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## Book Reviews

*Oilseeds in India: Perspectives for 2001 A.D.*, P.C. Agrawal, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi, 1990. Pp. xv+346. Rs. 130.00.

In this book, the author has done a comprehensive analysis of supply of oilseeds and edible oil, based on oilseeds production data from 1949-50 to 1983-84 and projected the country's requirement upto 2001 A.D. The assessment of demand for oil and oilseeds is based on an examination of the consumption data of National Sample Survey Organisation (NSSO) relating to the 38 Round (1983-84). The book consists of ten chapters, which could be divided into three modules. Chapter 1 sets the agenda and objectives of the book and module 1 consists of three chapters, which deal with oil consumption and demand for edible oils. The next module comprising three chapters focuses on the analysis of seedwise oilseeds growth at three different levels, namely, all-India, state and district. The last module has three chapters. Chapter 8 deals with the external trade of oilseeds and Chapter 9 projects the future oilseeds production scenarios with various assumptions and finally Chapter 10 enumerates the conclusions and policy implications based on earlier analysis.

The author has used statistical and econometric methods such as compound growth rate, trend growth rate and contribution of area and yield to estimate the production of oilseeds. For estimating the consumption of oil, he has computed elasticities for rural and urban population using data from NSSO. This has been done by fitting double log function by using the method of weighted least squares. The regression coefficient under this specification is the estimate of elasticity. He has also tried to compute the measures of inequality like Lorenz ratio and ratio of per capita consumption for top 25 per cent to bottom 25 per cent of the population. The future demand for edible oil has been estimated by taking into account the future population and its consumption rate (rural/urban, poor/non-poor, etc.) and the consumption growth. The equation used is  $Y_t = Y_0(1+r\beta)^t$ , where  $Y_t$ ,  $Y_0$  are consumption expenditure per capita of edible oil in the period  $t$  and base year 0 respectively,  $r$  is growth of consumption per capita,  $\beta$  is the elasticity of consumption of edible oil with respect to total consumption expenditure. The total demand for oilseeds has been computed by taking a norm of 25 per cent of oil in the seeds. The future scenario of production of oilseeds has been estimated with the annual growth rate of area and yield. Many assumptions have been made regarding the point to point growth rates or trend growth rates for area and yield estimation.

The author, being a Senior Systems Analyst, could easily develop data bases and software for this analysis, which otherwise is a tedious job to do and come out with such comprehensive analysis which he has accomplished in his book. Consumption and demand modules consist of three chapters devoted to consumption of edible oils, inequality of the consumption of edible oils across rural and urban population and finally demand for edible oils. In-depth analysis has been done with large sets of data, not only across urban, rural, poor and non-poor but within states, and comparing with food items. Computations of various coefficients such as statewise elasticities of rural/urban consumption in Chapters 2 and 3 have been used in Chapter 4 to project the demand for edible oils. The only drawback one can figure out in this analysis in the module is about the implications and interpretations and conclusions at certain places. For example, the consumption pattern does not talk of availability of oils in Public Distribution Systems and how it is different from oilseeds surplus states compared

to deficit states. The institutional buyers like hotels, halwais, hostels, etc., put a considerable demand on oil, which has not been mentioned anywhere. It is to be noted that the rural consumption of oil may be lower because of self-produced oil in ghanis, etc. And finally, the equivalent oilseeds norm of 25 per cent is not correct in today's context; for example, in the year 1991-92, we produced around 196 lakh tonnes of oilseeds and the equivalent oil computed is 59 lakh tonnes. But according to the author, to get 55 lakh tonnes of oil in 1990-91, he projects oilseed production should have been 220 lakh tonnes. It would have been appropriate if he had estimated the marketable surplus for each oilseed and then computed the availability of oil. However, the analysis done by him is very useful. Rarely anyone has tried this kind of work.

In the oilseeds production analysis module focusing on all-India level, statewise and major oilseeds producing districts levels, the analysis of each of the above unit is done to compute the growth rate of seeds using area, production and yield and also index numbers. Growth rates, exponential and compound, are computed between the period 1949-50 to 1983-84 as well as within periods divided into seven sub-periods. These growth rates are used in Chapter 9, to project various scenarios for the future oilseeds production. The author has used standard statistical methods for these computations.

Chapter 8 deals with the external trade of oilseeds. Here also the trends in exports and imports of different oilseeds are analysed using export/import of oilseeds/oil data from 1973-74 to 1983-84. The author has presented a number of scenarios based on eight different assumptions, which are summarised below:

Sce- nario (1)	Assumption (2)	Output projection (lakh tonnes)		
		1990-91 (3)	1995-96 (4)	2000-01 (5)
1.	Long-term exponential growth rate in yield (1968-69 to 1983-84) and area constant as in 1983-84	147	163	180
2.	Long-term exponential growth rate in both yield and area (1968-69 to 1983-84)	200	221	249
3.	Exponential growth rate in yield (1979-80 to 1983-84) and area constant as in 1983-84	207	304	477
4.	Exponential growth rate in both yield and area (1979-80 to 1983-84)	234	379	640
5.	Long-term compound growth rate in yield (1968-69 to 1983-84) and area constant as in 1983-84	158	185	218
6.	Long-term compound growth rate in both yield and area (1968-69 to 1983-84)	212	264	332
7.	Compound growth rate in yield (1979-80 to 1983-84) and area constant as in 1983-84	223	353	591
8.	Compound growth rate in both yield and area (1979-80 to 1983-84)	259	463	872

