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BOOK REVIEWS

Economics of Agricultural Credit with special reference to Small Farmers in West Bengal, Arun Kumar Bandyopadhyay, Studies in Economic Development and Planning, No. 35, Institute of Economic Growth, Delhi; Agricole Publishing Academy, New Delhi-24, 1984. Pp. xvi+174. Rs. 125.00.

The institutionalisation of rural credit in India was started as back as 1904 with the acceptance of village co-operative societies. Over time, a well structured institutional set-up for rural credit has emerged. Currently, formal rural credit is supplied by co-operative banks, commercial banks and regional rural banks with National Bank for Agriculture and Rural Development (NABARD) as a refinancing agency at the national level. Irrespective of all these developments, informal lenders remain an important or even the only source of loan funds for a majority of rural borrowers primarily belonging to the under-privileged sections of the society and nearly 50 per cent of the rural debt is due to them. Various explanations have been put forth for this continuing dependence of this majority of borrowers on informal credit. Mostly these explanations are qualitative in nature. The economics of credit use, a quantitative explanation has not been sufficiently covered. This study is expected to do justice to the topic it has chosen.

The study is organized under eight chapters. While Chapters 1 and 2 respectively are devoted to introduction to the study, and details on collection of data including survey design; Chapter 8 contains evaluation and conclusions on the study. Chapters 3 to 7 are devoted to analysis and discussion. Chapters 3 and 4 cover the contractual arrangements prevalent in the area between the lenders and the borrowers (landowners and non-owners of land). It also covers the procedures for computation of interest rate where it was not explicitly stated. The explanation for co-existence of multiple system of loans is covered in Chapter 5 whereas Chapter 6 contains explanation for high rate of interest. It also covers the composition of interest and factors that cause variations in the rate of interest. Chapter 7 compares the contractual arrangements between formal and informal systems of lending.

One important contribution of this regional case study is the substantive information it contains on informal credit market in the rural areas of West Bengal. The attempt to compute the rate of interest where not explicitly mentioned, though simple, is worth appreciation. On other scores the study could not be impressive and contributes little to the documented knowledge on rural credit market.

The author has concluded that the interest charged by informal lenders was high (100 per cent on an average) and it was higher in case it was not explicitly mentioned in the contracts. However, the author did not consider the non-interest costs (Annexure) in either case, nor did he compute the effective rate of interest paid by these categories of borrowers to the formal lending agencies. The non-interest costs of formal credit for them could be very high.

Also, credit is an economic good which can be procured and used and its price is determined by the forces of demand and supply. However, loan contracts are heterogeneous in terms of purpose of loan, time of disbursement, time of repayment, duration of loan, amount of loan, etc. Thus each loan contract is unique and could be treated as a distinct item and its price (rate of interest) must be looked at accordingly. In other words, loan contracts for different sources could not be comparable especially when the use of loan funds is not the same. Some sort of weights would be necessary.

The author attributes the reasons for co-existence of multiple system of loans to the existence of multiple systems in commodity, labour and service markets and their interlinkages with the rural credit market. But why these interlinkages should be so strong is not explained. Here again the argument of credit as an asset of different qualities for different lenders and for different contracts could be helpful in explaining the co-existence of the so referred multiple system of loans.

The study is another evidence to show that the average rate of interest in the informal credit market is very high (nearly 100 per cent). The variations in the rate were due to size of loan, duration of loan, mode of disbursement and repayment, etc. The author argues that the interest rate has four components: opportunity cost of capital, administrative costs, default risk and residual as monopoly margin—very high indeed. One may agree to the high rate of interest for informal credit in general. It, however, cannot be purely because of monopoly margin of the lenders. As there are many lenders and many borrowers high monopoly price could not be possible. Since the loan contracts are not very homogeneous and could be differenciated in terms of terms and conditions, the situation at the most may represent monopolistic competition and some differences in price of loans are expected. On the other hand, small farmers, tenants and landless labourers possess poor quality debt instruments and have poor credit rating especially with the formal agencies, they had to pay higher price for informal credit and the variations in price paid could be high. Thus, different systems of loans do co-exist.

The three components of cost of credit for the lender computed by the author are highly under-estimated. The opportunity cost of lender's capital invested in land has been computed at 40 per cent from cultivation of land and 5 per cent from leasing the land. In these calculations the author has ignored the capital gains from investment in land. For example, the per acre price of land in a particular location increased from Rs. 600 in 1968 to Rs. 3,000 in 1972, to Rs. 4,400 in 1974, to Rs. 7,000 in 1980 and to Rs. 13,000 in 1984. The rate of capitalisation between any two periods is substantial and hence the opportunity costs of rural lenders would be significantly higher than what was used by the author in this study. Similarly, administrative costs are grossly under-estimated. The opportunity cost of the lender's time as a manager of the firm would be much higher than the salary of a clerk.

As is understood, low rate of interest is an incentive to default. Accordingly, high rates charged by lenders must have checked the default and risk premium so computed at these rates could be under-estimated. In brief, the three computed components of rate of interest could be highly under-estimated resulting in the over-estimation of residual.

From the comparison of formal and informal credit the author has pointed out the dichotomy that the large farmers avail cheaper formal credit and the small farmers and the landless the costly informal credit. Here again the author has not compared the effective rate of interest the farmers have to pay for the use of credit from the two segments of credit market. Especially in the case of formal credit, the non-interest costs for small loans could be very high. In brief, in spite of these deficiencies, the study could be a good reading material for students of agricultural finance wanting to learn about the rural financial market in West Bengal.

ANNEXURE

Cost of Borrowing

The cost of use of credit may consist of the following:

(*i*) Interest on capital borrowed for the entire period of loan including penal interest if default is due to faulty lending policies.
(*ii*) Expenses on registration of mortgages/hypothecation of security assets. Sometimes these items are confiscated against default.
(*iii*) Expenses incurred on travel including meals, fares and opportunity cost of time spent by the borrower and his sureties.
(*iv*) Expenses on production of various documents including costs on stationery, stamp duty, legal or illegal fee, etc.
(*v*) Loss of returns on excessive expenditure, share money in co-operatives, and losses due to delayed/inadequate credit.
(*vi*) Loss of liquidity on security, share capital, credit reserve, etc.
(*vii*) Commission from loan funds, compulsory donations, etc., are some malpractices which add to the cost of borrowing.
(*viii*) Difficulties experienced in securing a loan, obligations of default are some intangible costs. Borrowing itself is a cost for some of them.

It may be observed that some costs are related to the size of loan or period of loan or value of security, others are independent of these three. Further, some costs are incurred prior to disbursement, some at the time of disbursement and some others after disbursement. Some costs are paid in cash, others are direct or indirect, tangible or intangible losses. This description of costs would show that all costs cannot be treated alike in the computation of effective rate of interest.

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Deposit Mobilisation and Advances by Two Rural Branches (A Comparative Study of a Commercial and a Regional Rural Bank Branch), Bank of India, Regional Rural Banks and Special Studies Division, Development Department, Head Office, Bombay, 1985. Pp. 209 (mimeo.).

This is an interesting study on the spread in the banking activities of two rural branches. It is a comparative study of the growth of a rural branch of a nationalised bank and the rural branch of a regional rural bank sponsored by it. Very little detailed studies like this are available on this important aspect of rural banking. This book therefore is a welcome addition to the limited number of studies made by the commercial banks in India.

The two branches selected for the study are located in Uttar Pradesh. The branch of Bank of India selected for the purpose was one which was opened in 1975 and the selected branch of the Grameena Bank was opened in 1978. It is reported that both the branches are situated within a distance of approximately 12 km. The details of the villages selected are not given in the study. It would have been very useful if an economic profile of both the villages had been presented in the study. An assessment of the spread of the banking activities in both the villages could have been judged more realistically against the economc background of the villages selected. If the details regarding the occupational pattern of the population in the villages were available, it would have been possible to examine the extent of spread of banking activities in each of the occupational groups in the two villages.

The study covers two major aspects of banking growth in the villages. As mobilization of deposits is one of the primary functions of the rural branches, the first part of the study is devoted to an analysis of the growth of deposits and the extent of the spread of the bank depositors as well as the dynamics of deposit accretion. The details of the growth in deposits on a quarterly basis for both the branches are furnished. It is observed that both the branches have preponderance of savings bank deposits. This is a very common observation noted in the initial years of expansion of rural branches. Savings account is the easiest means of introducing the banking transactions to the prospective bank customers. It is much later when the depositors gain sufficient knowledge of the various types of deposit schemes offered by the bank that there occurs a gradual shift in favour of the higher interest bearing deposit schemes. The preferences of persons from various occupational groups for the different savings schemes offered by the branches are also analysed in detail. It is revealed that the farmers' group dominates in terms of the ownership of the total savings amount in both the branches. In the absence of the village data relating to the occupational pattern, it would be difficult to comment upon this revelation. If farmers constitute a major percentage of the total population of the villages, it may be possible that they would constitute the major group of savings bank depositors.

One important area on which the study throws some light is the locational attributes of the rural branch and its impact on the spread of banking activities both geographically and occupationally. The distance between the branch and the customers is an important factor in determining the spread of banking activities. The distance for this purpose is being classified into four groups, *viz.*, (1) Village Post Office where the branch is located, (2) 1 to 5 km., (3) 5 to 10 km., (4) more than ten km. from the branch headquarters. "One singular and unambiguous conclusion" drawn in the report is that the proximity of the branch has a direct bearing on both the number of accounts and the amount deposited under various savings schemes at both the branches. One however does not know why the village post office area is selected as the area of operation of the branch. The village Panchayat area would have been the more appropriate distance unit to demarcate the immediate command area of the rural branch. One does not really know whether the village Panchayat area, which is a well-defined administrative unit is the same as the village post office area.

The second part of the study is devoted to an assessment of the credit disbursements by the rural branches and types of advances made for both agriculture and other priority sectors. There is also a chapter on the term loans made to agriculture. It is observed that the growth rate of crop finance is quite high at the branch of the commercial bank compared to the branch of the regional rural bank. These differences can be attributed perhaps to the difference in the target groups of borrowers financed by the two types of branches. The regional rural bank is expected to extend credit facilities to the small farmers, marginal farmers and agricultural labourers while the commercial bank would finance normally the big and medium size farmers. However, usually there is not much of a difference in the scale of finance adopted by the commercial bank or the regional rural bank. In the case of these two branches, it is not clear whether there has been any difference in the scale of finance. It is a bit surprising that the average amount disbursed per borrower under crop loan is consistently higher at the branch of the regional rural bank compared to the commercial bank branch for comparable size of land holdings. The experience elsewhere is quite contradictory to this feature.

About the recoveries, it is observed that it is better in the commercial bank branch than in the case of regional rural bank. It is also mentioned that default occurs right from the first instalment in the case of agricultural advances in both the branches. This is an area which requires greater attention of the bank management.

On the whole, the study is quite interesting and throws good deal of data relating to the operations of the rural branches.

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Agrarian Reform in India with special reference to Kerala, Karnataka, Andhra Pradesh and West Bengal, Theodor Bergmann, Agricole Publishing Academy, New Delhi-24, 1984. Pp. xi+216. Rs. 125.00.

The book under review is the result of a close study of land reform in India undertaken by the author in which process he extensively toured the country, examined available materials—published as well as unpublished—and visited villages and discussed with the people the various aspects of the reform measures and their implementation. The author in this work tries to unburden himself of the rich information and experience gained on Indian land reform scene so that some of these issues could still be debated and appropriate solutions found. It is in this context that this publication should be read with care by research workers and policy makers alike.

In all, there are seven chapters starting with a very brief first chapter titled "Introduction: The Role of Agrarian Reform in Indian Polity". This chapter brings into focus the peaceful movement for Independence and the integration of agrarian change as a part of such a movement. The second chapter discusses selected theoretical aspects of agrarian reform and agrarian movements. In this process attention is focused on the most essential factors that call for radical changes in agrarian structure, where the author lists nine points starting with 'population density and growth' and ending with 'changes in the value systems of the holders of land-titles'. "These factors do not all work in the same direction. The technical, economic, socio-political determinants and the social groups or classes can be perceived as vectors of different direction in a parallelogram of forces", says the author. After examining the political, social and economic objectives of land reforms, the author avers that agrarian reform is not a panacea, a cure for all evils of the agrarian systems of developing countries. He also examines different substitutes for agrarian reforms. The rest of the chapter deals with agrarian movement and its bearing on agrarian reforms.

