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BOOK REVIEWS

Indian Agricultural Economy, C. Arputharaj, Macmillan India Ltd., Madras, 1982. Pp. v + 186. Rs. 25.00

That the poverty of the masses and the backwardness of the Indian economy spring mainly from the backwardness of the agricultural sector needs hardly any emphasis. While nearly three-fourths of the Indian population is supported by agriculture, with more than four-fifths of its rural labour force working on it, Indian agriculture contributes only less than half to the net national product. Any attempt to study and understand the Indian economy should therefore begin from a study of the Indian agricultural economy. The literature on the agricultural economy of India, especially the research output, is quite considerable. Some of the best known Indian economists are those who have made significant contributions to an understanding of Indian agricultural economy. However, the serious student who wants to be initiated into the myriad issues and problems in Indian agriculture is still handicapped by the lack of any authoritative as well as seriously-approached textbook. Text-book writing is not considered either 'important' or 'prestigeous' by the well-known economists in India. The result is that textbooks are produced with an eye on the potential market among the student community to help them 'pass' examinations.

The book under review falls into this category of textbooks designed to meet "the requirements of the undergraduate and postgraduate students of the universities having agricultural economics as a subject." Moreover, the author recommends it as "very useful for competitive examinations like IAS, IPAS, ARS, etc." However the book is written in a concise form and is quite readable. It is divided into 12 chapters. After giving a picture of the Indian economy in a comparative world setting, the author deals with the role of agriculture in economic development where the focus is on land reforms and its implementation in India. The role of human factors in rural development has been given a full chapter bringing out the trend and state of agricultural labour. This chapter along with the chapters on agricultural business system (dealing with marketing) and agricultural finance (credit) seem to be the best chapters in the book. The other chapters include agricultural inputs, rural industries, transport, foreign trade and cooperation. The treatment of such a large number of aspects of Indian agriculture is quite brief, compressed into 180 pages in all. Most of the data have been brought fairly up-to-date.

For a serious student desirous of proding into the various aspects of Indian agriculture, the book will be a disappointing one. For, there is no list of readings—either basic or advanced. There is also no bibliography. The approach of the book could also be questioned. Most of the chapters give summary accounts of various government plans and programmes. In fact, there is hardly a chapter in which some analysis is attempted. But the

author has not refrained from making certain 'bold' statements, to say the least. In the first chapter itself he says: "On the basis of the planned development the growth rates of agriculture and industry are quite encouraging... Therefore, the Indian economy is a developing economy. *Our past experiences show that soon India can be included as one of the highly developed countries in the world*" (p. 15-16) (emphasis added).

For the limited objective of passing examinations, the book may be quite useful to an undergraduate student of economics though the same could not be said for the post-graduate student. This once again brings into focus the need for serious textbooks.

Centre for Development Studies,
Trivandrum

K. P. Kannan

Managing Agricultural Systems, G.E. Dalton, Applied Science Publishers Ltd., Essex, England, 1982. Pp. xii + 161. £ 12.00.

This study deals primarily with the management process in agricultural systems. It is written in a simple language without using many mathematical symbols or management jargons. In describing agricultural systems, the author has defined agriculture as a collection of activities which converts mainly biological inputs into food and raw materials. This gives an impression that the definition restricts the scope of agriculture to production activities only but the author immediately explains that the activities can be classified into a set of sequential processes such as input manufacturing and distribution, farming, food processing, wholesaling and retailing. This definition is closer to the definition of the agri-business system. I have defined the agricultural system in a much broader sense which includes both enterprise and non-enterprise-based-activities.[1]

The author has referred to another way of looking at agriculture as the combination of activities classified according to the skills required. They include manufacturers, engineers, salesmen, auctioneers, farmers, hauliers, teachers, researchers, advisers, administrators, contractors, politicians, officials, veterinarians, tradesmen and accountants. The list is not exhaustive but it does illustrate that one of the major functions of management is the integration of skills for a common purpose (p. 6). I have called 'people' as a second dimension of the agricultural system.[2] It is important to discuss the integration of people with various management functions in agricultural systems.

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1. D.K. Desai, "Management in Agriculture and the Role of Agricultural Economics in India," *Indian Journal of Agricultural Economics*, Vol. XXXVII, No. 4, October-December 1982, pp. 926-953.

2. *ibid*, p. 427.

The author has stated that the concept of the system can be applied to a macro level or it can be used for a specific purpose. The central idea of the system is what can be controlled and the objective of the user of the system. Hence the system for solving the problems facing a Ministry of Agriculture is different from that of a farmer or a large machinery manufacturer. From this point of view, the author has gone into the problems of managing agricultural systems instead of the agricultural system at the macro level.

In Chapter 2, the author has explained different types of agricultural systems. The examples which are given mostly pertain to agricultural production which could be viewed as a sub-system of the agricultural system. The most important aspect in this chapter is the use of models in agricultural systems. The author has cautioned the model builders that so far as the users of models are concerned, they find it difficult to specify what their needs are or expect too much too quickly of the model and the computer. To perceive, build, apply, sell and service a model demands a great deal of energy and dedication.

Chapter 3 deals with the environment. It deals with weather, economic environment and the interaction between agriculture and the rest of the economy. It also deals with the relationship of agriculture with the international economy. The discussion about agricultural markets and price support indicates the peculiarity of the environment for agriculture. I had included the environmental aspects of agriculture into the second dimension, *viz.*, 'field' in my concept of the three-dimensional form of the agricultural system.[3] The broad scope of the agricultural system is much more relevant as the environment for the system as a whole is more or less common and applies to all activities included in the system grouped as sub-systems.

Chapters 4 to 8 deal with different functions of the management process, *viz.*, planning, control, recording, forecasting and implementation. The functions of the management process can be classified in a variety of ways. However, the major elements of the management process are covered in these chapters. I have considered management process as the third dimension of the agricultural system.

The most interesting aspect in these chapters is the weaving of various techniques which are useful in various functions of the management process without creating any kind of awe about these techniques. Many books on management lay emphasis on the techniques and create an impression as if the knowledge and skill of the use of the techniques only fulfil the requirements of the management process.

The author has gone into details of the functions involved in the management process. He has given interesting examples to clarify various aspects of a particular function. Under the topic of planning he has covered the techniques of partial budgeting, linear programming and simulation.

The author has explained lucidly the function of control. All controls

3. *ibid*, p. 427.

have a cost, and management has to balance them with the benefits control brings.

While discussing the function of recording which primarily deals with management accounting and management information system, the author has explained in simple terms the need for the profit and loss account and the balance sheet. He has included an item of 'relationships' under this function and discussed agricultural research and surveys. The use of agricultural research and surveys in the generation of relevant data is important from the point of view of management information but agricultural research is much more important for bringing about growth in the agricultural system, particularly in the developing world. The author has not touched the relationship of agricultural research, education and extension and building of other infrastructural facilities with the totality of the agricultural system or "different agricultural systems" in a specific way.

The author discusses the function of forecasting which depends primarily on management information system. He has also illustrated the technique of decision trees. Although forecasting covers some aspects of marketing, it would have been better if marketing was discussed as an important function of the management process.

Implementation is the most important function in the management process. Even if an activity is well-planned, if it is not properly implemented according to the plan or plans are not modified during the implementation stage according to the needs of the circumstances, the whole management process would not bear desired results. The author has emphasized the analysis of problems both at the planning and implementing stages. He has discussed 'people' under the function of 'implementation'. Actually, 'people' are important for all functions of the management process. Some aspects pertaining to people such as the purpose of development, equity and development, equity and extension work, countering unfair competition, and education and training have been discussed under implementation. These are relevant to other functions of the management process also. The topic of communication could be properly discussed under the function of marketing and the topic of organization should be separately discussed as an important function in the management process.

On the whole, the author has fulfilled the major objective "to promote reflection, thought and discussion by professional people whose decisions influence the performance of agricultural systems and to convey the central concepts of management in agriculture in a simple language. This is a very useful book to the students of management in agriculture.

Indian Institute of Management,
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D. K. Desai

Group Lending Innovations for Rural Areas: A Pilot Study, B.M. Desai, CMA Monograph No. 89, Indian Institute of Management, Ahmedabad; Oxford & IBH Publishing Co., New Delhi-1, 1982. Pp. x + 29. Rs. 20.00.

Project Approach in Agricultural Financing: A Study of the Gujarat State Co-operative Land Development Bank, B.M. Desai and Y. Narayana Rao, CMA Monograph No. 91, Centre for Management in Agriculture, Indian Institute of Management, Ahmedabad, 1981. Pp. ix + 64. Rs. 40.00.

The rural credit delivery system in India had witnessed a number of structural and operational innovations in the last three decades. The important among the structural innovations are (1) entry of commercial banks in rural areas, (2) establishment of Regional Rural Banks, Farmers' Service Societies, Large-Sized Adivasi Multipurpose Societies, (3) policy measures such as concessional rate of interest, creation of bad and doubtful reserves and contribution to these reserves and (4) stipulations regarding financing of small farmers. The operational innovations include introduction of crop loan system, production oriented lending of Land Development Banks, supervised credit, project lending, group guarantee schemes, etc.

The two monographs under review deal with the operational innovations in the rural credit delivery system. The first monograph is an outcome of a pilot study on group guarantee scheme introduced by a branch of one of the nationalised commercial banks working in Mehboobnagar district of Andhra Pradesh. The title of the book is a misnomer as neither the loan nor the input/asset purchased with the loan under this innovation was jointly owned or used by the members of the group.

The loan was issued on the guarantee of a group of borrowers. Hence the innovation is group guarantee and not group lending. A suitable title could have eliminated the possibility of getting the reader confused of the subject matter. The monograph is divided into four chapters. The first chapter provides the introduction and deals with methodology. The second chapter gives the analytical framework of the study. The third chapter is devoted to empirical analysis. The last chapter contains the summary and policy implications of the study.

The second monograph is an in-depth study of project lending practised by one of the pioneer land development banks of our country, *viz.,* Gujarat State Co-operative Land Development Bank Ltd. (GSLDB). The book is divided into four chapters. The introduction, objectives and methodology of the study are covered in the first chapter. The second chapter provides a framework on the theme of project formulation and implementation for rural finance operations. The third chapter examines the Bank's practice of project approach of financing for minor irrigation. The main findings and implications are summarised in the fourth chapter.

There is a plethora of literature on rural finance in India but research studies dealing with operational innovations are few in number. The authors

therefore deserve compliments for making important contributions to the existing knowledge on the subject.

In the first monograph under review, the author has examined the conditions under which group guarantee scheme can be considered as a financial innovation from the point of view of both lenders and borrowers. While in the conceptual analysis, the author has successfully developed the advantages of group guarantee scheme such as lower default risks, lower unit borrowing costs, and other associated scale economies, the empirical evidence is not encouraging. However, the suggestion of the author to select homogeneous groups, particularly in regard to their location from bank, technology of production and farm size, etc., can be tried with advantage to realise the benefits of group guarantee scheme both by lenders and borrowers.

