia Publishing House, Bombay, 1970. Pp. xi + 93. Rs. 7.50.

The problems of agricultural taxation have of late been a subject of much public discussion, both from the point of view of equity and from the point of view of resource mobilization. However, well documented studies relating to this problem have been rather rare. The book under review is, therefore, most welcome. It is a systematic study of agricultural taxation in Gujarat. A great deal of painstaking work has gone into its making. At each point, the authors have explained the methodology adopted, their assumptions and the limitations. It is to be hoped that similar studies relating to other States will be undertaken, so that the problems of agricultural taxation may be nearer to rational solution.

The book is divided into four chapters. In the first chapter the authors give an idea of the relative burden of taxation upon the agricultural and the non-agri-

cultural sectors of Gujarat. They find that the total burden of taxation (direct and indirect taxes) per person came to 12 per cent of per capita income in the agricultural sector, while it came to about 20 per cent of per capita income in the non-agricultural sector. The difference in the relative burden between the two sectors is entirely due to the difference in the relative burden of direct taxes. An important finding of the study is that the relative per capita burden of indirect taxation is more or less equal in the agricultural and the non-agricultural sectors. The differences are therefore attributable to the differences in the burden of direct taxes. The most important direct tax on the agricultural sector is the land revenue. The land tax is found to be highly inequitable as between districts, villages and individual farmers. These issues are discussed in the second chapter which is devoted to a detailed discussion of the land tax. In the third chapter, the authors examine the movements of the terms of trade and come to the conclusion that the agricultural sector has derived significant advantage from the favourable movement of the terms of trade. There is thus a strong case for reforming the structure of agricultural taxation, to impart to it a larger measure of equity and elasticity.

While the study is useful so far as it goes, it could have been further enriched by an examination of the benefits of public expenditure. An income-groupwise analysis of the incidence of taxation would have further added to its utility. More important, in the last chapter, the analysis of different effects of various alternative patterns of agricultural taxation could have been taken up in depth. However, the book will no doubt be found useful by all those interested in this vexed problem.

V. N. KOTHARI

Marketing of Cash Crops: Efficiency of Futures Trading, M. G. Pavaskar, Economic and Political Weekly, Bombay, 1971. Pp. xii + 137. Rs. 15.00.

The book contains six studies. The first three present empirical evidence on price leadership, price forecasting and price stabilising functions of different futures markets. The last three studies are in defence of futures markets, providing empirical support for their usefulness and questioning the validity of several recent attacks against their functioning. All except the first study on price leadership were published earlier as journal articles. The publication of these studies in the form of a book constitutes an important and welcome addition to the still scanty scientific literature on futures trading in India.

The economic benefits of commodity futures markets are derived from their pricing and hedging functions. The hedging function of futures markets is very well-known but its pricing function in providing price leadership, and also in forecasting and stabilising price has received much less attention. Lack of understanding of this important pricing function of futures markets has resulted in the markets becoming targets of attack for allegedly causing price instability.

Pricing efficiency in a commodity futures market implies that futures market acts as a price leader, that futures prices represent price forecasts made by market operators, and that such forecasts bring about inter-temporal equilibrium in commodity prices, reducing both the magnitude and frequency of price fluctuations in the market.

The price leadership of the futures market arises because speculators who operate in these markets obtain significant market information with almost no loss of time regarding crop forecasts, inventories, market arrivals and export prospects, relating to the commodity in question through telephone and telecommunication systems. The market information so collected has a direct influence on futures price. The effect on spot price is indirect and felt through the futures price. The process of price determination in spot markets confers evidence on the role of price leadership of futures markets. The 'bids' and 'offers' in spot markets are often made by reference to 'on' and 'off' margins above or below the futures price. Pavaskar tests the hypothesis of price leadership of the futures market by considering data of cotton and castorseed futures markets for the period 1953-54 to 1958-59, and 1953-54 to 1965-66 respectively. Two methods are employed. The first method consists of comparing the actual frequency distribution of all possible directions and forms (lead, lag, no change) of future-spot price movements (nine cases) with the frequency distribution to be expected on the assumption that all the nine cases are equally likely. The second, linear regression, method has been employed to assess the extent of inter-relation of futures-spot prices and to form judgment, through use of appropriate time lags between the two series, on which is to be regarded as the price leader. Detailed results of the empirical analysis are presented which broadly support the hypothesis that futures price leads the spot price.