In the third chapter entitled "General Remarks about Agrarian Reforms in India", the author examines at random the major land reform measures rather superficially and without keeping a clear watch on the different types of measures involved. This chapter ends with a discussion under 'framework of land-tenure' where the distribution of land holding (operational) is shown and nothing more relating to the tenurial framework, probably just because the right type of information was not available. However, the comment "European notions do not fit the Indian reality" speaks more amply than all that is said in the rest of the chapter, to warn the readers of the limitations of the comparability of notions foreign authors often do have on Indian land tenure and its problems.

In Chapter 4 on "Agrarian Reform in Kerala, Karnataka, Andhra Pradesh and West Bengal", the author puts in all the information he collected during his latest tour of India in pursuance of the study. Some data of a comparative nature are provided for the four States, before the land reform measures are separately dealt with. The discussion on the States gives a historical background of the land reform legislation and implementation which make good reading. However, notes are more detailed as far as Kerala is concerned than those on the other States. The details of the legislative measures are listed in points in all the cases. The progress in implementation is noted on the basis of data collected by the author from the administration. The discussion on each State is capped by the author's impressions from field visits.

Chapter 5 is entitled "Comparison of Procedures and Achievements in the Four States". It is noted that the basic ideas of agrarian reform were similar in the four States but the differences in performances could be traced to the pace of radicality of realisation of the laws and rules. The author laboriously tabulates the contents of the reform laws of the four States. According to the author, "The scale of radicality and efficiency begins with Kerala, the pioneering state in land-reform in India, followed by West Bengal, then Karnataka, while Andhra Pradesh remains at the tail—with much propaganda, but no large achievements" (p. 170). What accounts for the differences in the four States? The author tries to answer this by analysing the interaction of opposing forces, where he identified three groups, *viz.*, (*a*) the landowners, landlords, etc., (*b*) small holders, tenants, share-croppers, landless, etc., and (*c*) the administrators. It is noted that "In Kerala, with high literacy and a low share of scheduled castes and tribes, the organizations of poor cultivators have a long tradition, are relatively well structured, are supported and guided by two competing communist parties and for extended period had a co-operative partner in the state government. . . ." (pp. 171-172).

"In West Bengal, the conditions were similar, though not favourable to the same extent." The author's own observations convinced him, however, that in West Bengal too the communist movement succeeded in "giving a political structure and political expression to the dissatisfied rural masses." "This conjunction of social forces permitted a breakthrough in the radical amendments to the long existing laws of land-reform and facilitated the implementation."

The socio-economic and political forces in Karnataka were markedly different according to the author. The more favourable land-man ratio, the industrialisation the State experienced in certain tracts at least, the enlightened congress leadership and their readiness to learn lessons from Kerala were factors that helped Karnataka. "Probably the rural population did not yearn as strongly for land-ownership as elsewhere in India. As a result of these factors land-reform was not very radical but its implementation was closer to the meaning of the law" (p. 173). Moving on to Andhra Pradesh, the author notes that the landlords were well organized and had "a strong influence in the Congress, which ruled the state since 1948 without interval, though with frequent change of leadership. The first real defeat of Congress occurred in spring 1983. The kisan sabha and the communists of both factions are quite weak. . . . There is unrest, riots, revolts and upheavals, but no strong statewide, enduring organisation, that can bring 'pressure' to bear on landlords and administration. The latter is closer to the landlords than to the poor rural masses. It thus seems that agrarian reform remained largely superficial and has not yet changed village society" (pp. 173-174). The author concludes his study by saying: "Summing up, this sketchy comparison proves, that pre-requisite of success of agrarian reform is not the availability or abundance of land for distribution; it is rather the political will to implement it." And the fact is that this 'will' can be created.

Chapter 6 on "Some Controversial Issues" and Chapter 7 on "Theses" seem to the reviewer to have been wrongly placed. The points discussed in these chapters could very well have been incorporated into the preliminary chapters and thus strengthened the theoretical component in the discussions there.

The book under review presents a very interesting though 'sketchy' comparative study of the land reform measures in four States in India which, according to the author, represents the different facets of the problem of the country as a whole. Only that way the title of this useful book can be justified.

The effort that has gone into the preparation of this volume is reflected in the notes and the bibliography appended. The author deserves to be congratulated for his scholarship and interest in this subject and for the success in presenting a readable and interesting discussion on agrarian reforms in India.

In a situation of shrinking interest in agrarian reforms it is refreshing to see that the old spirit revives now and then and that the importance and urgency of agrarian reforms are stressed often and on. One wishes that in this country that stage was over long ago. But it is not to be. A reading of this volume confirms that implementation of land reform measures is going to be a long drawn out affair for India.

Printing and get-up of this volume could be considered as good, though a little more attention at proof reading stage would have helped to improve the quality.

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Rural Economics, I. C. Dhingra, Third Edition, Sultan Chand & Sons, New Delhi-2, 1983. Pp. xii+356. Rs. 20.00.

Literature on rural economics is proliferating in recent times, specially on India, in view of its predominantly rural character and the emphasis placed on rural development and poverty eradication programmes. Some work on rural development are empirically based, innovative, provocative and explorative for influencing policy making and institutional changes. Others are informative and textual for giving a concise picture of rural problems for examination purpose. The book under review falls in the latter category. As an utilitarian handbook based on prescribed syllabus for the CAIIB examination, it is certainly useful for the students. The treatment of the subject is lucid, simple and adequately informative for the students of graduate standard. Of late, the role of bankers has undergone a sea change; from an elite urban group rendering sophisticated service of accepting deposits and giving credit to a small group of manufacturing and trading class of urban breed to an innovative class operating as agents of rural development and as catalytic factor of change. The latter role brings the bankers as a professional group face to face with the problems of rural India. The book is an effort for providing a concise picture of Indian rural problems to those who seek entry to that professional group through the qualifying CAIIB examination. The fact that the book has gone for third edition certainly shows that it has served well for the purpose for which it has been written.

However, the area in Economics which is usually called, Rural Economics, still remains indeterminate. Traditionally, agricultural problems are considered as coterminus with rural problems and its development is looked upon as synonymous with rural development, in view of its predominant character. Books on rural economics usually deal with agriculture, forestry, sometimes with animal husbandry and their problems relating to production, financing and marketing. However, in the context of dynamics of change, rural problems are much wider covering areas of rural non-farm sector as well. Farm and non-farm sectoral linkages, rural settlement pattern, infrastructure development, distribution of functions on rural space as transmitting mechanism of dynamics directed for changing the functional base of rural poverty are relevant enough for a proper comprehension of rural problems. Production interaction is a much neglected area in rural economics. Farm development alone is not effective for improving the functional base of rural manpower as agents of production. The entire rural production environment needs to be treated in an integrated framework of rural-urban national space, rather than considering rural and urban sectors as distinct and watertight compartments. Analytically such a treament is not sound enough. For a professional group of bankers, it does not provide a correct and full picture of the forces at play in rural environment for determining their role as a catalytic factor for triggering of dynamics of change.

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Agricultural Development in Haryana, D. P. Gupta, Agricultural Economics Research Centre, University of Delhi, Delhi; Agricole Publishing Academy, New Delhi-24, 1985. Pp. xv+120. Rs. 80.00.

This is an extension of the research study brought out by the late D. P. Gupta on Agricultural Development in Haryana, 1952-53 to 1975-76 in 1978. Along with K. K. Shangari, he also published a book on Agricultural Development in Punjab in 1980 showing his rich experience on agricultural development. The book under review is divided into 12 chapters including a short introduction on the physical features, agro-climatic zones and demographic setting of the State in the beginning and summary and conclusions at the end.

Chapter 2 gives a bird's eye-view of the compound growth rates of State income and of the primary sector at constant prices in comparison with Punjab, and the country. However, the share of agriculture and animal husbandry, forestry and fisheries in total State income in selected years are expressed at current prices alone while the indices for gross and net value of crop output are appropriately presented both at the current and constant prices. It is followed by an analysis of the growth of agricultural output, area and productivity in the pre-green revolution period (1952-53 to 1966-67) and the post-green revolution period (1966-67 to 1978-79) in Chapter 3. But the statistical significance of linear and compound growth rates has not been tested. Nevertheless, relative growth of crop output and yield of major crops in Haryana and Punjab has been discussed properly.

Chapter 4 is devoted to the description of growth in agricultural inputs, namely, land, irrigation, labour, capital, seeds, fertilizer along with the progress of co-operatives during the selected periods betwen 1950-51 and 1979-80. However, labour figures for 1981 Census are also given. The impact of some crucial inputs like capital, labour, irrigation, seeds and fertilizers on the area sown has been estimated with the help of Cobb-Douglas type production function using the data from 1952-53 through 1978-79 in Chapter 5. The use of combined time-series data of pre- and post-green revolution periods must have provided a hybrid production function representing neither of the period. Separate production functions for the two periods would have been more appropriate.

In Chapter 6, the author analyses the input-output price structure showing the growth rates in farm harvest price of crops over the period 1956-57 to 1974-75, movement in harvest prices, price elasticity of crops with respect to wheat and agricultural input prices particularly of fertilizers and labour wages. Parity in output-input prices and parity prices received and paid by the farmers have been shown with the help of time-series indices. Chapter 7 focuses on dairy development showing the brief progress in the number of milch animals, milk yield, milk production and dairy development programmes in the State. The next chapter deals with agrarian structural change in the size of holdings and tenancy with the help of statistics borrowed from Agricultural Censuses, National Sample Survey reports, Statistical Abstracts of Haryana and studies in the economics of farm management in Punjab for 1961-62.

A limited attempt has been made in Chapter 9 to work out the changes in farm output and farm business income on per holding and per capita basis on different farm size-groups at two time periods, 1961-62 and 1969-70 at constant prices. Chapter 10 deals with the regional and districtwise disparities in agricultural development and the factors responsible for variation in the use of various inputs and crop production and productivity. The strategy for agricultural development described in Chapter 11 merely mentions the various agricultural development programmes undertaken by the State including irrigation, land reclamation and soil conservation, physical inputs and services and special development programmes. The last chapter presents a brief summary of the earlier chapters and the main conclusions drawn from them.

On the whole, the book gives a rapid survey of agricultural performance and development programmes of the State but the text is mainly limited to mechanical interpretation of statistical tables. The author could have further improved the quality and usefulness of the book by more elaborative interpretation of results involving policy implications and also by projecting the future scenario of Haryana agriculture based on the development dynamics of the agricultural sector. An in-depth analysis of the determinants of agricultural development and their changing importance in development process over time was desirable for a proper comprehension of the multi-dimensional dynamic issues of agricultural development.

Notwithstanding the scope for improved treatment to development dynamics, a few printing errors and omission of methodological notes, the subject-matter is well organized to depict the status and performance of Haryana agriculture in an easily readable concise form. The chief merit of the book is that of putting together at one place relevant time-series information on various aspects of development experience of Haryana agriculture on which scarce reference material is available in the literature. In this context it is a welcome addition to the agricultural development literature of the country in general and Haryana in particular.

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Panchayati Raj and Rural Development: A Study of Tamil Nadu, C. Harichandran, Concept Publishing Company, New Delhi-15, 1983. Pp. xx+294. Rs. 90.00.

Panchayati Raj, as a subject of research had for long remained an exclusive preserve of scholars in Political Science and Public Administration with an occassional dabbling in by the sociologists. The reason for this limited disciplinary concern, perhaps, was the manifestly politico-administrative nature of the Panchayati Raj (PR) institutions. The economists, since a long time past, have considered the PR studies as a fringe area not well worth their sophisticated research pursuits. However, the emergence lately of the burgeoning macro economics as a sub-field within the broad field of economics has widened their investigative interests into less fascinating but nevertheless crucial areas like rural local government or PR system. The author's present work is thus among the extremely rare breed of studies on PR and therefore a welcome one.

This book is based on the study of financial pattern of select PR institutions—one best and one poor Panchayat Union and Panchayat—in Tirunelveli district in Tamil Nadu State. The aspects examined herein include the revenue and expenditure patterns and the physical achievements of the PR bodies in the context of their rural development exercises. Further, data collected on the basis of a survey on perception and attitudes of government officials, elected leaders and the rural population have been used so as to bring out the disposition of these groups towards the PR system.

The study is organized into 13 chapters, of which the first four provide background information including the methodology adopted; the next seven deal with the subject proper, *viz.*, pattern of revenue (tax and non-tax) and expenditure (developmental and non-developmental) of select PR institutions; the last but one chapter is devoted to a presentation of survey findings on perceptions and attitudes of the PR functionaries and clientele of PR and the final chapter contains the summary of the findings of the study and certain suggestions aiming at policy changes.