In the second monograph the authors have been, by and large, successful in highlighting the shortcomings in the application of concepts and techniques of project lending. The study brings to light that the shortfall in achievements, incidence of under-financing, lower incremental income and the growing menace of defaults are some of the snags plauging the project lending. However, attempts have not been made to clearly identify the reasons and causes of these maladies. Many a time support has been taken from the views expressed by the respondents without testing the validity of such views in the context, *e.g.*, growing menace of overdues has been attributed to natural calamities, etc., ignoring the fact that the incremental income obtained by the farmer-beneficiaries was more than enough to pay off the dues. Similarly, lower financial rate of return has been explained as lack of change in the cropping pattern and poor yield. The recent experience all over the country suggests that because of the higher input prices, the profit margin has registered a declining trend and so also the financial internal rate of return (FIRR). The encouraging average pumping hours per well noticed in this study suggests that all is not wrong with the cropping pattern and yield but something else like input-output prices is responsible for lower FIRR.

There are a number of such instances where attempts have been made to impose the pre-conceived ideas without empirical evidence. These points do not, however, detract from the value of the contribution made by the authors in regard to the identification of several areas of improvements in the implementation of projects, such as the need for catering to the working capital requirements of borrowers, providing credit for developing backward and forward linkages, etc.

The policy makers, academicians, bankers and other students of rural finance will find these two studies quite interesting and useful too.

Ahmedabad C. L. Dadhich

Development of Tubewell Irrigation in India, B.D. Dhawan, Studies in Economic Development and Planning No. 26, Institute of Economic Growth, Delhi; Agricole Publishing Academy, New Delhi-17, 1982. Pp.xviii + 208. Rs. 100.00.

The monograph is a timely publication as its need has been felt for quite some time. It has eight chapters covering 165 pages. In addition, there are two Appendices of 30 pages. Appendix A details the procedure adopted by the author to estimate the minimum farm size for a tubewell to be cost effective. Appendix B gives the derivation of the total cost functions for the mid-sixties and the mid-seventies.

The author introduces the subject with a description of the tubewell technology, its reliability vis-a-vis modern agriculture, Statewise groundwater bearing formation and the functions of the different parts of the pumpset and thereby provides necessary background information to his readers, particularly those who are not familiar with the tubewell technology. At the outset, he raises a few pertinent questions the answers of which have been sought in the rest of the monograph. Specifically, the author wants to identify the factors responsible for a decline in the tubewell development as one moves eastward along the Indo-Gangetic plains. He is also concerned about the lack of direct intervention of the State in accelerating the pace of tubewell development in the lagging regions and the inability of the State to regulate excess use of groundwater through tubewells and mitigate the problems of external diseconomies on the uses of dugwells. In addition, several specific questions including the one of how indivisibility of tubewell technology affects growth of tubewells vis-a-vis that of dugwells have been investigated by the author with reasonable clarity and thoroughness.

In the second chapter the author gives a historical account as well as importance of private and public tubewells in different States with particular emphasis on Punjab, Haryana, Uttar Pradesh, Bihar and West Bengal. He also examines in depth the comparative economics of tubewell vis-a-vis dugwells.

The author's analysis of historical data reveals that Punjab ranks first in tubewell development, followed by Haryana, Uttar Pradesh, Bihar and West Bengal in that order confirming the hypothesis that the development of tubewell declines as one moves eastward along the Indo-Gangetic plains. The recent deceleration in tubewell development in the western part of the Indo-Gangetic plains has been attributed to the lack of adequate groundwater resource, the bulk of which is already tapped for irrigation. The author may be partly correct. It seems that the stagnation of agricultural production technology is also responsible, at least partly, for the deceleration in tubewell technology in Punjab and Haryana.

The author has identified four factors, namely, land consolidation, rural electrification, institutional credit and the advent of high-yielding variety (HYV) seeds as responsible for making private investment in an individually-

owned tubewell profitable. Although the identification of the factors is, by and large, correct, a study of the relative influence of these factors on tubewell growth in the States of Indo-Gangetic plains could have been more useful for policy prescription.

The opening sentence of second paragraph on p. 9 appears to be erroneous. The rate of water discharge should tend to dwindle with the *decrease* rather than *increase* in water table as stated. Increase in the distance of the water table from the ground level has been confused with the increase in water table. The benefits from irrigation(B) and the associated costs of irrigation (C) are related as follows both for modern and traditional agriculture:

$B = \alpha_1 + r\,C - C^2$ for modern agriculture;

$B = a + b_1 C - b_2 C^2$ for traditional agriculture.

From these specifications, the author asserts that

$r_1/r_2 > b_1/b_2$ property(i)

implies that the maximum of the function for modern agriculture is greater than that for the traditional agriculture while $\alpha_1 > a_1$ (property (ii))implies that the modern function dominates the traditional function (in the sense of set theory). This assertion is not correct. Property (i) only implies that the physical maximum of the function for modern agriculture is associated with *a higher level* of irrigation cost (C) than the corresponding physical maximum of the function for traditional agriculture. It can easily be seen that both the properties (i) and (ii) have to be satisfied simultaneously in order to imply what is claimed by the author.

Appendix A shows the procedure for estimating the minimum farm size that would make the investment in tubewell cost effective. The notations used in Appendix A are a bit confusing. In particular, A is denoted as the *size of the operated holding* (acres) which is obviously a parameter. The same notation is used for the *minimum farm size* for a tubewell to be cost effective, a variable the value of which has to be determined through the application of the suggested formula. The minimum farm size required for making investment in tubewell profitable depends primarily on benefit (B) and costs (C) of tubewell irrigation which, in turn, depend not only on the selection of particular crop(s) but also on the choice of technology. The intensity and the extent of adoption of a technology on a farm depend, among other things, on the resource endowment of the farmer as well as the credit facilities available to effect the purchase of modern inputs like irrigation, fertilizer, plant protection materials, etc. Furthermore, the benefits and costs per acre of land irrigated by tubewell vary with the cropping pattern in addition to the level of technology actually employed. The author has worked out the *optimal* values of benefits (B) and costs (C) for the period from 1950 to 1975 for the regions' situation in the Indo-Gangetic plains. In this exercise he has assumed a given cropping pattern for each region for obtaining the overall values of benefit (B) and costs (C). Furthermore, he has also changed the crop pattern over time to obtain the *optimal* values of B and C for the bench-mark years. The author has not, however, stated the

basis for his assumption of a given cropping pattern as well as for changing it over time. In addition, *optimal* values of benefit and costs of tubewell irrigation seem to be misnomer as they are not derived through the process of optimal use of farm resources or an optimal cropping pattern. The author believes that the value of the discount rate (D) for western plains is less than that for the eastern plains even in respect of each component of D. It would have been better if the author could provide the reader with the rationale for his belief. The same comment applies to the weighting scheme given by the author in Table A.8.

There are a few printing mistakes which should be corrected in the next edition of the monograph. For example, in the second paragraph on p. 32, the regionwise statistics of tubewell irrigation are analysed for their temporal trends which are stated to have been summarised in Table 2.6. In fact, this should read as Table 2.7. On p. 167, k on the second term in the definition of F should be K. On the same page the definition of $\bar{C}$ should read as

$$\frac{v + r.p.C + i(1 - p)C}{3}.$$

In the last line of p. 168, c should read C and on the first line of p. 174, h should be γ

In spite of the above limitations and deficiencies, the present reviewer strongly feels that the monograph will be useful not only to the students and researchers in the field of Irrigation Economics but also to planners and policy makers.

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New Delhi

C. C. Maji

Participatory Research and Evaluation: Experiments in Research as a Process of Liberation, Edited by Walter Fernandes and Rajesh Tandon. Indian Social Institute, New Delhi-3, 1982. Pp.xii + 216. Rs. 20.00.

Research, a process of unveiling the secrets of Nature, in any field, is said to have been biased towards the affluents in its use. Research on sociological aspects is not an exception to this. With the result, the problems of the oppressed left untouched and have been multiplying at a remarkable rate without any substantial attempts to check it. This alarming situation is lately realised by the Government and other voluntary agencies. The efforts of the Government in this direction have met with some success. Few voluntary organizations which have been working for the development of these weaker sections could achieve fairly satisfactory results.

The book under review provides an explanation as to why the traditional researches have been a failure and suggests solutions based on the success of some of the projects of voluntary organizations. In a nutshell, it calls for an actual participatory approach of research and evaluation by the researcher in the project to make it really useful for the target group. The book contains revised versions of some of the papers presented at the Workshop

on Participatory Evaluation, held at the Xavier Institute of Social Service, Ranchi (1981). It has been divided into two parts. The first part discusses the theoretical approaches to participatory research and evaluation and suggests alternative ways of conceptualising its implementation. The second part presents a number of case studies which illustrate both the theory of participatory research and the problems involved in actual situations.

In the first paper a detailed account of various disadvantages of professional approach of research has been discussed. The professional approach of research has been described as a reproduction of our unjust society in which a few decision-makers control the rest of the population. Hence the participation of the researcher has been stressed to make the research more fruitful to the weaker sections. Research should be used as a tool in the hands of the people to acquire for themselves the rights and resources that they have been deprived of in the society.

In the second paper, the nature and dynamics of people's participation in development are discussed by evaluating ten voluntary development projects. The paper indicates that most of the projects in the sample have focused attention on the needs of the weakest section of the population and they varied considerably in the extent of people's participation. Though the physical targets could be achieved with or without any effective participation of the beneficiaries, the continuity and growth of the project beyond the stage initiated by the sponsors depend on effective participation. The linkages between the role of supporting institution and people's participation have been discussed. It is suggested that voluntary organizations should define their role very clearly and they should re-define their objectives and views not as development organizations but as pioneering groups that have to create viable and replicable models of development as alternatives to the present approach. The innovation does not have to be in getting new resources but in a new approach to build awareness regarding utilization of resources in a better way.

The third paper deals with the methodology of participatory evaluation. Some of the case studies reviewed in the paper show that participatory evaluation helps the people to grow as a community and can become a part of liberation process. The role of outside workers is recognized to be catalytic. A combination of knowledge and action, it is stressed, is necessary to make the people real actors.

The fourth discusses the relationship between communication in participation and the influence of nature of communication on the nature of participation. Modern forms of communication are said to alienate the common man and thereby stultifies his participation. The indigenous modes of communication are recognized to have greater impact on participation and hence need to be rediscovered and should be made integral part of the participatory research and evaluation. But here it is necessary to analyse whether it is possible to revive such communication methods in the present modernized society in which some of them are considered to be superstitious and the attitudes of the people are lopsided with the modernization. Moreover, it is also doubtful whether such communication is helpful

in development.