The second study on the "Accuracy of Futures Market Price Forecasts" seeks to examine (i) the degree of accuracy of price forecasts in commodity futures markets, and (ii) whether such forecasts are biased in favour of higher or lower prices. For testing the forecasting function of a futures market, Pavaskar compares the futures prices over the period of the contract prior to the delivery month with the futures price during the delivery month. This study is with reference to three important futures markets, *viz.*, the cotton, castorseed and groundnut futures markets of Bombay. The errors of price forecasts are expressed as percentage deviations of monthly average futures prices prior to the delivery month from the average futures price during the delivery month. The error of price forecasting, the study shows, is generally larger the longer the period over which the forecast is made. There is a careful and detailed examination in this study of the probable causes that contribute to bias in price forecasts in futures markets. In particular the author critically examines the reasons that have been commonly advanced for downward bias in price forecasts such as under-estimation by speculators of the prospective trend in commodity prices, new crop expectations, hedger's risk premium and controls on futures markets. Futures price quotations of a new crop, several months before the crop is harvested, are largely based on the expectations of the trade about the size of the crop. A downward revision of the crop estimates by the trade during the harvesting months is not infrequent. Such revisions are associated with corresponding upward revisions in futures prices. We may therefore witness new crop futures price quotations to be downward biased and rising during harvest and post-harvest periods. The presence of downward bias in futures prices has also been explained in terms of payment of risk premium by hedgers to speculators for the service rendered by them in bearing the risk of price fluctuations. Pavaskar, however, raises serious doubts on the application of the risk premium hypothesis to explain upward movement in futures prices in the cotton, castorseed and groundnut futures markets during the period

1953-54 to 1964-65 since there was a long term upward trend in the prices of all the three commodities. In Pavaskar's view short hedging would have been small in these three futures markets during the period covered by the study because hedgers would have run little risk in holding stocks during a period of rising trend in prices. In the absence of data on hedging (and speculative) commitments, since they are not published by the Forward Markets Commission, it is difficult to categorically refute or support the position Pavaskar has taken. Short hedging is undertaken by traders to insure against adverse seasonal price movement over the period the inventory is held and it is no comfort to them to be told that they need not insure their large inventories because there is a general upward trend in prices. Pavaskar, unfortunately, appears to have completely misunderstood Houthakker's explanation of risk premium paid by short hedgers and returns received by long speculators. According to Houthakker, speculators can receive a 'risk bearing' return by maintaining the long position in the futures markets. They can receive an additional 'forecasting return' by predicting changes in prices. These returns primarily depend on upward seasonal movement of futures prices and changes in the level of speculative commitments during the season and not on the general trend of prices as Pavaskar indicates. Pavaskar has taken the right stand in suggesting that it would not be legitimate to explain the downward bias in futures prices in terms of regulatory control measures on futures markets.

Organized futures trading has, time and again, been blamed for accentuating short period price fluctuations without any scientific investigation or empirical evidence in support of such accusation. Pavaskar presents an excellent study of groundnut kernel futures market covering two separate periods, one with, and the other without futures trading to compare short-term price fluctuations in the two periods. The statistical evidence Pavaskar presents clearly indicates that spot prices of groundnut fluctuated less widely when there was futures trading than in its absence. Such statistical comparison has an unavoidable limitations for it is impossible to say what the benefits of futures trading would have been during a period when there was no futures trading.

Pavaskar in the interesting study of "Futures Markets in Conditions of Short Supply" points out that the need for hedging, under such conditions, is greatly felt by exporters and forward sellers. His empirical study of oilseed commodities and pepper during the years 1959-60 and 1960-61 indicated that nearly 25 to 50 per cent of the export commitments in the different commodities were hedged in the futures markets. Pavaskar also observes that enquiries conducted by him on groundnut and groundnut oil futures markets at Bombay and Saurashtra indicated that traders (stockists) hedged a considerable proportion of their unsold stocks. Closure of futures markets, during periods of short supply when price rises inevitably occur, under the erroneous belief that it is these markets that cause the price increase, is mostly likely to reinforce the tendency of prices to rise because of the absence of a market to permit deferred demand and supply commitments.

In the study on the "Utility of the Futures Market in Cotton," Pavaskar states that the main justification for the cotton and other futures markets is the hedging facilities that they offer. The attack against cotton futures market, he points out, is misconceived, based on ignorance and prejudice and not on any critical analysis.

In the last study in the book "Why Does Organised Industry Assail Futures Markets?," Pavaskar unfolds the real reasons why large processors and manufacturers have attacked futures markets. These large processors and manufacturers as organized units seek to control the raw material and finished goods markets through elimination of trade intermediaries. Since futures markets encourage competition and are impediments to such exploitation, the organized industry has assailed futures markets.

All the six studies are well integrated, they shed considerable empirical evidence on the utility of futures markets and represent a scholarly contribution by one who is at the forefront in terms of expertise and knowledge of the working of Indian futures markets.