One obvious gap in the study is the omission in spelling out the concept of rural development which is surrounded by a raging controversy. Although rural development is a contentious term, it is by now agreed in all quarters that it has a definite qualitative component. The author here has by and large reduced rural development to a more or less quantitative ensemble of revenue-expenditure figures and physical target achievements. In the process the author has confused growth with development and focused rather overly on growth dimension to the neglect of developmental one.

The title of the book is rather misl eading. Going by the title one would expect an analysis of the role of PR bodies in rural development. Instead what is found between the two covers of the book is a picture of the finances of the PR bodies. The author would have done better to sub-title this work as "A Study of Finances". The present subtitle 'A Study of Tamil Nadu' may have been more appropriately put as "A Study in Tamil Nadu".

The findings of the study include the following: one, the PR has come to be associated with two broad images, *viz.*, as an agency of the State Government and as a unit of government at the local level; two, the present trend in the PR bodies is towards increased participation in achieving rural development objectives (p. 262); three, among the internal resources, tax revenue contributed a major share of revenues of Panchayats while in the case of Pan chayat Unions the tax revenues constituted a small percentage of (12 per cent or less). The grants constituted a major part (76 to 92 per cent) of the total revenues of Panchayat Unions; four, the Panchayat Unions concentrated more on development programmes than on maintenance works (mainly on education, health welfare and water supply, amounting to about 90 per cent), and among development programmes education consumed a lion's share (even upto 80 per cent); five, the non-officials and more so the officials hold the view that resources of the PR bodies were generally inadequate to meet the responsibilities thrust on them.

The study concludes with a multitude of suggestions, most of which are stereotyped. Further, the author has not gone into the feasibility or probability of operationalisation of the suggestions made duly considering the politico-economic realities on the ground, as many serious researcher would like to do. The book still retaining its research outfit does not quite make good reading. Furthermore, the author has not succeeded in any appreciable measure in welding together the different perspectives attempted in the study to sharply focus on the main thrust of his work.

The above lapses notwithstanding, the work reflecting the hard labour put in by the author is of reference value for researchers interested in local finance.

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Managing Agricultural Finance: Theory and Practice, A. S. Kahlon and Karam Singh, Allied Publishers Private Ltd., New Delhi-15, 1984. Pp. xvi+344 Rs. 150.00

This book focuses the attention of policy makers to the need for rigorous credit planning and management and for achieving commercial viability by the credit institutions in India. These are to be achieved without altering the existing objectives of economic growth, poverty alleviation, and sectoral priorities of these institutions. But the analysis of how this may be done is inadequately integrated and diffused. The book is nevertheless valuable for it draws attention to the above issues and also provides critical analysis of loan appraisal methods and performance of institutional finance for agriculture in India.

The purpose of the book, as stated by the authors, is to provide a careful and critical examination of the theory and practice, not only of the whole system of agricultural finance, but also of the design and operations of the banking system in India. The book is organized into 14 chapters. Barring a few exceptions, the readers are however deprived of references.

The chapter on "Capital and Credit Management in Agriculture" describes the rural environment within which the financial institutions have to operate. Based on this, the authors have convincingly argued for the need for many types of institutional finance arrangements. These include individual as well as group loans income and repayment capacity instead of collateral oriented lending, loan disbursement in kind, promotion of input supply agencies wherever this is infeasible, promotion of access to extension, produce marketing and processing services, and flexible loan terms and conditions. Farmers' demand for credit is justified on the ground that their reliance on self-finance alone would take them very long to develop. But a more fundamental and even universal reason is that the act of expenditure precedes accrual of receipts from production. Moreover, the purchase of some capital inputs requires expenditure in large amounts and in one bulk, whereas returns from them are spread over years. Similarly, although the authors are aware that credit is not an input, they have used this terminology frequently.

The two chapters on "Basic Concepts and Terms", and "Balance Sheet" cover some concepts and tools useful for financial management analysis. The discussion on capital and credit classification, 3 R's of credit analysis, distinction between farm income, investment and cash flow analyses, banking terminologies and on balance sheet is extremely well covered. But there are some important oversights. For example, excess of assets over liabilities is termed as profit instead of net worth, credit is defined as money borrowed rather than capacity to borrow; equity is used to mean owners' money as well as distribution of income; charge on land as against mortgage of land; and feasibility and merits of using financial statements like balance sheet and flow of funds in the case of farmers as against inputs distributors, manufacturers, agro-processors, etc.

Chapter IV on "Principles of Credit" conceptualises loan appraisal analysis and provides numerical illustrations for such analysis for farmers. It also shows the importance of non-credit factors in the realisation of anticipated returns, repayment capacity and risk-bearing ability, and that of using proper mechanisms and methods of loan disbursement, supervision and collection. It further suggests that credit to the poor be related to area planning to ensure supplies of technology, and inputs (*i.e.*, the 'backward' linkage) and those of marketing and processing services (*i.e.*, the 'forward' linkage). Such linkages are critical to the success of the credit programmes for them. The discussion on loan overdues is concise and yet comprehensive. In this context, it also emphasizes the undesirability of political factors for maintaining healthy financial and political climate. The recommended cadre of Agricultural Credit Specialists need not restrict their functions to farmers' credit appraisal but also identify potentials for promoting input distributors, agro-processors and deposit collections for a given block or a taluka.

Discussing field-level institutions in Chapter V on "Sources of Funds", the authors have dealt adequately with the problems of multi-agency approach to such institutions, and the differences among the primary level credit co-operatives. But none of the field-level agencies has been analysed as financial intermediaries. The authors have also described an ideal credit system a country should have. But how this can be achieved within the multi-agency model followed in India is not dealt with. The discussion on the national level set-up of credit covers operations of Agricultural Refinance and Development Corporation (ARDC), Agricultural Credit Department (ACD) of the Reserve Bank of India, and the National Bank for Agriculture and Rural Development (NABARD). This discussion also rightly justifies the integration of the refinancing arrangements for short- and long- term credit. The section on non-institutional agencies of credit is relatively strong in highlighting the operations of traders, commission agents, input dealers, etc., compared to those of landlords, agriculturists and professional moneylenders who are perhaps functioning more widely in the north-eastern and eastern States.

"Credit Disbursement System" as discussed in Chapter VI relates to the system prevailing in the commercial banks only. Moreover, this discussion does not address itself to such system for agricultural credit. These omissions are serious inasmuch as there is not much literature on the crop loan system as implemented by the commercial banks, Regional Rural Banks and the co-operatives. Nor is there any literature on the link, if any, between the kind component of crop loan system and the input distribution credit. Similarly, the authors could have made their discussion on various methods of determining bank finance for inventory holding, selective credit controls, and different modes of credit disbursal more relevant by relating it to credit for 'forward' and 'backward' linkages including indirect agricultural credit (*i.e.*, to the support agencies like input dealers, Agro-Industries Corporations, etc.).

In Chapter VII on "Trends in the Institutional Credit to the Rural Sector", the authors have found that although agricultural advances to the farmers have substantially grown since the early 1950s, there is still a considerable gap between the demand for and supply of such advances. They have also shown that only one-half of the expenditures on key inputs (fertilizers, diesel oil, insecticides, and pesticides) and one-third of the gross private capital formation in agriculture are financed by the institutional credit. The discussion on indirect agricultural finance is, however, very brief. What is noteworthy about this portfolio is that it can facilitate more effective and efficient use of direct agricultural credit (*i.e.*, to the farmers). The share of indirect agricultural credit in total agricultural credit advanced now accounts for about 20 to 25 per cent. But there seems to be a lack of consistency in the policy for this type of credit. This is because the share of indirect credit in this portfolio has varied widely from year to year. Regional variations in credit disbursal show that the commercial bank credit has gone to the same regions where co-operative credit had gone. This is attributed to the lower credit absorption capacity of the backward regions.

Chapter VIII on "Banking—Goals and Performance" attempts to find out how far the nationalised banks have fulfilled the goals for which they were nationalised. Indeed, the 14 nationalised banks have already achieved or are likely to achieve their targets. To illustrate, the advances to the priority sectors accounted for 36 per cent in June 1982 as against the target of 40 per cent in March 1985. Similarly, advances to agriculture claimed a share of 13 per cent in December 1981 against a target of 16 per cent in March 1985. Sixty per cent of the rural and semi-urban branches have been opened in hitherto unbanked areas. And, advances under the Differential Interest Rate (DIR) Scheme at four per cent reached their ongoing target of one per cent of the banking credit. The authors have rightly considered that the achievement of these targets is not sufficient to attain the goals of social banking. Three reasons given by them, among others, deserve to be noted here. These are: loan overdues of these banks have persisted at a high level of 52 per cent; quality of lending particularly under the DIR scheme appears inferior; and profitability of banks seems to have lowered.

Chapter IX on "Savings and Investment Finance" shows that fairly high savings capacity exists in the rural sector. The annual rural savings rate has significantly increased after the mid-60s when the green revolution was ushered in. Similarly, the annual compound growth rate in deposits mobilized by the commercial banks is significantly greater for the rural than that for the semi-urban and metropolitan areas. These together with the findings of the sample surveys on marginal savings rate support the authors contention that the commercial banks would be able to maintain their growth in overall deposits, despite competition from new savings instruments like debentures, shares, and company deposits. But this contention could have been subjected to more critical analysis by examining the suitability of various deposit mobilization schemes and efforts of these banks for the rural areas. Moreover, deposit mobilization performance of the co-operatives is altogether omitted. The discussion on interest rate structure emphasizes the need to keep a proper spread between the lending and borrowing rates, besides maintaining positive real rates for encouraging savings to flow into the financial stream.

Chapter X on "Financing the Weaker Sections" provides a convincing rationale for reserving institutional credit for them. It is emphasized that such shares may be reinterpreted by taking a larger view of priority sector lending instead of priority groups alone. It moreover insists that such shares be achieved through quality lending.

Chapter XI on "District Credit Plans" (DCPs) is informative and critical. It observes that the formulation and implementation of DCPs by the lead banks have become ritualistic and mechanistic. It also discusses organizational mechanism as embodied in District Consultative Committee (DCC) to implement the thrust of the lead bank scheme. But how far DCP has facilitated access to technology, input supplies, and produce marketing services as an integral part of the institutional credit to the poor is not studied. One of the reasons why this could not happen is that the scope of DCP is largely restricted to direct rural credit. Even after a decade of experience with DCP, it does not provide a procedure to reliably estimate existing and additional credit needs of support agencies like input distributors, agro-processors, etc., whose activities assist in realising earlier mentioned linkages.

For Chapter XII on "Financing Agricultural Projects" the authors deserve to be congratulated for their simple treatment of the technical material on project analysis. Similarly, inclusion of a numerical illustration which is drawn from the real world situation is very useful. The discussion on ARDC's experience shows that in the seventies and early eighties investments in agriculture were attractive in both financial and economic terms. What is striking about this finding is that it shows that the domestic agricultural prices that prevailed then were already attractive for the farmers to undertake these investments. But there are some drawbacks. The chapter needs to give a rationale for using project approach. The authors in their financial analysis using discount-worth technique have included interest costs as part of project cost. This is, however, not correct. These costs are excluded from such financial analysis because they are already accounted for in the process of discounting. Moreover, although the illustration on project exercise is comprehensive in its analysis of various components of the project, the analysis for the total project is rather sketchy.

Chapter XIII on "Monitoring and Evaluation of Agricultural Credit" begins by clearly defining monitoring and evaluation. For an individual financial institution it lays out the process of an efficient flow of credit in a cyclical sequence of five steps, namely, estimating demand and extending credit, monitoring the use of credit, examining the outcome, effecting recovery, and recycling. For a policy maker a similar four-step flow chart consists of monitoring aggregate flow, inter-regional flow, purpose flow, and flow to the weaker sections. Both these flow charts should have distinctly provided for monitoring indirect agricultural credit, and credit for "backward' and 'forward' linkages as well.

The last chapter on "Looking into the Future" draws on the earlier chapters to highlight the critical issues which the Indian banks including NABARD and policy makers need to immediately look into. Some of the more important issues are: restructuring branches of commercial, regional rural, and co-operative banks so that adequate loan and deposit businesses can be reaped by all the three; promotion of agricultural loan portfolio which consists of both short- and long-term loans; loan portfolio is to consist of credit for only primary production or also for agricultural marketing, processing, and storage; NABARD refinance policy being linked to loan recoveries and deposit mobilization rather than loan overdues; and identifying incentives for inducing larger flow of deposits into the banking sector. Only two major issues have been left out, namely, promotion of a loan portfolio which consists of credit for 'backward' linkage including indirect agricultural credit as well, and the concessionary credit under the DIR scheme.