The method of imparting training for participatory evaluation is discussed in the fifth paper. It is said that participatory evaluation is related to and built upon a foundation training in development work. The training for participatory evaluation, it is pointed out, should be consistent with the principle of participatory evaluation itself. It is suggested that the role of the trainer should be that of co-learner with the participants.

In the sixth paper the cases reveal that people are organizing because of the improper development plans which marginalise people and natural resources affecting those whose lives are tied up with the local resources. The present elite knowledge, it is stressed, need to be treated as a source of power and exploitation and countering this knowledge by knowledge generated through participatory research becomes a very essential and potent aspect of people's struggles.

The next five papers (second part) are case studies. The case study on Pachod Health Programme in Aurangabad district of Maharashtra reveals that how a purely medical programme catering to the health needs of the population has turned into a catalyst for social change, especially among the weakest section of the society due to people's participation. The project has raised the status of women in general and that of the scheduled caste women in particular. The change of their self-image has led to their beginning to work in co-operation. The difficulty in working with the present political set-up is also explored.

The next case study paper is purely imaginative and it adds little to the title of the book. Paper 9 presents the experience of workers of *Seva Manair* in a tribal village in Udaipur district of Rajasthan, resulting in the change of their views to realise that the people have to grow and that any outsider can only be a supportive channel. It is felt that a balance has to be kept between the benefits received and the socio-political process of the people. The experience of National Adult Education Programme (NAEP) after the participatory evaluation in respect of the difference in people's expectations and the actual work is certainly beneficial for the people working in this field. The next paper concludes that participatory research and evaluation assign a new role to the outside scholar in taking research as a tool for action as a process through which people grow in awareness of their situation and work for the acquisition of their rights. The last chapter is the summary of the conclusions drawn in the workshop.

On the whole, the book is a good contribution in the field of sociological research. The change in the methodology suggested from traditional objective research to participatory research and evaluation certainly extends the area of research. This innovation in the methodology will certainly yield a fruitful result in sociological research. Thus, the book is quite useful to the voluntary organizations, development workers and planners who are interested in the development of the weaker section.

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An Enquiry into Financing Agriculture by Co-operative and Commercial Banks, S. C. Jain and N. K. Jain, Development Publishers, Indore, 1982. Pp. v + 118. Rs. 50.00.

There has been a rapid growth of literature on co-operative finance for agriculture in India since the publication of the All-India Rural Credit Survey Committee Report (1954) and more particularly since the publication of All-India Rural Credit Review Committee's Report (1969). The book under review deals with a subject of paramount importance in the present context of multi-agency approach in Agricultural Finance. The authors have attempted to analyse the performance of co-operative and commercial banks during 1971-72 to 1978-79.

The book consists of six chapters. The first chapter deals with the credit programmes, and points out in detail the various problems of financing. The second chapter on disbursement of loans presents the trend and extent of purposewise financing by different institutional agencies during 1971-72 to 1978-79. The third chapter gives an account of the method of field investigation and appraisal taking into consideration factors like fixation of scales, repayment capacity, security, etc., observed by various institutions for their lending operations. The fourth chapter on supervision of loans discusses the methods and techniques of supervision, problems/inadequacies of supervision, need for coercive measures, etc. The fifth chapter is devoted to recoveries and overdues, highlighting the repayment problems, the extent and trend of institutionwise overdues. The sixth chapter examines various methods of improving the credit system. The authors are of the opinion that they have spelled out well thought out and tested measures which could be adopted by the government as also by the financial institutions. The various measures suggested are well discussed under sub-headings like segregation of agricultural credit from State list, devising annual recovery plans, recovery of overdues, etc.

On the whole, the book is quite informative but it may be a disappointment for those locking for an analytical study. The impact of multi-agency approach on viability has not been assessed in spite of its relevance to the subject. Loaning policies, performance of banks in purveying credit to small farmers and to weaker sections should have been discussed. In evaluating qualitative performance of loaning operations, the use of growth rate would have been more appropriate rather than discussing in absolute figures. Also, instead of making a general statement that supply of credit is very much lower than actual requirement which is not explicity spelt out, the authors could have used the estimates of demand for credit made by the National Commission on Agriculture (1976) to compare it with the supply of credit. Sources of funds might have been discussed in much more detail, for example, the types of debentures of land development banks and subscribers to debentures, etc., could have been analysed in a better way.

In spite of its limitations, the book will be of use to the students of agri-

culture to understand the role of the co-operative and commercial banks in the field of agricultural finance.

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G.R. Mulla

From Dependency to Development: Strategies to Overcome Underdevelopment and Inequality, Edited by Heraldo Munoz, Westview Special Studies in Social, Political, and Economic Development, Westview Press, Inc., Boulder, Colorado, U.S.A., 1981. Pp. xv + 336. Paperback $ 16.00. (Distributors: Bowker Publishing Company, Epping, Essex, England|)

Heraldo Munoz's attempt in this volume is to bring together some writings relating to the Latin American theme of *dependencia*. There are altogether 14 essays in the volume, divided into three main parts apart from Munoz's introductory piece. Part One has two chapters dealing with the scope and aim of dependency theory and Part Two two chapters that attempt to extend the dependency analysis. Nine contributions in Part Three outline the strategies to overcome dependency. In this sense, the book has an overall theme. However, the perspectives of the contributors are distinctly different. The first five chapters (including the Introduction) are indeed woven around the *dependencia* problematic. The contributors in Part Three—Mahbub ul Haq, Gustavo Lagos, Jan Tinbergen, Johan Galtung, Rodolfo Stavenhagen, Immanuel Wallerstein and others—are not particularly concerned with *dependencia* as such, but with their own recipes for the reconstruction of the world economy. Consequently, it is not easy to make a comprehensive review of the book. The review, therefore, concentrates on the *dependencia* theme and refers to other contributions only to the extent that they are related to it.

From the point of view of Dependency Theory the main contribution is Chapter 3 by James A. Caporaso and Behrouz Zare. They try to draw a distinction between dependence and dependency as also between the uses of dependency as a concept and as a body of theory. The distinction drawn between dependence and dependency is that while the former refers simply to external reliance the latter is "the process by which less developed countries are incorporated into the capitalist system." Elaborating, the authors point out further: "It [dependency] attempts to clarify the process of integration of the periphery into the international capitalist system and the developmental implications thereof. Instead of focusing on unified nation-states, the level of analysis shifts to more fluid and institutionally evasive units such as class structures, the alliance between local classes and international capital, banks, industries and firms and so forth" (p.44). In other words, dependency focuses on "the derangement

manifested in the functional incompleteness of the national economy'' (p.45). And more definitively: ''Dependency refers to a structural condition in which a weakly integrated system cannot complete its economic cycle except by an exclusive (or limited) reliance on an external complement'' (p.48). The attempt, thus, is to show that under-development is not an original condition, but something that is developed (to use Gunder Frank's expression) as a result of the subordination of a national economy to world capitalism in the colonial and/or post-colonial eras.

In the discussion of the problem of dependency, especially of the *dependencia* theory, there are oblique references to the now familiar and highly contested centre-periphery thesis, but one of the disappointing aspects of the volume is that the relationship between the two is not adequately explored. This is surprising partly because the centre-periphery thesis too is a Latin American contribution and partly because the authors rightly point out that unless there is theoretical clarity about the concept of dependency it will not be possible to suggest adequate remedial measures. Indeed, there is very little theoretical discussion in the volume although the attempt to situate the dependency problem in the context of the world capitalist system and the capitalist mode of production clearly invites theoretical explorations. It would appear that the authors are unwilling (or unable) to enter into controversial issues in their eagerness to present *dependencia* as an alternative paradigm to the older (American) paradigm of modernization. In avoiding (deliberately or otherwise) the controversies about the 'modes of production' discussions, the dependency concept gets confined to external aspects alone. The internal characteristics and dynamics of an economy in a state of dependency do not get much attention in the volume. Not that there is not any Latin American writing on this aspect. One thinks, for instance, of Anibal Quijano Obregon's piece ''The marginal pole of the economy and the marginalised labour force'' **[in Harold Wolpe (Ed.): The Articulation of the Modes of Production].** But it is possible that Obregon does not belong to the dependency school *per se*.

As has already been indicated, Part Three of the volume consists of an assorted variety of remedial measures to overcome dependency. These include Haq's suggestion for negotiations with the 'centre', Tinbergen's proposals for reshaping the international economic order, Galtung's emphasis on the need for self-reliance at the regional, national and local levels, Stavenhagen's call for profound transformation of all social and economic relations within Latin American countries and in their external relations and Lagos's arguments to show that a worldwide 'revolution of being' to replace the 'anti-values' of capitalist and socialist societies by the 'values' of a humanistic society is required to remedy dependency and under-development. I shall leave it to the interested reader to study these from the text itself. Only one issue will be examined here. Since dependency springs from *capitalist* domination, is there a possibility of overcoming it by overthrowing the capitalist order ? Wallerstein argues that capitalism is an affair of the world economy and that consequently a country

can reverse its dependency only to the extent that socialism is established at the *world level*. If so the the removal of dependency will materialise only in the new world to come, and if it is coming, it may also be put through the 'revolution of being' to clean up all the mess of our own wretched world. Joel Edelstein's sympathetic account of the different stages of the Cuban revolution and the evolution of the Cuban development strategy (one of the most informative chapters in the volume) would seem to lend support to the view that for most countries the overthrowing of capitalist dependency may lead to newer shades of dependence of a political and economic nature on some external socialist power. If so where do we go from here ? And what is to be done till the global revolution comes ushering in the new age ? The answer perhaps is that we cannot ignore the Haq strategy, the Tinbergen strategy or some variant of these while we continue the struggle to liberate all mankind from the forces of oppression and dependence.

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Rural Women in Rajasthan, Kalpana Raghuvanshi, Kanchenjunga Publications, Jaipur, Rajasthan, 1983. Pp. xii + 164. Rs. 150.00.

The book under review is the report of a study by the author undertaken for Vikram Research and Development Centre, Jaipur. The aim of the book, as stated by the author in her Preface, is to provide a strong base to all those concerned in planning and executing the schemes towards the upliftment of rural women.