L. S. VENKATARAMANAN

Land Reforms in Tamil Nadu: Evaluation of Implementation, K. S. Sonachalam, Research Programmes Committee, Planning Commission, Government of India, Oxford and IBH Publishing Company, New Delhi, 1970. Pp. 201. Rs. 20.00.

This study is the latest among the series on "Implementation on Land Reforms" sponsored by the Research Programmes Committee, Planning Commission, New Delhi, the earliest of these being "Investigation into the Working of Bombay Tenancy Act, 1948" by V. M. Dandekar and G. J. Khundanpur, published in 1957. Thanks to the thoughtful efforts of the Research Programmes Committee, we have now a country-wide picture of the land reform legislation and of its implementation in various States.*

The major differences between the earlier and the later studies sponsored by the Research Programmes Committee relate to (a) methodology, and (b) the central focus of the objectives. The earlier studies were based on large-scale sample surveys and the later, including the present one, are enquiries in depth in purposively chosen high tenancy villages. The shift from large-scale sample surveys to depth

*(1) Investigation into the Working of the Bombay Tenancy Act, 1948, V. M. Dandekar and G. J. Khundanpur, Gokhale Institute of Politics and Economics, Poona, 1957.

(2) An Enquiry into the Working of the Bombay Tenancy and Agricultural Lands Act, 1948 (as amended upto 1953) in Gujarat (Excluding Baroda District), M. B. Desai, Indian Society of Agricultural Economics, Bombay, 1958.

(3) An Inquiry into the Effects of the Working of Tenancy Legislation in the Baroda District of Bombay State, V. Y. Kolhatkar and S. B. Mahabai, M. S. University of Baroda, Baroda, 1958.

(4) Economic and Social Effects of Jagirdari Abolition and Reforms in Hyderabad, A. M. Khushro, Osmania University, Hyderabad, 1958.

(5) Effects of Land Reforms in Saurashtra, R. R. Mishra, Vora & Co., Bombay, 1961.

(6) Land Reforms in West Bengal, S. K. Basu and S. K. Bhattacharya, Oxford Book Co., New Delhi, 1963.

(7) The Economic and Social Effects of Zamindari Abolition in Andhra, B. Sarveswara Rao.

(8) A Study of Land Reforms in Uttar Pradesh, Baljit Singh and Shridhar Misra, Oxford Book Co., New Delhi, 1964.

(9) A Study of Land Reforms in Rajasthan, Dool Singh, Birla Institute of Technology and Science, Students Agency, Birla Vidya Vihar, Pilani, 1964.

(10) Land Reforms in Vidarbha, K. R. Nanekar, Oxford & IBH Publishing Co., Calcutta, 1968.

(11) Implementation of Land Reforms in Andhra Pradesh, G. Parthasarathy and B. Prasada, Rao, Andhra University, Waltair, Scientific Book Agency, Calcutta, 1969.

studies is deliberate and is intended to clarify the totality of forces leading to success or failure of implementation in a given socio-economic situation. Quantification *per se* is given less importance in later studies. Further, in the earlier studies there was some attempt to assess the impact of land reform legislation on agricultural investments and output. In the later studies this attempt was given up, since it was known that legislation, by and large, was not effectively implemented. The focus, therefore, was shifted mainly to an assessment of (a) the nature of implementation including administrative procedures, (b) the circumstances under which the groups which are expected to benefit from the legislation failed to obtain these, and (c) the direct and indirect effects of legislation on agrarian structure and on the land market. K. S. Sonachalam's work, more or less, conforms to the broad pattern laid down for later studies.

The study covered mainly three pieces of land legislation in Tamil Nadu: (1) The Madras Cultivating Tenants Protection Act, 1955, (2) The Madras Cultivating Tenants (Payment of Fair Rent) Act, 1956, (3) The Madras Land Reforms (Fixation of Ceiling on Land) Act, 1961. In addition to these, some attention was paid to the legislation governing agricultural labour.

The evaluation of the implementation of the first two Acts is based mainly on official data relating to applications filed under various sections by landlords and tenants, districtwise. Details relating to various estimates of surplus land, actual surplus declared, extent of surplus distributed have been studied, under evaluation of Ceiling Act.

In addition to an examination of official data, a survey of agricultural holdings in 26 villages spread over 10 districts and covering 6,337 households was conducted. The major questions taken up for study in the survey related to agrarian structure in 1967, pre-reform agrarian structure 1954-55, and changes in agrarian structure.