To the present reviewer this book is not just another book on Agricultural Finance. It is a book that stimulates better understanding of application of concepts of financial management to financing agricultural development by the credit institutions. It is also an attempt to evoke more efficient and effective strategy of institutional credit policies and operations. This book thus is valuable to the students, and practitioners interested in agricultural finance management in India and elsewhere in the developing countries.

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Agricultural Price Policy in India, A. S. Kahlon and D. S. Tyagi, Allied Publishers Pvt. Ltd., New Delhi-2, 1983. Pp. vii+510. Rs. 150.00.

The dual role of food prices and inter-sectoral terms of trade for (*a*) stimulating agricultural growth, and (*b*) in achieving changes in income distribution, has been a subject of bitter controversy in India. The book under review almost exclusively deals with the first aspect albeit in a very comprehensive manner. Both the authors have been practitioners of agricultural price policy in India for quite some time. Understandably, an attempt is made in the book to defend practically every aspect of the price policy prescriptions of the government in the recent past.

The first six chapters are introductory in nature and deal with such aspects as the role of price policy and the basic concepts involved; differences between agricultural and industrial pricing; brief review of agricultural supply response studies; seasonal variations in prices, etc. Chapters VII to X constitute the core chapters of the book. These deal with the dynamics of costs of production, price determination, terms of trade and the evolution of agricultural price policy.

After carefully examining the changes in the structure of costs for different crops, the authors reach the now familiar conclusion that the rise in material input costs has been very substantial during the 1970s, and that productivity gains were less than proportionate to the rise in input costs. The obvious, though implicit, policy prescription appears to be that input prices must be held in check (via subsidies, as is being done now).

Because technological changes would imply an upward shift in the production function, one would expect, in real terms, a decline in the marginal, and hence, average costs of production. However, since yield growth has begun to taper off in the green revolution belt despite the increased use of modern inputs, real costs per unit of output began to rise in this region. Experience during the 1970s indicates that further growth in wheat output can be realised in the North-west only by increasing unit costs, which cannot be met without further increasing the support price set by the government. This raises two broader questions regarding the pattern of growth of Indian agriculture not discussed by the authors. First, it appears to be imperative to explore the potential for further growth of wheat output through declining marginal costs via improvements in irrigation in other regions of the country such as Madhya Pradesh or Rajasthan. In other words, having attained a reasonably good cushion in terms of food security, the question of dynamic regional comparative advantage is extremely important at the present stage of India's agricultural development because it is imperative that the vast majority of poor farmers in the arid and rain fed zones are aided through public investments in becoming active participants in the rising basket of production. Second, *not* supporting wheat prices beyond a point may turn out to be an optimal *social* policy. This is because rising real costs of wheat may, in all likelihood, arrest a further shift of land use in the North-west away from the protein-rich pulses to wheat; this may be considered desirable from a social point of view.

The authors then discuss the various formulae for administered pricing of farm commodities. In brief, the authors claim that practically every conceivable consideration has been accommodated in arriving at the support prices fixed by the government! In this context, Raj Krishna and Raychaudhuri,[1] on the basis of empirical modelling of free market and procurement prices, observed: "Regardless of the principles of price fixation, the prices actually fixed by the States seem to have been based on the simple rule of thumb that if the market price rises for one or two years, the procurement price should be raised by about half to two-thirds of the percentage increase in the market wholesale price."[1] Rebutting Raj Krishna's observations, the authors quote the Agricultural Prices Commission (APC) Report as follows: 'In the light of the prospects of the ensuing crop, the anticipated trends in market prices, the likely impact of the procurement price on the market prices, the cost of production of the cereal and the variations in the input price, the Commission recommends that the procurement price for the coarse variety of paddy for 1978-79 marketing season be fixed at Rs. 82 per quintal."[2]

1. Raj Krishna and G. S. Raychaudhuri: Some Aspects of Wheat and Rice Price Policy in India, World Bank Staff Working Paper No. 381, International Bank for Reconstruction and Development/The World Bank, Washington, D.C., U.S.A., April 1980, quoted in p. 203 of the book under review.

2. Government of India: Agricultural Prices Commission Report on Price Policy for Kharif Cereals for the 1978-79 Season, Department of Agriculture, Ministry of Agriculture, New Delhi, 1978, quoted in p. 201 of the book under review.

What is not clear, however, is *how exactly* this reconciliation of conflicting considerations has been achieved without an analytical model. Merely stating "we have taken everything into account, and this is the price!" is not enough. And it hardly amounts to a rebuttal of Raj Krishna's position. The authors appear to be thoroughly convinced that there is absolutely no need whatsoever for any improvement over the prevailing methodology of price fixation followed by the APC. However, if it is true that an awareness of imperfection is the very condition of progress, and that even the very best scientific minds allow for a margin of error, the authors, uniquely placed as they are, would have spotted the deficiencies of the prevailing price fixing policy of the government, explored its implications for inter-regional, inter-crop, and inter-class equity, and suggested corrective policies.

Defending the use of 'terms of trade' as one of the considerations for price fixation, the authors quote the American example. However, it is worth pointing out that the United States is now shifting from a parity approach to a cost of production approach, perhaps following the lead given by developing countries such as India. The authors refer to various studies on terms of trade and show how they are faulty. Their own re-calculations show a worsening of the terms of trade for agriculture during the 1970s. Two points need to be stressed here. First, from the viewpoint of price policy, what is important is not so much a demonstration of either worsening or improving net barter terms of trade, as is a demonstration of the impact of the movement of terms of trade on *aggregate* farm output. In this context, the author's exclusive reliance on W. Peterson's study is unfortunate. Findings of this study have been questioned by, among others, Chhibber.[3] Raj Krishna's[4] more recent study (1983) shows that a one per cent change in the technology variable yields a much greater growth of aggregate farm output than does the same percentage change in price inasmuch as the supply elasticity with respect to technology variable is three times the elasticity with respect to the price (terms of trade) variable. As argued by Raj Krishna, this is because output growth essentially is a function of productivity-raising technology which *shifts* the supply curve; price movements do move output, but much less, *along* the supply curve.[5]

Second, in the Indian context, the net barter terms of trade cannot be used to reflect the relative profitability of the agricultural and non-agricultural sectors. The prices of a number of industrial products are fixed by government to ensure a return to invested capital independently of demand conditions. Consequently, industrial prices show a built-in downward rigidity reinforced by the oligopolistic market structure in some of the key industries. Therefore, the movement of net barter terms of trade, uncorrected for price distortions on both the sectors, does not reflect their relative *real* profitabilities.

Finally, it is necessary to state where exactly the reviewer differs from the viewpoint projected in this book. The importance of relative prices for crop allocation decisions of farmers is well-known and has been demonstrated by innumerable

3. A. Chhibber: Price and Non-Price Response of Aggregate Supply in Agriculture: Estimation and Policy, Stanford University, Stanford, California, U.S.A., 1982.

4. Raj Krishna, "Some Aspects of Agricultural Growth, Price Policy, and Equity in Developing Countries", *Food Research Institute Studies*, Vol. XVIII, No. 3, 1982, pp. 219-260.

5. See Raj Krishna, *ibid.*

studies on supply response. The authors of this book would have us believe that prices are not merely important in this sense, but *fundamental* to agricultural transformation. Thus, out of 500 odd pages, the authors devoted six pages to the role of non-price shifters in agricultural transformation, and only eleven lines to the role of optimum land and water management. The reviewer would argue for a balanced view of price and non-price (technology) policy in promoting agricultural growth. Given the overwhelming importance of autonomous technology shifters in output growth, governments should stress a technology and cost reduction policy more than price policy, given the dependence of millions of poor households on purchased food. The authors might justifiably argue, following Hayami and Ruttan,[6] that technological change itself is induced by relative price movements. On this, opinion is divided. Thus, Raj Krishna argued: "...only some aspects of innovation, in the broadest sense, can be shown to be price-induced. The price milieu determines the relative, privately perceived profitability of different techniques made available by complete applied research and hence influences the rates of their adoption (diffusion). But it cannot by itself explain the evolution of basic scientific knowledge and the level and growth of public investment in research, extension, infrastructure, and human capital in different parts of the world. The growth of basic knowledge has some irreducible nonlinearity, discontinuity and randomness. And governments have been far less rational than peasants in making investment decisions" (p. 237).[7]

Thus, the debate between the price fundamentalists, and those who argue for a more balanced view of price and non-price shifters, continues. The former will find this book their Holy Scripture, while the latter will find it a competent exposition of the former's viewpoint.

One final comment. The book is based on data collected under the Comprehensive Scheme for Studying the Cost of Production of Principle Crops by the Ministry of Agriculture, which virtually replaced the earlier Farm Management Studies. As is well-known, this source of data is extremely difficult for researchers to obtain. Often these data are selectively released to researchers working on 'harmless' topics (women and development, for example). As such, the book is a classic example of academic rent-seeking out of restricted access to data base. Nevertheless, researchers would find the time-series cropwise data for different States given in this book extremely helpful; one can only wish the authors had given the size-classwise details about costs and marketed surplus as well.

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Productivity and Equity in Irrigation Systems, Edited by Niranjan Pant, Giri Institute of Development Studies, Lucknow; Ashish Publishing House, New Delhi-26, 1984. Pp. xxviii+276. Rs. 150.00.

The book contains a few papers covering various aspects of productivity and equity in our irrigation systems, contributed by experts on irrigation management,

6. Yujiro Hayami and Vernon W. Ruttan: Agricultural Development: An International Perspective, Johns Hopkins University Press, Baltimore, Maryland, U.S.A., 1971.

7. Raj Krishna, *op. cit.*

administrators, irrigation engineers, and agricultural and social scientists in a workshop funded by Ford Foundation. Through these papers various important issues have been raised on the conceptual framework for the assessment of productivity and equity.

In the Introduction, the editor has summarised the papers and the discussions. Thisis a useful exercise and would help experts and workers in different disciplines of our irrigation systems. Keeping in view the huge investment (of more than Rs. 20,000 crores in irrigation works by the end of the Sixth Plan), their low returns and conspicuous inequality in the distribution of the benefits (however little) derived from such investments, the book under review will be welcome to all irrigation engineers, agricultural scientists, administrators, social scientists and people responsible for creating a data base information system for planning and decision-making.

An experience-based interesting paper by S. Hashim Ali shows how a favourable benefit cost ratio can be worked out by adopting unreliable irrigation and cropping pattern data to make the project acceptable for approval by the Government. This paper deals with various practical aspects which limit recognition of the productivity and equity factors at the planning and designing stages of our irrigation systems. Communication gaps, lack of adequate trained staff and water management manuals, defective engineering designs result in inefficient utilization of the created potential. The author has suggested various measures to improve proper distribution of water to ensure equity and productivity. But he has also noted that it would be difficult to implement these measures as these would face resistance at all levels. This paper stands out from all the administrators' experience-based papers and should be useful to the State Government departments associated with irrigation work. He suggests action research to determine the success or otherwise of the measures taken for equitable distribution of water and their effect on productivity, which would be indirectly beneficial in evaluating system performance.

Roberto Lenton's paper on monitoring productivity and equity in irrigation systems provides some practical and operational methods to measure P and E. Productivity measures focused by him are only two: (*i*) quantity and timing of water delivery and (*ii*) crop yields from such irrigation. In defining performance standards, he suggests measurement of actual performance against potential performance, given current operating conditions and knowledge of design parameters. Lenton defines equity measures in terms of variability of water delivery or yields between individual farms located within the command of an outlet or canal system. This has been illustrated by an example from WAPCO's [Water and Power Consultancy Services (India) Ltd.] study of the Mahanadi Reservoir Project. This is an interesting paper.

Performance monitoring of a wide variety of irrigation systems has been discussed in a number of Case Studies, ranging from large canal systems to minor tank schemes, storage and diversion projects, as well as farmer managed indigenous water distribution systems. Warabandi system of water distribution and management which is being practised for over a century in India, has been studied in-depth by S. P. Malhotra, S. K. Raheja and David Seckler, and a methodology for monitoring the performance of large-scale canal systems in warabandi condition has been developed. A. Sundar and P. S. Rao have stressed that unless farmers are involved in modernization work and unless the beneficiaries are well-organized, full benefits may not be realised. The case study of a farmer-group-managed-system by R. K. Patil and D. N. Kulkarni examined a system of collective construction, operation and maintenance of bandharas (weirs) on small rivers by local associations/groups. They feel that such studies may help in the formulation of guidelines for fostering farmers' associations on major irrigation projects, with necessary modifications of the systems to suit modern technological developments. Such studies should be taken up in areas where farmers' associations have made a headway in the irrigation development and management operations.

Scientific management of our irrigation systems to increase productivity and equity requires research and group discussions, and also wide publicity of such work to familiarise related workers with recent developments and issues. Quick publication of such productivity and equity studies, and wide circulation of the documents would help the concerned scientists, engineers, administrators and field workers.