The book is divided into 18 chapters. Chapter 1 (Introduction) presents a very brief and broad view of agriculture, animal husbandry, dairying, fisheries, forests, power, industries, mining and other aspects ending with a paragraph on rural women which has little relevance with the material presented earlier in the chapter. The author has stated that "In none of the previous five National or State Five-Year Plans, rural women were made a specific target group for receiving the benefits of various development programmes. Even the Sixth Five-Year Plan of the nation intends to provide them some indirect benefits only." Nevertheless, the author rightly asserts that in programmes aimed at eradication of rural poverty and making rural households economically viable, the role of rural women has not been adequately recognized. From the concluding paragraph of this chapter, it appears that the author is pleading for making rural women economically self-dependent but she does not make clear elaboration on this issue. The second chapter on the 'Profile of the Area' covers geographical features of Rajasthan, *viz.*, area, physiography, soil, climate, flora and fauna. The third chapter entitled 'The People' is a description of religions,

language and literature, history, culture, political awareness and Rajput heritage. The author characterizes rural women as the *weakest* section of the population of Rajasthan.

Chapter 4 on 'Population' deals with rural and urban population of States of India and districts of Rajasthan. Districtwise and tehsilwise growth rates in population and birth and death rates in Rajasthan have also been presented. Sex ratios in India have been compared with Rajasthan. Within each district of Rajasthan, tehsils and towns with highest and lowest sex ratios have been identified. Densities of population and male and female population for each district and age groupwise distribution of male and female population in the State have been presented. Data on the number of main, marginal and non-workers and occupational distribution of main workers both in respect of male and female have been included. The next four chapters on 'Agriculture', 'Animal Husbandry and Dairying', 'Industries' and 'Co-operation' describe the states of development of these sectors in Rajasthan.

Chapter 9 on 'Services and Utilities' covers irrigation and power, transport, housing, water supply, bio-gas plants, communication, banking, trade unions, local bodies, labour welfare, media, public representation, special schemes and medical and health. The author states that 4.5 per cent of the Assembly seats (out of 200), 4 per cent of the Lok Sabha seats (out of 25) and 10 per cent of the Rajya Sabha seats (out of 10) of Rajasthan are held by women. Rural Women Economic Programme in Rajasthan was started in 1981 in eight districts of the State. Details of medical and health services which have a direct bearing on development of women have been well brought out. Population of scheduled castes and scheduled tribes, and education and unemployment facilities and their membership in co-operatives have been given in Chapter 10. The author states that the revenue expenditure on the welfare of women (scheduled castes, scheduled tribes and denotified and nomadic tribes) was Rs. 7.65 lakhs in 1978-79 and Rs. 8.66 lakhs in 1981-82 and it is insignificant.

In Chapter 11, the author analyses the progress of education in general and of women in particular. She begins by asserting and rightly so, that education has never been given priority in Rajasthan State. She analyses the literacy rates of females over the last 60 years from Census data and compares them with other States of India. She also presents rural female literacy rates in the tehsils and districts of the State. The expansion in educational facilities has also been analysed. She concludes by quoting Padmanabha that with existing machinery and procedures, it will take 77 years for males and 275 years for females to achieve the target of 90 per cent literacy rate in Rajasthan.

The employment situation has been analysed in Chapter 12. The author observes that nearly 56 per cent of the rural women are forced to go out of the State as migrant labourers and more than half of the rural population of the State has remained untouched by the development programmes so far. Work participation rates of females at three points of time are presented.

The author asserts that though two-thirds of rural women are engaged in cultivation and 15.64 per cent as agricultural labourers, no attempt has been made for the training of rural women. In Chapter 13, economic indicators of Rajasthan State have been presented and outlays and expenditure during different Plan periods have been analysed.

In Chapter 14 the disparities in the conditions of rural and urban women have been brought out. While the female literacy rate in the urban areas is 34.45 per cent, it is only 5.41 per cent in the rural areas. The authour states that work participation rate among women in the rural areas is 80.5 and it is only 15.4 in the urban areas. She calls upon urban women to work for the upliftment of the rural women. She states that planners will have to discard the approach of minimum needs programme. In Chapter 15 on 'Administration', the author argues for a separate Ministry for the upliftment of rural women and separate State level and district officials for women programmes within the Ministry of Agriculture. At the end of the chapter, she argues that 50 per cent of the budget of individual beneficiary schemes of each department should be earmarked for upliftment of rural women.

While discussing appropriate technologies for rural women in Chapters 16 and 17, she argues for more training programmes for rural women specially in the areas of agricultural practices, post-harvest operations, horticulture and sericulture, social forestry, dairying and animal husbandry including poultry, handloom and Khadi industries.

In Chapter 18, the author lists remedial measures for the development of rural women. At policy level she suggests that since 80 per cent of female population lives in rural areas, 80 per cent of benefits of the individual beneficiary schemes should be earmarked for rural women. She argues for reserving 50 per cent posts at all levels of administration and in local bodies, Assembly, Parliament and Ministries for rural women.

The book suffers from several limitations. It is heavily weighed in describing the general resource structure of Rajasthan State. The author pleads for more attention to rural women in making them economically self-dependent but ignores the basic issue that why is there a need for separate planning for the advancement of women. In this connection, Jain[1] has very well argued that mostly the role of women has been perceived as limited to their needs as mothers, home makers and at most supplementary bread winners. In a typical poor household, all members of the family—man, woman, boys and girls—need to bring in some income, may be in the form of collecting fuel and food from roadside. Women, in addition, do cooking, washing and nursing. Thus the importance of women in poor and destitute families is very great. Studies in India show that in 35 per cent of poverty households, the primary bread winner is a woman.

The schemes to benefit rural women are likely to depend on the role of women in various sectors of the economy, which has not been brought out in

1. Devaki Jain, "Poverty, Unemployment and Women—The Linkages". *Yojana*, Vol. XXIV, No.16, September 1-15, 1980, pp. 7-11.

the book specially in Chapters 5 through 8. What are the operations performed by women in the farm sector of Rajasthan ? For example, Joshi[2] has pointed out that operations like sowing, transplanting, weeding, harvesting and threshing are performed more efficiently by women than men. Another relevant question which the author could have answered is whether wages reflect this phenomenon.

While analysing the disparities, more relevant and important issues have not been brought out. For example, whether hours of work, rest period and wages differ between male and female labourers in Rajasthan ? Whether there is any inequality in medical treatment between male and female infants and children amongst the poor in Rajasthan as has been brought out by Kumudini Dandekar in Maharashtra ? To what extent the goal of equal pay for equal work has been achieved through minimum wages act ? The details of the Rural Women Economic Programme started in Rajasthan in 1981 could have been given in the book. The figures of work participation rate among women in rural areas quoted from Table 14.1 of the book are wrong. Figures given in the text pertain to 1961 female population figures.

The author has pleaded for higher allocation and special schemes, programmes and machinery for upliftment of rural women. She would have done a great service to the cause of rural women by picking up the thread from Chapter 27 of Sixth Five-Year Plan document (1980-85) which analyses the situation of women, their neglect and importance for nation building. It commits itself to provide for women, access to education, employment and health. The total budget for social welfare (which is one of the strong sectors for women and development) was increased from Rs. 63.53 crores in 1974-79 to Rs. 150.40 crores in 1980-85. According to Jain,[3] "In formulating the 1980-85 Plan, several consultations were held with specialists in the field of women's advancement. A challenge was thrown to the spokeswomen for women to examine strategies, investments, structures, schemes in various sectors and suggest other schemes and structures through which women's interests and role can be safeguarded." Subsequently, Women and Development Division of Social Welfare Department has initiated such exercises in Karnataka and Madhya Pradesh. The results of these exercises and such an exercise for Rajasthan State in terms of redesigning of annual plans could have been presented more fruitfully.

All these limitations apart, the author has once again raised the need for accepting the view that planning for advancement of rural women should receive due attention of planners and economists so that future plans may specifically include women component. The book has also provided basic

2. Rama J. Joshi, "Socio-Economic Condition of Women Agricultural Workers", in S.M. Pandey (Ed.): Rural Labour in India, Shri Ram Centre for Industrial Relations and Human Resources, New Delhi, 1976, pp. 180-194.

3. Devaki Jain, "Women and the Sixth Plan", *Yojana*, Vol. XXV, No. 19, October 16-31, 1981, pp. 8-11.

resource inventory of Rajasthan State which will be useful for project formulators in the area of rural women development.

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Migration and the Labor Market in Developing Countries, Edited by Richard H. Sabot, Westview Special Studies in Social, Political, and Economic Development, Westview Press, Inc., Boulder, Colorado, U.S.A., 1982. Pp. xiv + 254. $41.00. (Distributors: Bowker Publishing Company, Epping, Essex, England.)

Studies on migration and labour markets have started getting recognition recently, though their contribution to economic growth by transferring labour from low productivity to high productivity areas was acknowledged in economic theory long back. An attempt to examine the causes and consequences of the migration phenomenon has an important role to play in devising the strategies for economic development. It is in this context that the book under review, which is a collection of articles on migration and labour market in developing countries from the acknowledged researchers, working in these areas particularly in developing countries, is a welcome addition to the existing literature on the subject. Various hypotheses which have been formulated with distinct theoretical framework, supported by empirical evidence from the developing countries have enhanced the academic value of the book immensely. It deserves to be studied carefully, so that its policy implications are fully appreciated by those who are concerned with designing policies for economic development particularly in the developing countries. In fact, by establishing the linkages among income distribution, migration, surplus labour and poverty in developing countries, the book raises the issues, which are fundamental, and no one working in these areas can afford to neglect them. These issues relate to (*i*) the response of labour supply (migration) to the urban centres and hence the social opportunity cost of urban labour by different characteristics of labour markets; (*ii*) the difficulty in estimating migration decision functions; (*iii*) the definition of income and prices, so as to compare the different localities for the behavioural analysis of migration; and (*iv*) the consequences of out-migration for rural productivity and income distribution.

The chapter on "The Structure of Labor Markets and Shadow Prices in LDCs" by Joseph E. Stiglitz, presents an overview of labour market models. It has been argued that the shadow price of labour would be just equal to the urban wage, provided it is optimally set, the unemployment

is constant, and the amenity value is enjoyed by every one in the urban sector. But if the amenity value is enjoyed by those who are in employment, the 'corrected' opportunity cost of labour would be equal to the urban wage, but the 'uncorrected' opportunity cost would be the rural wage. However, the entry of marginal migrants in the informal sector is not going to create any impact on the shadow price of labour.

The relationship between the shadow price of labour and the market wage is determined by the elasticity of supply (if the elasticity is 2, it would imply that the opportunity cost is only two-thirds of the urban wage), which has been assumed fairly elastic, because of small urban sector relative to rural sector, and homogeneous potential migrants with respect to taste, risk and aversion, skill and transport costs, etc.