The disputes under the Madras Cultivating Tenants Protection Act, 1955 were classified and studied under four categories : (1) eviction cases, (2) resumption cases, (3) lease continuation cases, and (4) restoration cases. The first two types are filed by the landlords and the latter two are filed by tenants. The story of the disputes in Tamil Nadu has many similarities to those narrated from other States. A large majority of the cases were filed by the landlords mainly under sections relating to eviction. Out of the total applications of 18,683 filed under this Act between 1964 and 1967 as many as 16,428 were filed by landlords for eviction of tenants. Tenant applications for lease continuation and restoration were negligible. The regional distribution of disputes has also many similarities to the studies elsewhere. The large majority of disputes were concentrated in the predominantly canal irrigated district of Thanjavur, the rice bowl of Tamil Nadu. The dry areas, as judged from disputes filed, were relatively unaffected by legislation. The applications filed under the Madras Cultivating Tenants (Payment of Fair Rent) Act, by tenants are also negligible, considering the number of tenants and the extent of tenancy in the State. Even here, the district which was prominent was Thanjavur, and applications filed from other districts were almost insignificant.

Commenting on the small number of applications filed by tenants, the author writes, "On the whole it appears that the tenants in Tamil Nadu are satisfied with the rates of rents fixed and other ancillary conditions although the rates are relatively higher than in the other States of the Union." (p. 62.) This inference is not warranted, and is not supported by the other material presented by the author. The author notes that "ten years after the enactment the clause relating to registration of tenants has remained a dead letter and the omission was rectified only in 1969." It is possible that the small number of cases from tenants is due to the fact that the tenant is too weak to confront the landlord in a court of law and in addition he cannot even establish his *bona fides* in the absence of records of rights.

An excellent narrative of administrative procedures adopted in relation to Madras Land Reforms (Fixation of Ceiling on Land) Act, 1961 has been provided. The results of the Act are disappointing, as expected. The surplus acquired and distributed is negligible and was far less than anticipated.

The official data on cases filed under various sections of the Act are no doubt useful for an understanding of the broad impact of the Acts on various groups, the major beneficiaries, etc., but it is to the survey data that one turns to probe the deeper forces at work in changing the agrarian structure. The extent of evictions outside the court of law, the nature of evictions, the class of tenants affected, the nature of the impact on the land market and a whole host of questions remain unanswered in the analysis of sample survey data. This is really unfortunate, since the schedule appended included questions on all these aspects. The analysis of sample survey on changes in agrarian structure, though illuminating on certain aspects, could have been more revealing. The official data disclosed that Thanjavur district was the main centre of conflict. It is, therefore, natural to expect crucial differences in the nature and degree of impact on agrarian structure between the predominantly canal irrigated Thanjavur, and other districts. But a regionwise break up of the data in relation to changes in agrarian structure is not shown.

Inferences relating to changes in agrarian structure are drawn in the study by comparing the agricultural status of households in 1966-67 with their corresponding status in 1954-55. It was found that some of the tenant households in 1966-67 were landless labourers in 1954-55, and some owner households in 1966-67 did not own any land in 1954-55. From this it was concluded that there was an upward mobility from landless labour to tenancy and from tenancy to ownership. The households covered in 1966-67 did not include other than owners and tenants. For this reason, the possible downward shift of a larger number of erstwhile tenant and owner households is ignored in the survey data, and, therefore, the legitimacy of inference, "on the whole the agrarian structure has shown signs of improvement meaning thereby, upward movement in agricultural pyramid, landless labourers becoming tenants or owners, tenants becoming owners and so on" (p. 122) becomes questionable. In fact, non-inclusion of the erstwhile tenant and owner households in the purview of the survey is a major weakness in the methodology of the study.

The data relating to characteristics of leased-in area, sale and purchase of households, by status, have very close similarities to those observed in other stu-

dies. A large majority of rentiers are absentees and not related to tenants; majority of lease deeds are oral. Rents are generally paid in kind and not in cash. Purchases by agricultural households exceed the sales in all the groups, this suggesting a transfer of land ownership from urban to rural and from non-agriculturists to agriculturists.

There are a few other issues, namely, growth and extent of "Capitalist Farming" in agriculture, changes in the extent and character of tenancy, the changing character of rental market, etc., on which one would seek light from the analysis on changes in agrarian structure. But it is possibly too much to expect this book or any devoted mainly to evaluation of implementation of land reform to throw light on all these.

The inclusion of a section on landless agricultural labour is well chosen, and provided a proper perspective to the study of land reform.

Sonachalam's painstaking survey has enough material for reflection and guidance for the policy maker and will stimulate further enquiries into the changing directions of agrarian structure mainly in the context of new technology.

G. PARTHASARATHY