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Economics of Agriculture, A. A. Rane, Atlantic Publishers and Distributors, New Delhi-27, 1983. Pp. viii+327. Rs. 40.00.

The book is divided into seven parts and has as many as 39 chapters. The topics covered in Parts I through VII are agricultural finance, co-operation, agricultural marketing, farm management and production economics, research methodology, economic information about Indian agriculture and agricultural growth and economic development. Most parts begin with an introductory chapter and end with a 'list of selected references'. Questions relating to each part, in the form of multiple choices, statements, short notes and 'full questions', are given under the head 'questions' at the end of the book. Some practical problem exercises relating to Parts I and IV are also included.

The author attempts to condense a vast body of knowledge so as to render his work useful to those who have some interest in agricultural economics. The book is mainly addressed to students and teachers of "all courses in agricultural economics", both at the undergraduate and postgraduate levels in the agricultural universities. The author claims that the students of B.A., M.A., and M.Com., and the agricultural finance officers would find the book useful for them.

After giving a sketchy introduction of agricultural economics in just two pages (Chapter I), the author straight away jumps to 'Agricultural Finance' and introduces the subject in Chapter 2. Financial institutions, principles of credit management and loan proposals are outlined in Chapters 3 to 5.

Part II discusses various aspects of co-operation like co-operative agricultural credit, land development banks, development of co-operative movement in India and abroad, etc. (Chapters 6 to 12). Agricultural marketing is covered in Part III

(Chapters 13 to 19) where various aspects of it, like marketing functions, channels of distribution, defects of present system of agricultural marketing, regulated markets and price spreads, etc., are highlighted.

The book devotes maximum space to farm management and production economics (Part IV, Chapters 20 to 28). Here, the author has tried to touch upon a wide spectrum of topics including linear programming, game theory and simultaneous (equation) model. Then the author abruptly switches over to research methodology (Part V, Chapters 29 to 34) and later devotes the final two parts to provide information about Indian agriculture and agricultural development in India and some other countries.

The arrangement of broad topics in different parts is only random and lacks any logic. Each part of the book is in itself independent and the reader does not find any continuity of thought over the entire text. The position in respect of the material within each part and sometimes even within an individual chapter is no better. The author does not succeed in proceeding beyond merely listing down the topics. There is a complete lack of scholarly and in-depth analysis of the topics covered in the text. The treatment of the subject, thus, remains superficial. To make the things still worse, the book carries countless grammatical and printing errors. The write-up is unlike that of a standard text book and there is hardly any indication of editing anywhere. A little care on the part of the author could have avoided much confusion created by some of the diagrams. For example, even elementary diagrams like that on pp. 157 and 175 (Figures 22.3 and 26.1) have not been carefully drawn to show 'minimization of loss' and 'stages of production'. In Figure 26.1, neither the boundary between zones I and II nor the shape of the total product curve is correct.

On the whole, the book gives the impression of being a cheap 'help book', written and printed in haste. Sadly, it provides nothing of value. In its present form, the book is likely to mislead or confuse the beginners in agricultural economics.

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Marketing Efficiency in Agricultural Products: A Case Study of Cotton in Guntur District in Andhra Pradesh, J. V. Prabhakara Rao, Himalaya Publishing House, Bombay-4, 1985. Pp. xv+289. Rs. 95.00.

This book makes a welcome addition to the literature on the subject of marketing efficiency in agriculture which plays an important role in the national economy, in general, and agricultural economy, in particular. Unlike books which deal with the subject in a general way, the book under review is a case study of marketing of cotton in Guntur district in Andhra Pradesh selected for intensive assessment of marketing efficiency during 1970-71 to 1974-75. The study is quite relevant in the context of the remarkable change in the agricultural economy in the district which has been brought about due to sudden and large scale shift in cultivation from tobacco to cotton during the reference period. Though the data base of the study is somewhat out-dated, the author has every excuse for the same for the simple reason that printing of Ph.D. thesis has become a serious problem these days for want of publication grants in time.

The book is divided into eight chapters. Chapter 1 presents the objectives area of study and methodology deployed in the study for arriving at meaningful conclusions. A review of literature is made in Chapter 2 to provide some insight into the areas which were thoroughly probed into and to identify the areas which deserved further research. Chapter 3 presents an outline of cotton economy of India in general, and that of Andhra Pradesh and Guntur district, in particular. The author has dealt with the profile and problems of cotton producers in detail in Chapter 4 on the basis of micro level data obtained from a sample of 376 cotton growers The performance and problems of the ginners have been described in Chapter 5, The cost of marketing and market margins have been analysed in greater detail in Chapter 6, whereas Chapter 7 discusses the institutional framework with reference to certain policy issues. As usual, the last chapter of the book gives a detailed summary of the findings of the study and incorporates important conclusions useful for policy formulation purposes.

The author has been successful in spelling out various problems in the marketing of cotton arising out of the inefficiencies and inadequacies of marketing facilities available in the area. Based on the empirical evidence coming out of the analysis, he has stressed the need for introducing crop insurance scheme and proper grading system to combat the problems arising out of the risk involvement with regard to variabilities in production and price of the commodity.

The analysis of cost of marketing of cotton and computation of producer' share in the price prevailing at the terminal market are noteworthy contributions of the study. More specifically, the comparison of the producer's share in Guntur district with other markets in India amply supports the strategic planning required for the development of efficient market infrastructure, co-operative marketing and regulated markets for the produce produced by a vast majority of unorganized producers in the area.

In an attempt to offer guidelines for increasing returns and stabilising income earnings of the producers, the author has made several suggestions relating to extension measures, institutional finance, transport, grading, market information, modernization of gins, marketing cost, price stability, regulated markets, co-operative marketing, cotton corporation, monopoly procurement scheme, crop insurance, growers' associations, etc. These suggestions are of general nature as they apply to almost all agricultural commodities and implementation of the same requires relatively a longer time and enormous investment. In fact, it would have been more appropriate if the author could have focused attention on a few policy issues which might bring about an effective change in the existing marketing system within a short-run time period and moderate investment.

The erratic trends in cotton prices, as observed in the study, deserve serious attention from the policy formulation point of view. Moreover, the price policy for raw cotton is beset with several intricate and complex problems as a result of which both the growers and consumers have experienced perennial hardships. The author has, therefore, suggested the need for appropriate price policy to provide incentive to increase production.

As pointed out earlier, the major limitation of the book is that the study is based on the outdated data for the period from 1970-71 to 1974-75. Significant changes have taken place both in production and market structures as well as working systems of the agencies involved in cotton marketing. In spite of these limitations, the comprehensive piece of research embodied in the book penetrates into the intricacies of a complex area in agricultural marketing which is expected to provide an insight to researchers and practitioners in the agricultural marketing system, in general, and cotton marketing, in particular.

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Indian Agricultural Economics: Myths and Realities, Ashok Rudra, Allied Publishers Pvt. Limited, New Delhi-2, 1982. Pp. xvi+467. Rs. 150.00.

The Indian Council of Social Science Research (ICSSR) initiated in 1972 surveys of research in all branches of social sciences, which included agricultural economics as well. Ashok Rudra's study comes after a decade. The objective and approach of the ICSSR studies and that of Ashok Rudra differ, yet they have much in common too. The ICSSR surveys were comprehensive. They presented the findings of research studies around well chosen themes. Ashok Rudra too selects the themes and examines them critically. Both the ICSSR surveys and the present study have a large span. Coming nearly a decade after the ICSSR publication, in a way, Ashok Rudra's study updates the detailed catalogue of ICSSR surveys. Ashok Rudra proceeds by labelling accepted ideas as myths. Myths pertain to (*i*) market economy, (*ii*) statistical analysis and (*iii*) Marxian interpretation. We deal with the first in detail, second with appreciation and third briefly with general agreement.

Out of the 21 chapters, ten are devoted primarily to the discussion of myths, each chapter deals with one of the ten selected 'myths'. In a way, the author's probe into myths continues in the remaining eleven chapters too, though reference to myths in these chapters is indirect. The author has taken upon himself the main task of identifing a myth and demolishing it. He leaves a debris behind.

Of the ten myths discussed in the first part, four relate to the market economy. He prefers to call them apologia of bourgeois economists. These myths, as listed by the author, pertain to (*i*) allocative efficiency, (*ii*) full employment, (*iii*) market efficiency, and (*iv*) moneylending efficiency.[1]

Market perfection or imperfection is an unsettled issue. It cannot be directly settled. The author devotes a chapter to it. What he refers to as missing link—considering the producer as a part of the marketing chain—was in fact accounted for as early as 1931. In his seminal work on marketing of raw cotton in India, M. L.

1. The author could have added to the above list a few more that were current prior to the rigorous analysis pursued by market economists. Backward bending supply curve referred to production and to market supply alternatively, insensitivity of produce to price changes and if we go back in history, the cob-web movement of prices are typical of the era gone by.

Dantwala described at length, the practices indulged in by the traders while dealing with cotton producers. But he has made two more important observations as well. He had referred to the malpractices on the part of producers. More revealing was his finding regarding efficient functioning of raw cotton market at all levels in sending and receiving price signals. M. G. Pavaskar's work on the subject covering also futures trading, is well-known. Ashok Rudra quotes liberally Uma Lele and Z. Y. Jasdanwala. Lele has shown convincingly the efficient operation of a grain market. Jasdanwala dealt with groundnut. The author quotes Jasdanwala to show how indebtedness, small holdings, etc., work as price distorting factors at the producers' level. But careful analyses of Jasdanwala, on which her final conclusions are based, show that the only factor that affected the price level of groundnut in Saurashtra was distance from the market; debt, lack of education, tenancy or size of holding did not affect the prices received by farmers for groundnut in Saurashtra in a statistically significant way. Either one subscribes to Dantwala's implied hypothesis of balancing of corrupt practices on the part of traders and producers as observed in the thirties, or one accepts market imperfection to be minimal, as observed by the analysis of Jasdanwala in the sixties. Both works—Dantwala's and Jasdanwala's—pertain to commercial crops in Western India where market developments are advanced. The market situation regarding grains was different. There obtained 3,000 varieties of rice recognized by the market prior to Government procurement, which could have been conveniently employed by traders as a ploy to cut into the prices paid to producers. Arguably, it can be accepted that in erstwhile areas of permanent settlement, where rice was the main crop, price distortions would not be uncommon. India is a vast country. It is dangerous to assert by way of generalisation 'perfection of market'; so also a wide variety of situations make it difficult to accept imperfection of market to be a typical condition prevailing in or applicable to all parts of India. The author's study should be regarded more as a caution for a new research worker while making any assumption *a priori* about market condition, without examining a specific situation.[2]

Allocative efficiency myth is traced by the author to the use of production function as an analytical tool. He rightly points out that the uncritical use of Cobb-Douglas (C-D) production function in agriculture gives wrong results. Besides, lack of due care in the use of results and in the application of the model for the analysis of data, have led to contradictory and often absurd results, such as negative production elasticity of an input. C-D production function has a history of over four decades. It was applied to industrial data based on time-series with mainly two inputs with no possibility of zero reading showing up in series of observations. Initially, therefore extending its use to cross-section data relating to agriculture was inappropriate. And yet, it still continues to be applied to agriculture. Historically in search for an appropriate form of production function, as an alternative, linear programming (L.P.) was used. It yielded shadow prices which could be used as guidance for allocation of resources. One of the first studies that came during the early sixties was that of D. K. Desai. L. P. involves disproportionately lengthy

2. It may be added that interest in pursuing market perfection hypothesis arose primarily from the economists' concern for development. Inefficiency anywhere in the economic system when removed could contribute to growth, in addition to the improvement of distribution. At the time when technology was traditional, marginal help to growth was considered a worthwhile gain.

calculations and less realistic assumption of fixed proportions of inputs. However, around the same time came a break-through in the form of production function, first in the constant elasticity of substitution (CES) form and then in variable elasticity of substitution (VES) form. The transcendental logarithmic (translog) function, a variation of VES, is now more commonly used. The newly evolved functions come closer to reality but have proved messy and fairly complicated in handling. The search for perfection is a continuing task. The ideal form should take account of multi-product, multi-input situations with varying inter-relations among products and inputs. Cannonical regressions solved only a part of the problem and hence their use did not become widespread.