It has been argued by Stiglitz that given the opportunity cost of capital the development of industries within the rural sector intended to provide employment during slack agricultural periods may lead to inefficient use of capital. In contrast, Schuh has mentioned (p. 182) that local industrialisation makes more efficient factor markets serving agriculture in its modernization and also reduces the disparities in per capita income between the agricultural and non-agricultural sectors. However, Stiglitz has advocated mainly the development of activities such as raising of different crops and those connected with lighter industries having the pattern of labour use that are complementary to the existing pattern of labour use in the rural sector. But such activities would not serve the purpose of raising the income level of workers and using effectively the labour force in the rural sector, particularly when there is no scope to absorb increasing labour force in the urban sector in a country like India. The social cost of migration in terms of overcrowding and maintenance of workers is quite high in the urban sector. Whereas in the rural sector, there is evidence to support that during the busy seasons of the year, all the workers are fully employed to the effect that some workers' migration to the urban sector might lead to a fall in agricultural production at the existing level of technology. In such a situation the development model based on the mechanism of rural-urban transfer loses much of its significance. It is in this context that the rural industrialisation becomes very important, not only for productively using unutilized labour force in the rural sector, but also to generate a higher rate of growth by giving a fillip to other activities including agriculture through their forward and backward linkages.

The supply of labour (migration) is, however, a function of expected wages, which in turn are related to the unemployment situation. The expected urban wage has been measured by multiplying the urban wage by one minus the urban unemployment (*i.e.*, $W_u^e = W_u(1-U)$, where $(1-U) = L_u / N_u$, the ratio of urban unemployment L_u, to urban labour supply N_u. Hence one minus the unemployment rate equals the ratio of the rural wage (W_r) to the urban wage (W_u), $\frac{W_r}{W_u} = (1-U)$. If the urban wages and

unemployment would show the expected relationship with the migration, then by definition the expected urban wage would also show similar relationship. The expected wage, however, does not seem to have added much to the understanding of the migration phenomenon at least in India.

The relationship between migration and urban unemployment has been discussed by John R. Harris and Richard H. Sabot in their paper on "Urban Unemployment in LDCs: Towards a More General Search Model". The migration is, of course, affected by the levels of unemployment and vice versa—higher the unemployment, lower would be the migration. Unemployment has been referred in this chapter as productive activity of job searching for the best available jobs. The search behaviour has been treated under the condition of risk but not uncertainty, for the distribution of wage offers is fairly known to the searchers. However, the dispersion of wage around the mean is expected to be positively related with average duration of search, and hence unemployment and migration. Higher wages encourage migration, which in turn is influenced by unemployment. These relationships have been established empirically in India. It has been observed that unemployment at origin encourages out-migration, while unemployment in the destination serves as deterrent. As regards the urban wages, it has shown significant influence on migration. The rural wages which have shown positive relationship with migration, is somewhat puzzling, probably because it could not reflect as proxy for the total income earned.

Chapter 3, "Notes on the Estimation of Migration Decision Functions" by T. Paul Schultz, deals with conceptual, empirical and statistical problems associated with the estimation of migration function for explaining the variations in the regional migration by differences in economic incentives in more or less homogeneous labour markets with respect to age, sex and education. The migration function has been discussed in the micro framework. It expresses the relationship between the probability of migration and variables such as direct cost of movement and expected income in areas, origin and destination. Further, the wage and employment functions (the latter may be viewed as a supply function in certain circumstances) which become identical in the framework of expected wage hypothesis should be estimated with respect to age, sex, and education by migratory status, so as to obtain predicted values for the labour market conditions in all the regions. This would be helpful for estimating the migration decision functions. However, Schultz has recommended the estimation of the polytomous logistic model using either individual or grouped data on migration.

Paul Collier and Sabot in their chapter on "Measuring the Difference between Rural and Urban Incomes: Some Conceptual Issues", have argued that the conventional definition of individual income, which is the sum of products of all purchased goods and service at their market prices, may be appropriate for the national income accounting, but not for the purpose of behavioural analysis of the migrants. For the purpose of estimating the

income, viewed in the framework of realized consumer demand, the hedonic approach has been suggested, which asumes that the utility does not depend on the consumption of commodities *per se*, but it depends on the satisfaction of wants by the 'qualities' inherent in physical goods, giving rise to the distinction between intermediate and final goods.

Since the comparison of rural and urban incomes is involved in the migration analysis, it raises the index number problem, which has been discussed at length by Collier and Sabot. In view of the marked differences in the prices at which the acquisitions are valued in rural and urban areas, it has been emphasized that the urban prices are more appropriate than the rural prices. Further, to know how the urban prices influence the substitution in consumption by the average rural dweller, some estimates should be made for the comparison of rural and urban incomes.

There are two chapters: (*i*) "Out-Migration, Rural Productivity, and the Distribution of Income" by G. Edward Schuh, and (*ii*) "Migration from Rural Areas of Poor Countries: The Impact on Rural Productivity and Income Distribution" by Michael Lipton, dealing with the consequences of migration on rural productivity and income distribution. The former examines direct and indirect effects of migration on the average income of the non-migrants in the macro framework. Whereas the latter presents the rural micro evidence regarding the impact of migration on income distribution in the rural areas. Based on the empirical evidence from the U.S. and in conformity with the neo-classical models of labour migration under which the incomes of supply regions tend to rise and produce a convergence with the incomes of receiving region under unconstrained labour markets, Schuh has argued that internal migration increases an economy's growth rate by achieving a more efficient allocation of resources. Ultimately, migration becomes equilibrating mechanism, but it has its own costs. External diseconomies can be created by geographic mobility. Adjustment process in such a situation takes quite a long time.

In contrast to Schuh and the neo-classical expectations that migration works as equilibrating force in that it allocates labour efficiently among alternative activities, Lipton has argued that the pattern of migration observed in the developing countries raises the rural inequality. It is based on a bi-model distribution of migrants from villages: with poor migrating to short distances from the village having high man-land ratio, low yields, etc., representing the 'push' factors, while the better-off and educated migrating long distances to acquire better jobs, from the villages having cash crops, higher sale of produce, etc., denoting thereby the 'pull' factors. The characteristics of migrants, younger male people, more educated, also tend to prevent migration from equalizing the incomes within the area of origin.

The remittances whether affected through financing productive and labour intensive investment or by being sent directly to the rural poor, are unlikely to reduce rural poverty, mainly because they are generally quite small compared to the village income flows and also because they flow mainly to the rich rural households. It may, however, provide some benefits

to the poor people. It has been further argued that the migrants' return would also not create any equalizing effects, because the tendency to return is mainly among those migrants who are quite old, sick and unsuccessful.

Lipton is, however, fully aware of the limitations of the data obtained from the villages studies, which do not permit to draw any causal relationships. Keeping this in view, an inference that migration worsens rural inequality becomes rather too strong. Ideally, such an inference requires information about the changes caused by the migration at two points of time, which in a way becomes the study of rural-urban continuum. In the absence of such a study, one may rely on cross-section analysis but within the framework of 'control' groups in the homogeneous labour market. Further, one may not fully agree with Lipton's other inference mentioned on p. 216 that "Rural emigration is a response also to decades of public policy biased, in both investment allocation and price manipulation, against agriculture."

On the policy issue, the suggestion of Lipton is, of course, worth mentioning. He has stated on p. 216 that "Policy must concentrate on removing the fictitious causes of rural emigration; on enabling those left behind in the rural sector to recover their costs and forcing the urban sector to pay for its benefits; and on identifying 'better' and 'worse' migration—encouraging the former, and discouraging the latter."

The conclusion that where unemployment is due to labour market segmentation and if marginal product is low, the resource costs of such urban unemployment are not likely to exceed 1-2 per cent of gross national product, but if it is due to deficiency in demand, the aggregate costs have been measured to be 10-15 per cent of national product, mentioned in the last chapter by Sabot, is extremely important for policy formulation purposes. Such an assessment, of course, requires much background research in the field of migration and labour market.

The book makes a significant contribution to the literature on labour market, which is now growing. This has made the book a valuable addition with timely publication. It seems to be a must for researchers interested in these areas and all the more important for policy makers.

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Maharashtrachi Krishi Arthavyavastha (in Marathi) (Agricultural Economy of Maharashtra), D.K. Salunkhe and Jagannathrao R. Pawar, Continental Prakashan, Pune for Maharashtra Universities Book Production Board, Nagpur-10, 1982. Pp.xvii + 607. Rs. 70.00.

The main merit of this book is that it meets ably the long felt need for a comprehensive survey of agricultural economic development problems in

Maharashtra State. During the past few years four full-fledged agricultural universities have been established in this State. Alongside, a number of colleges have been set up in rural areas, which offer courses in agricultural planning and rural development. The students have been given an option to write answer books in Marathi language. In teaching and research at these institutions, naturally the emphasis is given on specific problems of this State. Recently, a few books covering the rural problems in India during the post-independence period have been published, but they have been written in English language. Moreover, the treatment of the subject-matter is at the all-India level with analysis carried further to inter-State level. For obvious reasons, these books could not study in depth the specific regional problems. This book attempts to focus attention on the problems of agricultural growth and rural development in Maharashtra State in the broader all-India setting.

The book is divided into three parts. The first part presents the main problems in Maharashtra's agricultural economy. The second part deals with the natural endowments and utilization of natural resources. The third part is devoted to a critical review of the various programmes for agricultural growth and rural development in Maharashtra State. The book is the outcome of team-work of agricultural economists and other agricultural scientists, which assists the reader in a better perception of the problems.

Part One presents the main problems of agricultural economy in Maharashtra like the high growth rate of population ano rising man-land ratio, increase in the number of small and marginal farms, low productivity of land because of poor soils, low and vagarious rainfall over large areas, small percentage of cultivated land which benefits from irrigation and a vast expanse of drought and famine prone areas. No wonder, the growth rate of agricultural production was very low till mid-seventies and the State continued to lag much behind the goal of food self-sufficiency. A chapter has been devoted to present data on the incidence of poverty and malnutrition in rural Maharashtra in the light of the commonly accepted norms. The extent of rural people suffering from under-nutrition and malnutrition being about 50 percent, useful data on nutrition improvement schemes of Maharashtra Government have been presented. Like many other States the unemployment problem has been becoming more serious to which attention has been drawn.

Part Two presents data on land utilization and crop pattern, measures *taken* for soil conservation and increasing irrigation potential and raising yields of major food and non-food crops in Maharashtra.

Part Three which includes 21 chapters discusses in detail the various problems of agricultural economy from production to marketing, as also subsidiary occupations like dairying, pisciculture and cottage industries. They present relevant statistical and other information, broad features of the various programmes undertaken and their progress, and weaknesses observed in their implementation. It has been stated that there has been no Green Revolution and White Revolution in Maharashtra, though during the past five/six years the agricultural growth rate has shown an improve-

ment. It follows that the potential for increasing area under irrigation being limited, the only hope is to devote more attention to improving yields in dryland areas and promoting long-term measures to reduce the incidence of droughts and famines.