Empirical evidence provided by the author including on commodity market operation at the producers' level is mixed. The author maintains that the prices differ for different marketing agencies. But the highest price obtains, according to him, in *hats* (non-permanent markets) and the lowest when the produce is sold to the village retail trader. Even when the big farmer buys from the small producer, the price received by the small producer is higher than that offered by a village retail trader. Access to multiple marketing agencies suggestive of competition is noted by Ashok Rudra as an ascertained fact. He also notes that even the big farmer does not necessarily sell to the highest bidder. The main outlet for the big farmer is the small trader, for the medium farmer the *hat* and for the small farmer *hat* and small trader- and big farmer. The widest range of pre- and post-harvest prices observed by the author was 1:2.5, for most cases it was 1:1.7. What is important is that inter-agency differences in the range of prices were nearly identical. Market seems to adjust in many ways to reach a stable position (Tables 1 to 5, Chapter 3).[3].

Imperfect markets for credit would imply restricted access to credit agency and discriminatory and high interest rate. Existence of both cannot be denied. But once again evidence provided by the author shows that the overlap of land owning and moneylending is marginal. The author takes count of agencies to which access is available to poor borrowers. While moneylending rich farmers and retail traders were the two major sources of credit for tenants and casual and attached labourers, access to alternative sources of credit was not denied to all of them. In Bihar 40 per cent and in West Bengal one-tenth of tenants had access to credit co-operatives. What seems to be a major surprise is that interest rate charged on yearly basis by different agencies for loans in kind or in cash was nearly identical with the exception of co-operatives for cash loan and retail shops for grain loans (Tables 5 and 6, Chapter 4). Whatever the imperfection of the most sensitive loan market, the comparable interest rates for different agencies including rich farmers in whose case the overlap of land and moneylending could be most obvious, are indeed revealing. Regarding co-operatives one should go about a little cautiously. Real rate of interest in terms of cost to the co-operatives or to the borrower is, according to recent studies, much larger than the statutory rate. This is not to suggest that once there are competitive markets, many agencies and uniform prices, the ideal situation would

Recent evidence provided by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) on the basis of price and quality differentials as identified by producers regarding jowar from dry farming regions is particularly enlightening; the producer seems to know well the market worth of his produce according to these studies.

obtain. Forces of competition work within the external constraints of poor overheads, lack of communication and limited supply of resources. As regards credit, expansion of institutional credit in a big way in the late seventies could be expected to have changed the situation from the one depicted by the author. His data are for the year 1975. What is important is that where market forces have successfully penetrated, institutions have shown expected success. Both the co-operative credit societies and commercial and regional rural banks have a better record of performance in regions where markets flourished. Eastern States have a weak record regarding private and institutional credit agencies.[4]

The major theme of Ashok Rudra's study is not one of demolishing the market economy myth. But it recurs at many places in different forms. His main theme pertains to institutional behaviour and structural deficiencies. Chapters 5 to 8 deal with them specifically. Here too the author opposes the accepted (or traditional) views. His major contribution lies in his scrutiny into the relation between the size of holding and per acre productivity (yield) and their causes. Negative relation seems to be accepted as a received thesis. Erven J. Long (and not Sen, as the author mentions) was, according to my information, the first author to test the hypothesis on the basis of evidence provided by farm management surveys. Erven Long analysed the data upto the village level. A first salvo against the persuasive evidence was fired by D. K. Desai, again based on farm management surveys. Desai brought in quality of land in his analysis and found that when this is done the relationship between size of holding and yield per acre changed from negative to positive. Besides quality of land, Ashok Rudra has other points to add, for instance, it should be made clear whether the acreage measured refers to cropped or net sown area. If output is in value terms, crop combination would matter unless uniform proportions of area under different crops are observed for all size classes. To this we can add, even for the same crop, crop quality would matter, yield per acre of fine rice cannot be compared with that of coarse rice. If uniform price for a given crop is used and yields of different crops are considered using prices, and this is the widespread practice, we get lower average value of output per acre for upper size-groups of farms compared to that for small farms.

Ashok Rudra breaks down the main hypothesis into nine steps in all. They are based on labour input which is observed to be more on small farms. Linked with varying proportions of family and hired labour input, it is maintained that own labour together with larger overall labour dose, results in higher yields for small farms, which would imply declining labour productivity as the size of holding declines. But this logic is not empirically supported in three out of ten cases examined by Ashok Rudra (Table 6, p. 169). Does labour input vary proportionately with land when the latter is measured by combining quantity and quality? This aspect is not probed by the nine steps in which the hypotheses is broken down. Other aspects too do not get uniform support from empirical evidence (Tables 1 to 3, pp. 164-165). For instance, the proportion of farms employing hired and family labour side by side, vastly outnumber in Punjab (Table 1), and significantly in West Bengal

4. As with credit, so also with marketing of cotton, sugar and dairy products, AMUL is a leading example of a successful co-operative enterprise. Before AMUL entered the field, Polson had made strong in-roads in the dairy district of Gujarat. Market potential for milk existed even then.

and Assam for all size-groups. On the whole, the author establishes firmly that the widely held hypothesis of negative relation between size and yield and the logic behind it are not unassailable.

The author has assailed two major institutions, tenancy and labour market and also measurement of labour employment. The myth about inefficiency in tenancy arrangement is the legacy of market economists. Text book literature carries this idea prominently and the Chicago school, till Cheung proved otherwise, endorsed it formally at least in regard to crop-sharing arrangement.

Early in the sixties, Tara Shukla got probably the first evidence suggesting positive association between the extent of tenancy and land productivity. In the early fifties Ambika Ghosh observed positive association between the extent of tenancy and the extent of area under commercial crops. These are strong results. Both these observations are confirmed by Ashok Rudra (p. 143). He adds, high rainfall areas and tenancy are also positively related (p. 143). His major findings, based on his village data, are varied and important. The low performance of tenants as compared to that of owners was widespread among small holders, not among medium or large. Tenant-cum-owners do not show a sustained relation between the extent of tenancy and the yield per acre (size of holding is not considered alongside it, by Ashok Rudra). Tenants do not use less inputs, nor more labour (though they use more own than hired labour) and per acre value of output does not differ for tenants and owners (Table 3, p. 109). Such differences do not obtain even when improved and ordinary paddy and potato are considered separately. Though 50:50 is the most dominant mode of crop share, rental arrangements in the form of 14 other modes were observed by the author in different proportions. In his study similar pattern of shares obtained for cost shares along with share in produce across Northern and Eastern States. In a large number of cases the conditions for sharing seemed common for traditional and improved varieties. Ashok Rudra observes, "tenancy arrangement......is perfectly compatible with capitalist relations between owners......and tenants......" This would imply a market economy in land relations, supposedly most feudal otherwise. Tenancy relations are believed to be sticky over time. But they are not. Over a period of time tenancy contracts did change. During World War II period the extent of land under share contract increased even in regions where cash rent prevailed before, the former permitted automatic adjustment during the period of rising inflation rate. Ashok Rudra finds further that there is little evidence of tenants being required to sell their produce to their landlords, suggesting inter-linking of market and hence a lever for exploitation is not dominant (Table 15, p. 136).[5]

The assault of the author on several myths is thus a mixed success. Debris from demolition leaves wide holes and often the frame of the premise seems to stand up in their midst, much to the dismay of many who would have liked it scrumble.

We skip the discussion of two myths listed by Ashok Rudra, *viz.*, semi-feudal inefficiency and green revolution. We endorse his view that extra economic forces

5. Evidence now available shows that the tenancy type arrangements of crop share have sprung up for trading in tractor services and for supply of water for irrigation from tubewells and wells. Reverse tenancy, small owner leasing out land to big owners, is also on the increase with the new technology of HYV. These new forms of tenancy are yet to be recorded by the professional literature.

do not seem to influence tenancy and labour employment. This observation pertains to the widespread belief of dominance of semi-feudal arrangements obtaining in agriculture. About the green revolution, he seems to endorse the prevalent view. According to the widely held view, the growth of crop production after the green revolution has been on the trend line. The author deals elsewhere at length with the difficulties of measurement of trend and maintains that the linear trend is an approximation and is not realistic when there are wide fluctuations. One would take exception to his position regarding green revolution not being a break with the past and also that it had limited impact, *viz.*, only on wheat and that too in the Punjab. The significant contribution of green revolution or better still, seed-fertilizer technology, is in terms of increase in yields per acre, that enabled to maintain the growth rate even without much expansion of area under crops. While Punjab among the States and wheat among the cereals are in leading position, the spread of new technology to other crops and to other States is observed in recent years for which data are available.

Ashok Rudra has basic training in statistics. The statistician's scholarship is fully reflected in four chapters in the second part of the book. They deal with quantitative measurement and hypothesis testing. Chapter 12 dealing with production function overlaps in parts with earlier discussion on the same topic in Chapter 1. One would hardly disagree with the author that $\bar{R}^2$ should not only be significant but respectable (p. 266). Besides, the coefficients should be meaningful; unstable and negative coefficients in fitting a production function would be unacceptable even if significant. Further, the variables should be homogeneous, functions should be fitted with properly weighted observations, especially when multi-stage sampling involves non-proportional probability. However, economic theory would not require all farms to be Siamese twins, as the author appears to believe, they can vary in size as long as they optimally combine the inputs and get proportional production. A major problem regarding production function fitting for crops is that inputs are deployed to get an 'expected' level of output. Most of the production function exercises are done with observed current input and output data. A break-through to overcome the problem is not yet available. Many of the findings of researches so far done would be greatly improved if such a break-through were available.

Similarly, the author demonstrates that semi-logarithmic straight line and Gompertz forms of functions give nearly comparable goodness of fit for trend line (p. 245). Choice of form of trend function is therefore a matter of judgement about reality. Periodwise break down would suggest deceleration in crop production on the basis of straight line and Gompertz, but constant rate of growth on the basis of semi-log form. Gompertz and exponential too give for the available data comparable goodness of fit (p. 247). Discussing empirical works regarding the behaviour of marketable surplus, the author has a useful word of advice, "much depends in such model-making exercises on the selection of variables with which one starts."

Significance of tests of significance is central to the author's statistical objection to traditions that have developed in empirical analysis by economists. Point-estimate testing with null hypothesis is one of them. In statistics two types of errors, A and B, are commonly accepted. B type of error could be more important in instances relevant for economic analysis; we might be wrongly rejecting the competing hypotheses such as increasing returns to scale or value of marginal product not being equal to price of an input by emphasizing 'A' type error. He would suggest running a pooled test of Fisher type, when at least one of the several tests run shows a magnitude other than the expected one. Similarly, he warns that, besides intercept, coefficients too are likely to be affected when dummy variables are introduced. Using dummy variables affecting intercept only would be a restrictive practice. These are important warnings from the author and scholars not otherwise exposed to advanced statistics would benefit by heeding to them.

Institutional behaviour and conceptualisation of institutional relations could be considered the central theme emerging from the book. Amidst 'demolition of myths', both right and left and the statistical flaws of 'vulgar' econometrics, the central theme is scattered all over. The third part deals in a major way with the core theme. Discussion about tenancy, usury, bonded labour and different kinds of debt relations are in a way extention of discussion of these and similar issues in the first part. In the third part the author reorganizes the same empirical evidence to examine the issues in the context of Marxian ideas of modes of production. He puts in proper perspective the current discussion on the subject in the economic literature. He would emphasize that all labourers do not have an access to loans and hence would be ensnared to fall prey to exploitation and that all who have such an access are not necessarily bonded. Necessary and sufficient conditions are not identical, he would emphasize. For, he observes, with data, that even among labourers, those who borrow and repay loan constitute a significant proportion. Tenants and owners are not two distinct classes with a rigidly defined dividing line between them. Owners who lease out do cultivate a part (perhaps a major part) of the land they own. They, the lessors, save and invest in productive assets. Tractors and tubewells are concrete examples of such investments. These are weighty evidences (no statistical refinements would be necessary to facilitate their interpretation).

The author's major point regarding the analysis of labour market (labour relations) is heterogeneity of labour. He even objects to using labour as a single variable since, according to him, there is no such variable. There is male, female and child labour, own and hired labour, day or casual labour and attached (and bonded) labour and crop sharers. To this big list he adds one more category of labour with specific skill for specific operations and general unskilled labour. Motivation for the supply of each category of labour differs. This position of the author is acceptable. One can go along with him and add even one more category, newly emerging, that of migrant labour. A category that is on the way out may also be mentioned, *viz.*, exchange or free labour.