Although the coverage of the book is comprehensive, as the focus is on Maharashtra State, in my view, discussion of some aspects which have long-term policy implications would have been useful. For instance, when discussing the agricultural growth for the State as a wnole, a comparative study on district/regional basis would have brought out whether inter-district/regional imbalances have been widening and which laggard districts need more urgent attention.Discussion of size distribution of land holdings, if it could have been supplemented by data on assets holdings in rural areas would have thrown light on changing income/wealth distribution pattern, particularly in irrigated and cash crops growing areas. The picture of agricultural credit system appears incomplete because the role played by the nationalised commercial banks has not been covered. Furthermore, some of the important policy issues currently discussed in the co-operative credit sector, such as, integration of land development banks and co-operative credit banks, two vs. three-tier system in co-operative credit structure, role of regional rural banks vs. co-operatives would have been helpful. In the discussion on agricultural marketing, a section on comparative study of different marketing systems prevalent in Maharashtra State would have been worthwhile. A separate chapter on tribal economy would have served a useful purpose in drawing attention to the special problems of these tribal areas in the removal of poverty and destitution.

The survey of agricultural economy in Maharashtra State done in this book written in Marathi language is comprehensive, informative and analytical and will be found useful by students, agricultural scientists, government officials, rural bankers and social workers who take intelligent interest in agricultural development. It is hoped that this publication will provide stimulus for writing books on similar pattern but drawing more pointed attention to specific regional problems for each of the four regions in Maharashtra State.

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Television and Knowledge-Gap Hypothesis, Prakash M. Shingi, Gurinder Kaur and Ravi Prakash Rai, CMA Monograph No. 82. Centre for Management in Agriculture, Indian Institute of Management, Ahmedabad, 1982. Pp.vii + 123. Rs. 90.00.

The impact of television (TV) on the acquisition of knowledge by different segments of the population, situated in different socio-economic environments and having different attitudes and aspirations, has been a

subject of absorbing interest in recent years. Research workers have examined the issue from a variety of viewpoints. While some have arrived at the conclusion that TV widens the gap in knowledge between the rich and poor sections of the rural community, others have come to a contrary finding and held that it can reduce the disparities of knowledge between these strata of the rural population. The present book makes an attempt to identify the structural and economic factors which mediate information acquisition, and to assess the extent to which TV has widened or closed the knowledge-gap that existed between different farmer groups before their exposure to it.

For an evaluation of the objectives, the authors have selected two villages from Jaipur district of Rajasthan (India) where the Satellite Instructional Television Experiment (SITE) was launched during 1975-76. One of these belongs to an agriculturally progressive community, while the other represents a backward community. The relevant data on which the findings are based, relate to 152 farmers—74 from the progressive village and 78 from the backward village. These are further grouped among viewers and non-viewers. The number of viewers comes to 43 in the progressive village and 36 in the backward village, while the number of non-viewers comes to 31 in the progressive village and 42 in the backward village.

The factors influencing acquisition of knowledge have been classified into two categories: those related to community structure and those related to individual farmers. The former include village resources, institutions, leadership base, communication linkages, population make-up, cropping pattern, etc.; while the latter include level of knowledge, socio-economic status, communication skills, prior levels of exposure, relevant social contact and attitudinal selectivity of media.

Chapter 3 of the book is devoted to a comparison of the characteristics of the progressive and the backward farmers included in the sample. The bases selected for comparison are: caste, age, education, agricultural status, inter-personal interaction, media habits and TV exposure. On the basis of such a comparative analysis, it is found that the farmers of both the groups indicated a certain measure of identity in regard to caste composition, age and social participation. There was, however, considerable diversity in the level of education, change agent awareness, frequency of interaction with the change agents, and exposure to newspapers, movies and TV. The farmers from the backward village were found to own more land, but their expenditure on agricultural inputs and the number of implements owned by them were considerably lower than those from the progressive village.

The next two chapters are devoted to an analysis of the pattern of relationships between the selected variables in the two villages and to an identification of the key variables affecting the acquisition of knowledge. In the backward village, it is found that farmers who were educated, who

read newspapers and listened to radio, who saw commercial films, who were members of the local level organizations, and who knew change agents and met them frequently, were also those who watched TV programmes more often than others. The same trend was observed in the progressive village as well. In regard to acquisition of knowledge, four variables were identified as the most important, *viz.*, change agent awareness, change agent contact, social participation and radio exposure.

Chapters 6 and 7 address themselves to the main question related to the impact of TV on knowledge. For this purpose, farmers are divided into viewers and non-viewers and their mean scores of knowledge are computed and compared. From the methodological viewpoint, these two chapters should prove to be extremely rewarding for research workers interested in isolating the impact of TV from that of other publicity media. The results of the analysis show that exposure to TV in the backward village narrowed the gap in knowledge between the weaker and elite sections of the population. In the progressive village, the results indicated that while the pre-exposure knowledge-gap associated with a set of variables narrowed down as a consequence of TV, the gap associated with another set of variables actually widened. On the whole, the impact of TV was found to be greater in the backward village than in the progressive village. The mean score of knowledge for the viewers and the non-viewers in the progressive village was found to be 44.86 and 36.23 respectively compared to 40.28 and 25.17 in the backward village. The difference between the scores of the viewers and the non-viewers in the progressive village thus came to only 8.63, compared to 15.11 in the backward village. The gap among non-viewers in the two villages stood at 11.06. Among the viewers, it was only 4.58. From this it could be concluded that TV reduced the knowledge-gap by about 7 points.

This conclusion contradicted the original hypothesis formulation by Tichenor *et al.* (1970) who stated: "As the infusion of mass media information into a social system increases, segments of the population with higher socio-economic status tend to acquire this information at a faster rate than the lower status segments, so that the gap in knowledge between these segments tends to increase rather than decrease."

The broad conclusions to which the present study leads will be found to be highly significant.

1. TV neutralises the negative impact associated with differential levels of non-TV media involvement.

2. In so far as differential levels of non-TV media involvement are associated with socio-economic status, TV also neutralises the negative impact of socio-economic status on knowledge acquisition.

3. TV overrides the influence of demographic and attitudinal factors and neutralises their impact.

4. TV overrides not only physical barriers but also structural barriers, and thereby reduces the knowledge-gap between the rich and the poor.

5. From the policy point of view, TV could be utilized to break the near monopoly of inter-personal channels of communication for developmental

purposes. Its adoption in the developing countries would reduce information disparities.

Apart from the new perspectives brought to light, the study merits careful attention on the part of research workers from the viewpoint of methodology. It shows how the limitations of benchmark data can be overcome by 'split' sample techniques and how the definitional constraints related to knowledge and communication skills can be given an operational-quantifiable character. For scholars interested in evaluating the impact of alternative mass communication techniques, perhaps, the study might show the directions in which information to be televised can be processed and properly distributed among the target groups of the audience to achieve given objectives.

Yet, it is surprising that the authors fail to pay adequate attention to the structural transformation that have taken place in India's rural life in recent years, and that could explain why and how, contrary to earlier findings, the lower socio-economic strata have successfully absorbed the impact of increased information inputs.

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Management of Agricultural Extension: Training and Visit System in Rajasthan, Prakash M. Shingi, Sanjay Wadwalkar and Gurinder Kaur, CMA Monograph No. 96, Centre for Management in Agriculture, Indian Institute of Management, Ahmedabad, 1982. Pp. vii + 110. Rs. 52.00.

The book under review is an outcone of a study conducted by the staff of the Centre for Management in Agriculture, Indian Institute of Management, Ahmedabad. This monograph reports on the recent approach of extension introduced first of all in Rajasthan State to revitalize agricultural extension through the training and visit (T & V) system to manage efficiently the transfer of information and knowledge. The book is divided into five chapters. The first chapter highlights the concept of extension as given by different authors and commissions, extension approaches and problem areas in extension. The need for massive extension efforts to modernize the outlook of the farmer and to make him more enterprising and willing to adopt readily innovations so that agricultural production could be increased was accepted more during the recent period for development of Indian agriculture in various reports.

The World Bank aided T & V system of agricultural extension in a phased manner in many Indian States since June 1977. However, this was introduced first of all on a pilot basis in the Rajasthan Canal and Chambal project areas in 1974-75. The Community Development Programme was

also introduced in the first phase in the State of Rajasthan. The present study on T & V system is carried out over a period of three years covering the farmers and officials of the extension administration from the VEW, AEOs to the agricultural production commissioner rather than on structured field survey.

The second chapter highlights the theoretical concepts of T & V system as suggested by Benor and Harrison. The extension service organization has also been illustrated diagrammatically (p. 12) to make the new approach clear compared to the existing approach of extension. The project proposals went through a couple of revisions to modify the scope and content without changing the emphasis of visiting the farmers and training them regularly. The staffing pattern and duties of various personnel engaged in extension such as VEW, AEO, SMS were also spelled out. This chapter makes the history of the project clear to the readers.

Field observations and discussions with the project officials in the three distinct zones of Rajasthan, *viz.*, hilly region (Bhilwara and Udaipur), desert areas (Jodhpur) and plain areas (Jaipur) recorded during the three years (1976-77 to 1979-80) have been presented in the third chapter. The observations presented on various facets associated with T & V system in this chapter are neither systematic nor coherent in all the three areas as also confessed by the authors (p. 35). Observations recorded varied with the area in terms of contents.

The monitoring and evaluation functions and the concepts, organizations and strategies associated with T & V system—a third major function of State level machinery in extension—have been discussed in the fourth chapter under State level functions. In the T & V approach, evaluation and monitoring were conceived to be guided by the desire not to supervise, but to help to improve the people and the project. This system differs from the traditional system of evaluation of writing confidential reports and submission of reports about the work done by them during the period. Evaluation and monitoring are carried out as per selected indicators, *viz.*, sociological, agronomic and economic aspects of extension projects. The main focus on monitoring is on visit component, in evaluation of yield data and adoption of agricultural recommendation which is a joint concern of both monitoring and evaluation. This work is carried out by the Directorate of Extension, Delhi and the World Bank with the help of reports submitted from time to time. Based on these reports, the evaluation cell at the Directorate of Extension identifies the problem areas and recommends follow-up measures. However, no evaluation and monitoring results of this project have been discussed in this chapter.

An assessment of the project highlighting the success in Rajasthan in many ways has been discussed in the fifth chapter along with a schematic representation showing the factors associated with effective management of agricultural extension. The main points of the project success discussed are the timely introduction of T & V system by Benor when such innovations in agricultural extension were badly needed, rationalization of work load of VLW so that they may be made efficient and productive, strengthening of

organizational support, such as arrangement for office space, transport provision of manpower, creation of training facilities and monitoring activity; functional relationship and co-ordination with other agencies specially input supplying agencies, research and extension linkage, planning-extension linkage, etc. A number of changes taking place in the attitude of the farmers with the introduction of T & V system in Rajasthan based on observations are listed. However, these lack scientific temper of analytical approach showing the extent of changes or the percentage of farmers benefited by this approach. In the end, the authors point out that T & V system is basically suited for regions having assured irrigation but express their doubts for application to rainfed agriculture conditions in the country. The book ends with appendices and bibliography.