He further maintains that free labour or labour working at much below the market wage, under some compulsion, is not significant. He observes also that wages have a wide range of fluctuations from lean to busy season. Wages are paid in cash, in kind but fixed, and also as share in produce. On the basis of these observed facts, he seems to maintain, however, that the widespread phenomenon of labour hiring, including hiring by the poor farmers (and tenants) is but a reflection mainly of supply conditions. Females of certain castes would not offer their labour for wage, but those of other castes would. Labourers performing skilled jobs would not offer themselves for lower paid jobs. Mismatch of jobs and manpower would inevitably lead to unemployment and when the overall supply is abundant, unemployment would be widespread and would obtain for all categories. The argument appears to be plausible. However, if wages fluctuate widely between peak and lean seasons, one would infer that swings in wages are caused by similar swings in demand for labour, which at peak creates conditions of relative scarcity and at other times relative abundance. One would observe that during periods of relative scarcity the highest rate of labour force participation will obtain as the market mobilizes all available labour to avoid loss of valuable harvest. In a specific sense, labour productivity is also at its peak during peak period. Female labour participation is observed to be negatively related with land size or income of the family. Unless the castes and income categories coincide fully, the caste restrictions would have but limited hold. In a short staple cotton growing region, female folks of 'upper castes', not working in the field, work for wages for opening cotton pods. This may not be an exception. But these very women along with others working in the fields would be the first to withdraw from hiring for wages when family incomes rise.

The author's tirade is against tradition. And hardened traditions, like unintelligent imitations, rarely contribute to the advancement of science. In this respect, Ashok Rudra's work makes an important contribution. The work will be useful to economists of both bourgeois (as Ashok Rudra would call) and Marxian types. Students of applied economics in the field of agriculture would find many warnings of the author *qua* statistician singularly helpful. Rarely does one come across such a wide coverage of topics and such critical insight, combining a perspective view of market and Marxian economics in one book as is provided by the author. We therefore heartily welcome the publication.

Bombay C. H. Shah

Agricultural Research Policy, Vernon W. Ruttan, University of Minnesota Press, Minneapolis, Minnesota, U.S.A., Second Printing 1983. Pp. xiv+369. $29.50.

This book is a valuable addition to the scant literature of agricultural research management. Observations made by Ruttan, though based on U.S. experience, are relevant for agricultural research management in India. Ruttan says, "There is no school or discipline of agricultural research management. This is probably as it should be. Effective research management is the product of a unique contribution of experience, insight, skill and personality......these qualities can be enhanced and refined by drawing on the accumulated experience of research organization, management, and strategy that has accumulated since agricultural research became institutionalized (p. 4)." This sounds similar to the observations made by many people when business management was about to acquire the status of a discipline. Although agricultural research management has yet to acquire the status of a discipline among various branches of management in general and agricultural management in particular, the Indian Council of Agricultural Research (ICAR) has taken an entrepreneurial step in establishing the National Academy of Agricultural Research Management (NAARM).

In agricultural research management, research policy is of prime importance in various management functions.[1] Ruttan has dealt with agricultural research policy from a broader perspective not confining to agricultural research management *per se*. The clientele for him is not only research managers but also policy makers for agricultural development, supporters of international agricultural research and academicians.

Throughout the book Ruttan has emphasized two aspects: (*i*) induced technical innovation and (*ii*) induced institutional innovation. Technical innovations are induced depending upon the resource endowments and relative price structure. The effect of a rise in the price of fertilizer relative to the price of land or the price of labour relative to the price of machinery has been to induce advances in biological and mechanical technology. Appropriate incentives lead applied researchers and basic researchers to respond to the needs of society. The low productivity of agricultural scientists in many developing countries is due to the fact that many societies have not yet succeeded in developing incentives that lead to focusing of scientific effort on the significant problems of domestic agriculture (p. 36).

Ruttan has gone into the details of the process of innovation and shown the relationship between technological innovation and scientific innovation. He says that when science depends on society for patronage, society can be expected to insist on responsibility or at least accountability (p. 60). He has given the case studies of seven national agricultural research systems: (1) United Kingdom, (2) Germany, (3) United States, (4) Japan, (5) India, (6) Brazil and (7) Malaysia. Based on these case studies he has developed four models for the organization of agricultural research (p. 107). At the end of the case studies he raises some important questions: Why do some societies find it so difficult to sustain support for an activity that pays such high growth dividends? How does the agrarian structure, the farm size distribution and tenure structure, affect the demand for agricultural research? (p. 112). For the agricultural research system in India co-ordinated by the ICAR, there are important lessons in these case studies on organizational aspects.

Ruttan has described the international agricultural research system organized under the auspices of the Consultative Group on International Agricultural Research (CGIAR). He states that the international agricultural research system should be viewed as a permanent feature of the global agricultural development of strong national systems. In India, we have the headquarters of the International Crops Research Institute for the Semi-Arid and Tropics (ICRISAT) at Patancheru (Andhra Pradesh). My experience as a member of the External Management Review Panel of ICRISAT leads me to suggest that the ICAR should take more advantage of ICRISAT than it takes at present.

The author discusses the problems of location and scale in agricultural research. Depicting the example of location of agricultural research facilities in U.S.A., he cites the analysis by Don Hadwiger indicating that 44 per cent of all USDA research facility construction between 1958 and 1977 was located in states represented by members of the Subcommittee on Agriculture of the Senate Appropriations Com-

1. D. K. Desai and N. T. Patel: Agricultural Research Management: Case Studies of Operational Research Projects of ICAR, Oxford and IBH Publishing Co., Delhi, 1986.

mittee (p. 164). Fortunately in India, the location of agricultural research facilities is not yet much influenced by politicians but as the interest of politicians grows in agricultural research facilities, the future location is likely to be influenced by them.

In U.S.A. there is substantial complimentarity between public sector and private sector agricultural research. The author has made case studies of research on (1) mechanization, (2) development and protection of plant varieties and (3) insect control. Based on these case studies, he concludes that the scientific and technical skills required for the research work are not likely to be available completely within either public or private sector institutions. Institutional innovations are required to facilitate effective patterns of communication and collaboration between public and private sector research organizations (p. 211). In India private sector agricultural research is negligible. Recently, private seed producer firms have started breeding programmes to develop special varieties of jowar and bajra in Maharashtra. Such efforts need to be encouraged in all States.

The funding system for agricultural research in U.S.A. narrated by Ruttan (Chapter 9) may not be relevant for all developing countries. In India we have research grants for the institutions and also project grants for individual research workers from the State Governments and the Central Government. However, the administration of research grants has its own peculiarity. The research directors and individual research workers have to develop "Indian entrepreneurship" to obtain substantial research grants. A good example is research grant for the Centre for Management in Agriculture (CMA) of the Indian Institute of Management, Ahmedabad, from the Ministry of Agriculture of the Government of India.

The author has devoted a full chapter on the economic benefits from agricultural research (Chapter 10). The rates of return on research in U.S.A. are high compared to almost any form of public sector investment. He has raised an important question: Why does society underinvest rather than overinvest in public sector agricultural research?

The problem of research resource allocation is very much relevant to research managers. Ruttan has described different models of research resource allocation. I do not know whether any work has been done in developing models for research resource allocation in India. The ICAR, Agricultural Universities and State Governments which allocate funds for agricultural research should be interested in developing some models for allocation of funds.

The chapter on the social sciences and agricultural research is relevant for agricultural economists in India. Ruttan has described the evolution of agricultural economics in U.S.A. A comparison of this with the evolution of agricultural economics in India shows an interesting contrast. The U.S.A. evolution is from micro economics (farm management and production economics) to intensive interaction between agricultural and general economists in the field of agricultural and economic development. In India agricultural economics evolved with the contribution of general economists working on agrarian reforms in the beginning in the early forties and developed to cover micro economics (farm management and production economics) in the sixties. The problems which agricultural economists face in agricultural research institutes and agricultural universities in India are more severe than their counterparts in U.S.A. They have yet to establish their credibility both with agricultural scientists and general economists. However, the Indian government has realised the value of agricultural economists and hence had appointed an eminent agricultural economist like Dr. Raj Krishna as a member of the Planning Commission. A great deal is expected in terms of contribution from social scientists, agricultural economists in particular, to understand basic behavioural relationships and to apply social science knowledge to speed innovation and improve the performance of agricultural research in India. Social scientists particularly agricultural economists have to make substantial contribution to the agricultural research system in spite of the tension between social science and natural science based disciplines.

The author has raised in the last chapter an important question of moral responsibility of agricultural researchers and managers. He has quoted an example of tobacco research. He indicates that if political processes can lead to greater consistency between revealed preferences and individual values, individual scientists and research managers might no longer be confronted by a situation in which cigarette smoking is branded as dangerous to health and at the same time public resources are appropriated for research on tobacco production (p. 346). Ruttan's observation that a nation's agricultural research budget can be a powerful instrument for expanding its capacity to produce food and fibre, but it is relatively a weak instrument for changing income distribution in rural area (p. 346) should serve as a warning to the enthusiasts who want to direct agricultural research to improve income distribution in India.

Ruttan emphasizes that institutional innovations can be designed both to generate technical change in a manner consistent with resource endowments and product demand and to bias the incidence of benefits and burdens in a manner consistent with social policy.

The book is thought provoking. Though based largely on U.S. experience, there are many lessons for developing countries to develop agricultural research on proper lines. Those who are interested in agricultural research management should use this as a reference book.

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Agricultural Prices and Economic Development, Edited by A. P. Srinivasamurthy and Rameswari Varma, Himalaya Publishing House, Bombay-4, 1984. Pp. viii +428. Rs. 190.00.

Price levels and price policy have a significant role in the economic development of the country. The relative level of agricultural prices influences the farmers' decisions about allocation of their resources amongst different crop enterprises and determines the level and pattern of production. The ratio of prices of different agricultural commodities to that of input prices determines the relative profitability and shift in terms of trade (production pattern) over time. Thus, economic development which is influenced by growth in agricultural production is said to be largely influenced by agricultural prices.

This publication is based on selected articles from various journals dealing with the behaviour and impact of agricultural prices on various aspects of agricultural development. The publication includes 18 articles grouped in three sections.

Section I contains four articles dealing with Agricultural Prices Theory, Agricultural Price Policy and Economic Development. This section explains the theory of agricultural prices and their behaviour in relation to economic development. "Agricultural Development and the Price Mechanism" by B. N. Ganguly, "The Functions of Agricultural Prices in Economic Development" by John W. Mellor, "Agricultural Prices in Economic Development" by Raj Krishna and "Pure Theory of Agricultural Prices" by P. R. Brahmananda are the papers included in this section.

Section II discusses price movements including issues in agricultural price policy and price determination in India. It includes eight articles which deal with the farmers' response to prices in the allocation of crop acreage, increasing production and marketable surplus. "A Critical Survey of Recent Studies on Farmers' Response to Price" by D. S. Tyagi, "Price, Response of Marketed Surplus of Foodgrains" by Pranab Bardhan and Kalpana Bardhan, and "Role of Price Incentives in Stimulating Agricultural Production in a Developing Economy" by R. Thamarajakshi are the articles included in this section. The issues concerning determination/fixation of agricultural prices, price policy and plans have also been discussed in the following articles: "Principles and Problems of Agricultural Price Determination" by M. L. Dantwala, "Minimum Support Prices for Foodgrains: Guidelines for a Policy and a Programme" by V. M. Dandekar and "Agricultural Price Policy in India and Some Issues in Price Fixation" by Rameswari Varma, besides two others in this field. An in-depth study of the papers included in this section of the book would improve the analytical faculty of the reader in the field of agricultural prices.

Section III of the book, spread over six articles, covers the theme of marketing and distribution system of agricultural commodities. This section is devoted to the study of the existing system of marketing practices, forms of procurement and distribution including building up buffer stocks and its operation in foodgrains. Among the important articles included in this section are "Role of Price Spreads in Determining Agricultural Price Policy" by P. S. George, "Price Transmission and Price Spread in Foodgrain Marketing" by S. Bisaliah and others, "Marketing and Pricing of Foodgrains" by Uma Lele and "Public Distribution and Procurement of Foodgrains" by I. S. Gulati and T. N. Krishnan. A study of the papers in this section would give an idea of how marketing costs, price spread and market prices would affect the price policy of the Government.

The purpose of this book is three-fold. First, to bring all the material scattered in several journals and books on the relationship of the behaviour of agricultural price to various aspects of economic development at one place for easy accessibility; secondly, to provide a theoretical framework for an understanding of the problems of agricultural prices in their relationship to economic development; and thirdly, to provide a reference in framework of long-term interest and value.

The Readings, however, like a Curate's egg are good in parts. In fact, it would have been more useful to have selected fewer articles relevant to the title of the collection, *viz.*, Agricultural Prices and Economic Development, for a slimmer and lower priced student edition rather than have this pot-pourri. To this select category would have belonged Ganguli's, Mellors' and Raj Krishna's articles on the Role of Price Mechanism in Agricultural Development and Dantwala's and Dandekar's articles in Section II of the volume. These write-ups are both scholarly and eminently readable. The opening article in the selection, *viz.*, "Pure Theory of Agricultural Prices" is, however, too pure to be of much use to the average reader and as such is not a good selection to begin the volume.