There is some wrong reporting in the discussion part, *viz.*, reporting of DAV College at Sanganer instead of Ajmer and Sangaria College at Sriganganagar (p. 22), use of Rajasthan Agriculture University and Udaipur University simultaneously for one another (p. 31), mention of Dungarpur research station instead of Durgapura research station (p. 32), etc. In addition, there are some printing errors (p. 65). However, these points do not overshadow the main merit of the book which is its cohesive presentation of the theory and the relevant applied material.

On the whole, the book may prove quite valuable to extension personnel as it takes a comprehensive view of the T & V system introduced in Rajasthan. Students of extension education will benefit most from this study. However, those who seek research findings from the study would be disappointed. It provides only some indicative results which need to be verified by taking a larger sample and use of proper statistical analysis for future studies.

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Patterns of Regional Development: A Comparative Study, Ajit Kumar Singh, Sterling Publishers Pvt. Ltd., New Delhi-29, 1981. Pp. xii + 301. Rs. 75.00.

John Friedman, commenting on the future of Regional Science,* made a series of suggestions for future research directions which included one relating to initiation of "research into the question of regional planning for rural development, not via usual mode of projecting net spread-effect for rural areas from hypothetical growth pole investments, but from a perspective which looks towards the implementation of rural development pro-

* Concluding Remarks, Seventeenth European Congree, Regional Science Association, Crocow, Poland, 1977.

grams on a regional basis.'' Friedman's prioritized research area remains of crucial importance in the Indian context, considering the grim fact that despite the articulated objective of reducing regional disparities, income-productivity-employment differentials continue to exist. Notwithstanding the now acknowledged failure of our erstwhile experiments of economic development based on 'trickle down' or percolation theory, the 'perspective' of which Friedman spoke is yet to grow into a matured vision.

Singh's admirable study is a successful attempt to provide a perspective, based on an in-depth analysis of past experiences, which comes to its logical conclusion by blue-printing a strategy for balanced regional development. The study does not remain a cut-and-dried statistical diagnosis of the past experiments, but provides a prescription cutting across a myriad of spatial as well as aspatial factors relating to the problem of regional development. This approach puts the book in a class radically different from numerous doctoral works which only add to the catalogues of many national libraries.

The study is very valuable for theoreticians and practitioners. It opens with a critical survey of the major theories of regional development. This section presents an intellectually elegant analysis of the problem of regional development in the global context. Adopting the sector theory as the analytical framework, the author not only charts the growth but also delineates the problems of the major sectors constituting the regional economies of Eastern and Western Uttar Pradesh: a classic example of disparate levels of development within a State. With the help of assiduously collected data for a period spanning about 25 years, painstaking analysis undertaken at the regional and district levels, the author identifies the causal factors of inter-regional disparities and explains the dynamics of development.

The author demystifies the celebrated nexus between income differential and differentials in resource endowments in the respective regions. He proves that the per capita income differences in Uttar Pradesh are not owing to differences in resource endowments or demographic characteristics such as man-arable land ratio, but due to numerous and diverse factors and their number of permutations and combinations. For instance, the relative poverty of Eastern Uttar Pradesh is demonstratively related to low factor productivity, low level of technological adoption, inadequate infrastructure, locational disadvantages for industries, low degree of urbanisation, relative degree of rigidity in cropping pattern, etc. He also underlines the role played by the non-economic factors in regional development, such as social customs and practices, historical past including reformist movements, etc.

The volume testifies to the author's statistical resourcefulness and unrelenting labour. However, one of the plus points of the volume, namely, the wealth of data covering about one-third of the printed pages, is also the only drawback of the excellent study. They are not only plethoric but largely drawn from secondary sources, notorious for various reasons, particularly their 'unreliability'.

This drawback, however, does not dilute the intrinsic value of the work. The major conclusions arrived at will remain the same, whatever may be the extent of numerous and endless statistical quibblings. Professor Colin Clark remarks in his Foreword to the volume: "In a field where so much bad and mediocre work is being produced, I find this text.....intellectually excellent." Others from the lower level of the academic totem-pole will find that the work is a notable exception to the prevailing Gresham's law of the Indian literary world, *viz.*, mediocre or bad books tend to drive away good books out of circulation, as the book will remain useful for researchers and planners. One also hopes that the author will pursue the line of enquiry further regarding organizational innovations, particularly strengthening of planning machinery at district and block levels, as suggested by him.

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Inequality and Poverty (A Case Study of Karnataka), G. Thimmaiah, Himalaya Publishing House, Bombay-4, 1983. Pp. xiv + 106. Rs. 45.00.

This slim volume makes useful contributions in two important areas of Indian economics. These are (1) estimation of poverty and its socio-economic correlates and (2) regional economic development. In the area of poverty there now exists a considerable body of research based literature at the all-India level as well as at lower levels of aggregation. The subject of regional development too is no longer as neglected though it deserves a much higher priority in research programmes. Indeed, as this volume shows, the two subjects overlap so much that it is no longer possible to consider the problems of poverty without simultaneously taking into account the past experience and strategies of development. Likewise, the questions connected with unequal distribution of income and wealth are inseparable from those of poverty and development. However, the problems of researching these aspects of our society are not at all negligible. Indeed, considering the inherent limitations of the available data, principally the NSS, it may not be feasible to simultaneously deal with all the core issues of our society, *viz.*, poverty, inequality and socio-economic development in a single piece of research. This is too large a task which, given the constraints of established research methods, are not satisfactorily dealt with taken as a whole. It might be more practicable if all the relevant questions one wants to study are broken down into sub-components and dealt with in a piece-meal manner depending upon the limitations of data and constraints of research methods. It is possible that this way no single scholar will be able to accomplish everything he may want to do within a reasonable period of time. But, on the whole, the results are likely to be more satisfactory and more steady progress will be achieved in the sphere

of knowledge. Fortunately, for us, Thimmaiah did not set for himself such an unattainably high aim; his book comprises mainly the research findings on poverty and inequality and also contains some policy proposals. Unfortunately, the latter are the weakest part of the book and fail to make any impression.

The most original part of the book is the way the author could dovetail to the NSS sub-samples for Karnataka the results of a very ingenious State-wide survey, conducted by the Institute for Social and Economic Change in 1974-75, for studying "the socio-economic impact of drinking, horse racing and state lottery." This has enabled the author to present a wide range of very useful data pertaining to the socio-economic characteristics of Karnataka households. Now Karnataka has a bench-mark survey on income, education and occupations which can be relied upon for making inter-temporal comparisons for decades to come.

On poverty estimates I have only two comments to make. First, starting from different base levels in 1960-61 the percentage of people below the poverty line in rural and urban areas became almost equal in 1965-66 (*viz.*, 66.41 per cent and 65.89 per cent respectively). Thereafter, practically every year the poverty rates declined upto 1970-71. Indeed, in this year's estimates, the rural and urban poverty levels are almost identical (*viz.*, 51.51 per cent and 51.63 per cent respectively). Moreover, the estimates for 1972-73 and 1973-74 show sharp reductions, particularly for the latter year. I would have liked a discussion of the underlying statistical tendencies. The results we have published* do not tally with those of the author. No doubt, since there are differences in methods, the results may also differ. But, unlike Thimmaiah, who shows a sharp decline in rural poverty from 43.90 per cent to 30.65 per cent in one year, our data show a slight increase (from 44.54 per cent to 45.71 per cent). Second, the argument that rural poverty has fluctuated with the level of agricultural production could have been investigated more fully. For example, in 1967-68 paradoxically the poverty rate declined slightly though per capita food production had fallen considerably. What were the mitigating circumstances ? Again, in 1972-73, food production per capita and poverty rate declined together. If true, what were the government policies which produced such a favourable result ? May be, the government, it has achieved more than meets the eye.

The author's discussion of socio-economic explanations for inequality and poverty is, no doubt, very interesting but suffers from two important gaps. Population growth as a factor which generates poverty in our economy is simply not mentioned; nor does it find any place in policy discussions. This is surprising because all the variables included by him are subject to demographic explosion so much so that it might not be possible to grasp their true significance independently of the demographic framework. Perhaps, there were practical reasons for not considering the population

* C.K. Johri and B.K. Jain, "The Structure of Indian Poverty", *Indian Journal of Industrial Relations*, Vol. 18, No. 1, July 1982.

aspect, but the text provides no inkling of the author's thinking on this aspect.

Second, there is practically no discussion of the role of education and education policy in relation to inequality and poverty. The data show an ambiguous pattern and it is not clear as to what the author has inferred in respect of this variable. In theory, education is predicted not only to raise income but also to lower inequality, but in reality one is not always sure whether to expect confirmatory findings, particularly in respect of the latter. May be, in view of the vastness of the subject it could not be adequately discussed in a slim volume. But, then, as on the population issue. one does not even know what the author thought of it !

Despite the aforesaid shortcomings, the volume under review will be welcomed by researchers and policy makers alike. I hope that in coping with the long run problems of development in Karnataka, they will not be misled by the unnecessary details pertaining to deceptively simple differences amongst different religious communities and castes and instead will focus on the truly fundamental issues of poverty and inequality.

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Food Security for Developing Countries, Edited by Alberto Valdes, Westview Press Inc., Boulder, Colorado, U.S.A., 1981. Pp. xxii+351. $26.25. (Distributors: Bowker Publishing Company, Epping, Essex, England.)

This volume is a collection of contributions made by policy advisers and researchers in a Conference held at the International Wheat and Maize Improvement Center (CIMMYT), Mexico in November 1978. The Conference was organized jointly by the International Food Policy Research Institute (IFPRI) and the CIMMYT. Its main aim was to improve our understanding of the problem of food security in Asia, Africa and Latin America. In his Foreword to the book, John W. Mellor raises many important issues throwing light on how fluctuations in food supplies affect low income and high income countries. Mellor's suggestion that there is considerable scope for increased efficiency and decreased costs through International Trade is not of much relevance to poor countries who are facing serious balance of payments problem.

Including the Introduction, there are in all 14 chapters contributed by 21 authors. This volume covers a wide ground, especially world price stabilisation schemes, self-reliance, liberalisation of world trade, special problems of rural areas, insurance approach to food security, compensatory finance, financial facilities and buffer stock reserves.