In Section II, Thamarajakshi's article on the "Role of Price Incentives in Stimulating Agricultural Production" presents a well reasoned analysis but as already mentioned is now dated and as such is only of historical value. The editors would have done well to request her to take the analysis forward to the presently obtaining situation of successive bumper harvests and a public distribution system reeling under the pressure of unduly heavy stocks. The article on "Foodgrains Growth and Price Policy" also suffers from the same limitations as it stops at 1975. It is in fact the following decade which saw many vicissitudes on the agricultural production front and as such provided a real touch-stone to the success or failure of price policy in the agricultural sector. It would have been better if the editors, instead of contributing three of their earlier and consequently dated writings to the selection, had especially undertaken an analysis of the role of price policy and price situation in the decade following 1974-75.

A word of caution is necessary. No doubt, price policy is an important instrument for the allocation of resources and distribution of income and as such has an influential role in capital formation. But it is wise to keep in view that its role in stimulating agricultural production is of a limited nature. The National Commission on Agriculture (1976) appropriately observed in this context that price policy cannot be relied upon as the principal mechanism for augmenting production, particularly in a situation where shortages run across the board. Such a policy would only add to price rise without yielding higher production. The increase in output and farmers' income has to be brought about mainly through technological improvements and making available crucial inputs rather than by manipulation of prices. Major role of agricultural price policy could be only to correct distortions which are socially and economically harmful and which emerge from time to time because of imperfections in the market mechanism. We would like to emphasize even at the cost of reiterating that in the agricultural sector the remedy to low productivity, particularly in critical areas like oilseeds and pulses lies in purposeful investment, better skill formation, adoption of improved practices, etc., to further the levels of productivity so that their cultivation even under irrigated conditions is viable. Price policy cannot substitute for these measures or for better technology. The important point that needs to be realised is that technological improvement reduces the cost of production either in absolute terms or, more often, as a percentage of the value of output of the crop in question. Moreover, technological change is a cushion against too much variability in crop production which imparts unhealthy fluidity to the agricultural price scene. No write-up in this collection brings out these limitations of agricultural price mechanism in stimulating agricultural production.

The role and success of agricultural prices and pricing policy in stimulating agricultural production in particular as also overall economic development have been often debated with varying arguments and conclusions. Availability of different views at one place in this publication would make it easier for the readers to draw their own conclusions about the impact of prices on economic development. Going by the selection of the papers included in the publication and their groupings, the book on the whole is a welcome piece of work on the subject and should prove quite beneficial to policy makers, researchers and particularly to the students for whom it is primarily meant.

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Political Economy of Land Reforms, G. Thimmaiah and Abdul Aziz, Ashish Publishing House, New Delhi-26, 1984. Pp. xiii+94. Rs. 65.00.

The failure in the redistribution of land to the poor through land reform is well documented in several early studies sponsored by the erstwhile Research Programmes Committee of the Planning Commission. This has also been the theme of a number of other subsequent studies. The merit of this book, which focuses attention on land reforms in Karnataka, is that it attempts at an explanation of the failure in terms of what the authors call, a "positive theory of caste and class group behaviour in Karnataka". The analysis draws upon the discipline of not only economics, but also political science and sociology. It is this which makes the book an interesting reading.

The theoretical framework is outlined in a few pages in the second chapter. Neoclassical and Marxian economic theories are stated to be inadequate in explaining the failures in implementation since these do not incorporate into their frame an important element of the Indian social situation, *viz.*, caste system and its interaction with State power and bureaucracy. Caste system contributes to the failure of land reforms in two ways: it weakens class consciousness among the potential beneficiaries and inhibits the growth of a supporting peasant movement; and caste alliances of the rich landowners with bureaucracy, and those in State power work against effective implementation. The authors should be commended for their attempt to incorporate the caste element into their analysis. However, the theoretical frame requires further elaboration and refinement.

The subsequent chapters of the book seek to establish the role of caste system in contributing to the failure of land reform. The Inam Abolition is explained in caste terms. The owners of Inam *lands* were mainly Brahmin, absentee owners, and the tenants of these lands belonged to the dominant majority castes, who constituted the vote banks after Independence. It suited the political interests of those in power, *i.e.*, the non-Brahmin landed interest, *viz.*, Vokkaligas and Lingayats, to bring in legislation for abolition of Inams. But the bureaucracy was controlled by Brahmins, and this contributed to the delay in implementation. Though the legislation for abolition of Inam lands was passed in 1947, it was made into an Act only in 1954.

If the delays in the implementation of Inam legislation are attributed to Brahmin bureaucracy, which had a vested interest in Inams, the delays in initiating a radical ceiling legislation up to the early 1970 are attributed to the dominance of the land owning Lingayat group in State power. The growing power of the dominant non-Brahmin caste groups is illustrated by facts on the changing composition of the Karnataka Legislative Assembly by caste. While the share of Brahmins in the legislative assembly declined since 1952, the Lingayats and Vokkaligas held dominant position in the Assembly with more than 60 per cent of the legislators. There was also a shift from non-agricultural to agricultural groups. Thus the dominance of non-Brahmin landowners in State power contributed to delays in radical ceiling legislation while resulting in a stiff tenancy legislation. The contrast is traced to the interplay of caste politics. While ceiling legislation affects the land owning Vokkaligas and Lingayats, the tenancy legislation affects the Brahmin absentee landlords, and the Vokkaliga-Lingayat coalition in State power had less to lose by a stiff tenancy legislation. The more radical ceiling legislation of the early 1970s is attributed to the installation of non-dominant minority backward group in power, reduced strength of dominant landlord caste groups in legislature and the support of a Brahmin bureaucracy which by this time lost its landed interests.

As regards the implementation of the 1974 Act, the post-1977 period implementation suffered a setback as compared to the pre-1977 period. This is explained mainly in terms of a number of factors; the renewed power of the dominant majority caste group; the growing share of the dominant majority caste groups in bureaucracy, and the conversion of Land Tribunals into an institution for distribution of spoils among politicians.

The authors draw some policy implications extending beyond land reforms in their study. They plead that no one single caste or class should be allowed to dominate political and administrative power in the State, and also within political parties. A broad-based composition of political parties and bureaucracy will enable the weaker sections of the society to have their say not only in policy making at the political party level but also in their effective implementation. This reviewer has much sympathy with the plea of the authors. But there is a dilemma which needs to be resolved in practice. A recognition of caste for broad-based representation is likely to weaken class consciousness; but non-recognition will leave the weak minority caste groups, particularly the Scheduled Castes and Scheduled Tribes, neglected while the richer among the dominant majority caste groups continue to use the caste loyalties to prevent the coalition of the poorer members of the upper caste with the poorer groups among the weak minority castes.

The authors should be commended for attempting an analysis of the role of caste in explaining the implementation failures, though caste gains an exaggerated importance in their analysis.

The empirical data on caste and other variables should be of particular interest especially in the context of recent revival of interest in caste and class.

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Profitability of Commercial Banks, Varsha S. Varde and Sampat P. Singh, National Institute of Bank Management, Bombay-6, 1983. Pp. ix+93. Rs. 40.00.

Profitability of commercial banks has been a subject which has caught the imagination of researchers, bankers and government in a large measure. The topic has gained prominence after the nationalisation of commercial banks. It is so because the country can ill-afford the banks go the way other public sector undertakings are going. Banking is a business and if run on business lines it must succeed; on the other hand, if the commercial banking is converted into something for increasing the public welfare, naturally the main plank of profit gets slipped to the second place and only the welfare remains. The difference between an undertaking in the private sector and that in the public sector is glaring. Success of a unit in the private sector is determined with reference to both the profitability and profits, whereas the public sector has not been seemingly much concerned with the profits. Most of the time the public sector enterprises have shown their leanings towards the welfare of the labour force and the executives rather than the public or the consumer. This reviewer does not think whether the Government in the past at any time had taken the profitability issue seriously in the public sector. However, there appears to be fresh wind blowing in the right direction.

The book under review is a study of profitability of commercial banks. It is divided into three sections which are further sub-divided into chapters. Section A deals with the "Concepts and Trends", Section B with "Planning and Monitoring" and Section C with "Methodology Refinements". Section A consists of four chapters commencing with the analytical framework for profit management in banks. The second and third chapters deal with the declining trend in bank profitability, and profitability: the inter-bank comparison respectively.

The first chapter under Section B deals with productivity in banks whereas the second chapter studies profitability planning in banks. The subject matter of the third chapter is monitoring profitability of bank branches.

The first chapter in Section C which focuses its attention on methodology refinements deals with matching revenues and costs of commercial banks. The second chapter is concerned with measuring cost of funds for banks while the last chapter deals with the operating cost of rural retail banking.

The authors start with developing a model to define profit which according to them is the excess of spread (excess of interest earned over interest paid) over burden (excess of manpower expenses and other expenses over non-interest income). It appears that the authors want to meet the manpower and other expenses out of non-interest income. "Spread provides the gross income to cover the burden. The latter arises because of the shortfall of non-interest income relative to non-interest expenses.... To the extent that non-interest expenses cannot be reduced and the non-interest income cannot be increased by raising the service charges, the profitability depends on the spread.... The objective of an exercise in profitability management in a bank is, therefore, to achieve the spread as large as possible and the burden as small as possible." The objective is laudable but the hundred dollar question remains unanswered.

The model suggested is intelligible. However there is a need for refinement of the model as regards the use of a few alphabets. For example, alphabet 'N' is used to mean non-interest expenses (M+O given on p. 2) whereas the same alphabet 'N' on p. 5 denotes the total number of employees working at all levels with the banks, though in a different context. It could have been avoided.

The study of the declining trend in bank profitability is spread over three phases. The first phase of five years, namely, pre-nationalisation (1964-69) shows, according to the study, that the decline was according to the rise in burden ratio whereas in the second phase from 1970 to 1975 the rise in burden was much faster than the rise in spread, and thus the decline continued. During the third phase from 1976-1981 the spread went down considerably and was the sole cause for further decline in the profitability ratio. The authors have identified many factors, tertiary and associate, responsible for the final outcome of the amount of spread. In fact, in the present context, the banks have hardly any freedom to do anything with regard to the rate of interest charged on lending and interest paid on deposits. It is only the quality of asset and liability management decisions that will ultimately decide the quantum of the spread or spread ratio. It would have been praiseworthy if the authors had given some concrete suggestions in this regard.

Banking being a service industry, it is a little difficult to determine productivity as we would do in the case of any manufacturing unit. Here one has to depend on the input-output in terms of money. Cost incurred on providing services and the amount realised for those services will determine the productivity of banking industry. Since the banking office and its personnel are busy in many services and tasks simultaneously, it is rather difficult to find out the cost of miscellaneous services provided by a bank. The result is that the pricing of such services is just arbitrary and discriminatory also. The readers might have noticed that while dealing with the bank they pay different prices at different times and varying charges for the same service at different places. How nice it would have been if the authors had investigated into the cost aspect of such services so that pricing would become easier to fix and effective to yield profit.

The authors have discussed monitoring profitability of branches through regions. In this regard it is significant to stress that the branches are established at places which are not always revenue earners but because it is obligatory for a bank to open branches in unbanked areas. These branches are often losing propositions and cannot therefore be compared with other branches. In fact, because of such losing branches sometimes the net result of any bank is adversely affected. The present transfer price mechanism to determine profit or loss followed by banks with regard to their branches is highly imperfect and inappropriate. The authors have suggested certain key indicators to monitor the profitability of branch offices by Zonal and/or Regional offices. Further, the schedule designed to supply the information by branch office to Regional office is comprehensive. The schedule not only helps in making inter-branch comparison easier but also in monitoring the profitability of each branch.

The reviewer would like to emphasize that the cost of funds flowing in is not only measured by the amount of interest paid but it must include the cost of free services rendered by banks in order to attract these funds. We are aware that the banks are denied the opportunity of paying what they would like to pay on the deposits because of the restrictions imposed by the Reserve Bank of India, and therefore, they render free services thus indirectly benefiting the depositors. The cost of such services should also, therefore, be added to the interest paid on deposits. These are the areas where further studies can be undertaken. In fact, it would be an advancement over the existing literature if through some method we are enabled to calculate cost of funds lent. Similarly, the cost of other agency services could also be computed to help pricing of these services.

To put in a nutshell, the book is a thought provoking study which will help bankers, policy makers in the government and researchers. It is refreshing to go through the models developed by the authors while explaining certain concepts and trends. It is highly recommended.

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