Since there are a large number of papers it would be difficult to comment on all of them. In view of this, the review centres more on some of the important issues which were discussed in the Conference. In their introduction to the volume, Alberto Valdes and Ammar Siamwalla refer to a paper by Minhas in 1976.* While agreeing with Minhas that national food policies relying on food imports are highly risky, they are opposed to independence from all forms of food imports. Minhas is of the view that India should opt out of the world security system, not depend at all on food imports, raise its level of self-sufficiency and build its own reserves. Since food insecurity arises from real income fluctuations, they suggest income transfer measures, such as food-for-work programmes. crop insurance, etc. They also suggest financial policy to protect against fluctuations in cost of imports. Shlomo Reutlinger and David Bigman (Chapter 9) also consider that self-reliance is the worst enemy of stability as instability in domestic prices leads to a fall in consumption of low income people and farmer's income is also adversely affected. In their view, under conditions of free trade, the global supply of food and hence international food prices would be much more stable than the supply prices in individual countries in the absence of trade. Daniel Morrow (Chapter 10) is also of the view that world price stability would not solve the problem of food security for developing countries. Valdes and Panos Konandreas (Chapter 2) come to the conclusion that though world price stabilisation scheme can help in mitigating food insecurity it is not sufficient for the task.

Mellor (Foreword), Reutlinger and Bigman, and D. Gale Johnson (Chapter 12) contribute to the discussion on liberalisation of world trade as a solution to the problem of food insecurity. All of them are of the view that liberlisation of barriers to trade would reduce the size of grain reserves required to achieve security. Advocates of liberalisation of barriers to world do not seem to appreciate the problems, of poor countries where large scale food imports do immense harm to domestic farmers who can get better prices to their products in the absence of these imports. It is best to follow via media policy like that of India where the domestic farmer is protected by minimum support prices while limited quantity of foodgrains is imported for adding to the buffer stock whenever the level of buffer stock goes down.

Valdes and Konandreas (Chapter 2); Gale Johnson (Chapter 12) and Reutlinger and Bigman (Chapter 9) discuss world price stabilisation schemes. These authors hold different views on the desirability of stabilising world grain prices. While Valdes and Konandreas hold the view that successful price stabilisation schemes could help mitigate food insecurity, this by itself is not adequate. Reutlinger and Bigman are of the view that stabilisation of world grain supplies and prices are not desirable for achieving food security. Gale Johnson holds the view that national policies insulated from world variations in demand and supply have adverse effect on prices. Though the authors express different points of view, the same central view is held by them, *viz*., permitting free trade. However, this view is not

B.S. Minhas, "Presidential Address—Towards National Food Security", *Indian Journal of Agricultural Economics*, Vol. XXXI, No. 4, October-December 1976, p.8.

in the interest of developing countries whose main objective ought to be achieving domestic price stability instead of permitting domestic instability by permitting free trade. Most of the advantages which free trade can give can be achieved by following domestic dual price system, *viz.*, controlled prices for meeting the minimum requirements of vulnerable sections of the population and free prices for others so that the former still has the incentive of higher prices. This should be combined with precautionary imports required for maintaining the buffer stock.

Solutions to some of the problems mentioned above are available in the discussions on insurance approach to food insecurity, compensatory finance and financial facilities. Barbara Huddleston and Konandreas (Chapter 11) do simulation exercises and come to the conclusion that international food insurance scheme could operate either as a purely financial mechanism that provides participating countries with funds to cover imports or it could operate with limited grain reserve in addition to financial mechanism. Gale Johnson has an interesting suggestion to offer which should be considered seriously by poor and rich countries. He suggests that U.S.A. in co-operation with other industrialised countries could guarantee to each country that in every year in which grain production declines more than a given percentage of trend production, the shortfall in excess of that amount would be supplied. For the seven-year period (1968-75) the insurance programme would have reduced total carryover in India to 12 million ton-years from 41.5 million ton-years without the insurance programme. Gale Johnson's view gets support from Huddleston (Chapter 13). According to the author, proliferation of national reserve stock programmes in many parts of the world could lead to an overall accumulation considerably in excess of the amount needed to provide reasonable food security. Louis M. Goreux (Chapter 14) recommends that developing countries with weak balance of payments position should be helped with food aid programme that would provide either the deficit cereals or compensatory finance scheme.

The idea behind financing scheme put forward by Goreux was to provide the developing countries with the financial means for importing the quantities needed to offset their production shortages. Of the existing financing schemes the IMF facility is the largest one. The same argument has been put forward by Valdes and Siamwalla. Extending IMF facilities for importing foodgrains like IMF oil facilities is a positive suggestion.

Morrow (Chapter 10), Reutlinger and Bigman, and Gale Johnson have discussed the problem of buffer stocks and reserves lucidly. Morrow is critical of the concept of reserve stock made by the FAO. The FAO considers 25 per cent of annual world wheat utilization as the safe level, *viz.*, 104 to 108 million tonnes including 71 million tonnes for working stock. According to Morrow, it is not desirable that all world stocks in excess of minimum working stocks should be subject to reserves based on international price fund rules. Morrow's discussion of simulation exercises done by Alexander Sarris is very competent. The simulation exercise aims

at assessing the impact of reserve stock system on the world wheat economy. Morrow points out that even if all countries were able to agree on the appropriate price level and reserve stock, the problem of how to share the cost of the reserve stock would be extremely difficult to solve. While Morrow takes a negative view of world reserve stock, Reutlinger and Bigman, and Gale Johnson take a positive view. The former are of the view that buffer stocks yield large savings in government expenditure for these programmes which outweigh the cost of operating the buffer stock. Gale Johnson holds the view that the amount of storage is based upon the expectation that investments in holding reserves would yield normal rate of returns on that investment.

Deviating from the main trends in discussion such as self-reliance, insurance approach to food security, compensatory finance, removal of barriers to world trade in foodgrains, buffer stock, etc., Siamwalla (Chapter 4), Uma Lele and Wilfred Candler (Chapter 5), Jorge Garcia and Ahmed A. Goueli (Chapter 7) confine themselves to local and area problems. Some of them discuss data problem also.

While discussing the problems of some East African countries Uma Lele and Candler make extremely interesting observations. According to them, viewed from the point of view of sub-Sahara area the discussion on food security in international literature is unrealistic and non-operational particularly because most food transactions do not pass through markets. Just before harvest, stocks held by private farmer exceed all other stocks. "Thus, to think in terms of public stocks as the only component to food security is to overlook the single most important contributor to food scarcity: the private sector." Some of the issues discussed by Uma Lele and Candler are very much relevant to a large number of developing countries.

In his paper on the nature of food security in Columbia, Garcia suggests that food insecurity can be eliminated by eliminating poverty-income transfers to vulnerable groups and improvement of food distribution network for the rural sectors. Ahmed Goueli (Chapter 7) points out that since Egypt relies heavily on international markets, food insecurity problem arises from fluctuations in international trade. Timothy Josling (Chapter 8) in a paper on price, stock and trade policies points out the difference between market economies and the U.S.S.R. He points out that Socialist Developing Countries act as destabilising factors in the world market due to the weak link between production and consumption. Siamwalla in his paper on security of rice supplies in the ASEAN region brings out an interesting fact that most food security schemes are for wheat while rice problem is mostly an Asian problem as 95 per cent of world milled rice is grown in Asia. Out of this, only 3 per cent is involved in trade. U.S.A., China and Thailand are the main exporters of rice. In view of the special nature of security problem in the case of rice, the author points out that self-sufficiency in rice is better than trade as even small foreign trade drives prices up sharply. The author suggests a food insurance scheme that pays for shortfalls in rice production or high rice prices in terms of wheat crops.

Randolph Barker, Eric C. Gabler and Donald Winkelmann (Chapter 3) in their paper on long-term consequences of technological change on crop yield stability make an interesting observation that there is no evidence to support the contention that adoption of modern technology leads to greater yield stability. There are evidences to show as new technology is introduced, the skewness in yield distribution shifts from being strangely positive to negative, perhaps creating a more favourable risk environment.

IFPRI and CIMMYT rightly thought of organizing a Conference at the right time as the global demand for food will grow rapidly as a result of high income growth. These countries will face a growing food import gap unless output increases above the historical trend. In the period 1960-75 our average world real per capita income grew at the rate of 3.2 per cent per year. In order to achieve world food security in the long run, it is essential such countries should accelerate their rates of growth in production. Unless they aim at self-sufficiency, it will not be possible for them to reduce their dependence on food imports particularly because their balance of payments problem will become more acute. It would be difficult for these countries to compete with centrally planned economies like that of the U.S.S.R. The U.S.S.R. has entered the world grain market in a big way since 1972. This trend is likely to continue resulting in a further push-up of world grain prices causing difficulties to poor developing countries. In view of this trend. it is desirable that these countries should move in the direction of building up national food reserves like India rather than depend upon free world trade in grains. When highly developed countries like members of the EEC have raised barriers against free world trade and maintain high domestic prices for the benefit of their own producers why not countries like India also move in the same direction? The present situation is that agricultural products are over-priced in EEC and under-priced in low income countries. The policy of self-sufficiency should be supplemented by a policy of building up of food reserves by an international agency by pooling the surpluses of surplus countries. This agency should act as a stabilising agency. Only this can provide real security to developing low income countries and not free trade in foodgrains. Any movement in the direction of free trade in foodgrains will only worsen the problems of low income developing countries. Nor does the solution lie in U.S.A. and some other developed countries holding stocks of foodgrains on behalf of other countries which face the problem of frequent food shortages. To this extent, the Food Security Conference organized by IFPRI and CIMMYT has not succeeded in hitting the bull's eye. The Conference would have been able to take a more balanced view of the world food security problem if it had participants from countries like India, Bangladesh and Ceylon which are the countries which belong to the category of low income countries which face frequent food problems. As pointed out by Valdes and Konandreas (Chapter 2), if we exclude three (India, Bangladesh and Sri Lanka) of the 24 cases, during 1965-76 the mean ratio (the food import-export ratio is used as an indicator of the pressure put on foreign exchange supplies to finance food imports) was less than 15 per cent, which does not indicate a severe cons-

traint during normal years. Thus in terms of the quantum of foodgrains required for meeting food deficits the problem arises mainly due to India, Bangladesh and Sri Lanka. Since these countries are predominantly rice consuming countries, the food security system suggested by the Conference will not solve the problem of these countries as the world has very little surplus in rice.

The main recommendation of the Conference that all restrictions on free movement of foodgrains in the world should be removed will not serve the purpose of poor countries who have to protect their farmers against competition from food imports from food surplus countries. For these countries there does not seem to be any way out except aiming at self-sufficiency. So far as developed countries like the EEC members are concerned, they do not need any food security system as they do not have balance of payments problem. In fact, they are also interested in protecting their high price agriculture against competition from cheaper grains from surplus countries.

While the policy decisions recommended by most of the papers presented in the Conference are not of much practical relevance, the papers presented are technically sound. The volume brought out is a useful addition to the economic literature on food security.

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