It is very difficult to accept any one of these, particularly taking into account the estimates of individual oilseeds as given by him at segregation level when we know the actual current scenario. On the aggregate level, only scenario six can be accepted with a pinch of salt. As a matter of fact, the Technology Mission on Oilseeds has projected around 280 lakh tonnes of oilseeds output at the turn of the century. If we take the growth rate of yield as suggested in the book, then in many cases at the turn of the century, our yield per hectare is much more than the best possible yield in the world. Similarly in the case of area, ultimately the total cultivable land in the country is constant and the shift of crops takes place depending on the price incentive and suitability of the crop. However, the analysis given by him has its positive points. He has tried to link his analysis of the earlier chapters with policy implications and recommendation in the last chapter.

The most restrictive thing in this kind of work is the limitation of data availability. Generally, data are available from the Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, after a time lag of one-two years after the event. Hence, the book published in 1990 could use only data up to 1983-84. From the short-term policy point of view, the analysis may not be of immediate relevance but for the long-term policy implications the utility of such work cannot be denied. It seems that the book can be fruitfully utilised by researchers and academicians to examine the methodologies used and the possibilities of their application to other agricultural crops.

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*The Food Question: Profits Versus People*, Edited by Henry Bernstein, Ben Crow, Maureen Mackintosh and Charlotte Martin, Earthscan Publications Ltd., London, 1990. Pp. 214. £ 7.95.

The book is a collection of 16 essays by different authors including an introductory chapter by the editors. The aim of the publication, according to the editors, is to contribute some tools of analysis and to illustrate their applications. "We hope to make the results of specialised research more accessible to all those concerned with the issues, so that they are better equipped to confront and assess for themselves the theoretical, political and practical challenges involved."

The editors then pose a question as to what is meant by the political economy of food. As an answer, it is stated that at the simplest level, all the chapters in this book examine the interrelations between politics and economics: between political ideas and actions and economic ideas and processes. To do this, they all examine aspects of the social organisation or social relations of the production, exchange, distribution and consumption of food. And they focus on the contradictions and conflicts which structure these social relations and which drive economic change: class divisions between those who benefit from the work of others and those who are exploited; conflicts between men and women over production and access to food; conflict between governments and between governments and people. Finally, all are concerned with actions and responses: examining ways in which people struggle against their situation and discussing potential responses to the situations analysed.

Admitting that the food question comprises quite a large number of issues, the book,

according to the editors, covers only a fraction of them but it does contain analysis of many different levels of the political economy of food. The chapters examine the problems of access to food in the city and the countryside; changes in production relations in food farming, especially the connections between small peasant farmers and large multinational firms and agencies; how markets work and their effects on local, national and international levels; and the 'development' strategies, in relation to food, of the large agencies such as the World Bank and the IMF. The central concern is who gets to eat what - and, especially, why?

The study really relates to the 'politics of food' - a subject which has recently been in the news. The U.S.A. refused to sell wheat to India in early 1992 and also insisted that India should not supply foodgrains to Cuba. When the U.S.A. reaped a bumper wheat crop in 1992, India was included among other 28 countries for concessional wheat sales and India has now contracted wheat, despite honouring her commitment to Cuba. A similar rather worse situation arose in 1974 when the United States stalled the committed supply of 150 thousand tonnes of food aid to Bangladesh. The U.S. government decided that Bangladesh's export of jute sacks to Cuba contravened a section of U.S. food aid law which forbade aid to countries trading with communist governments.

Chapters 2 and 3 deal primarily with this aspect. It is clearly brought out that food aid is rarely given by one government to another without conditionalities. This is in fact another type of imperialism and the major culprit in this game is the U.S.A.

Besides the two chapters on India dealing with 'Some Economic and Political Consequences of the Green Revolution in India' and 'Another Awkward Class: Merchants and Agrarian Change in India', other chapters deal with Tanzania, Mexico, Bangladesh and various third world countries.

The fact that the benefits of the green revolution went largely to the big farmers has been very well debated and might be considered as true in the early years of the revolution period. But in the later years even small and marginal farmers have benefited from the HYV technology. A number of studies conducted in the area clearly show that the productivity levels of small and marginal farmers are actually a shade higher than those of the big farmers. It would, therefore, be wrong for anybody to conclude that a situation like this has disrupted "the delicate balance between the legitimate aspirations of any individual nationality and the interest of the nation as a whole under conditions of extremely uneven growth", as assumed by the author of the study.

Further discussion of the subject leads the author of the paper (Utsa Patnaik) to come to a conclusion that in Punjab the origins of the secessionist ideology, and the subsequent terrorist movement against the Central Government and all organisations and individuals opposed to secession, lie in the opposite (but in its principles the same) phenomenon of extremely rapid agricultural growth which has made Punjab the most prosperous region in India.

It is rather naive for anybody to come to such conclusions and link the present terrorist movement as a result of the green revolution. It is recorded history that separatist movement in Punjab had its origin in the late Master Tara Singh movement immediately after Independence. What has aggravated the situation at present is the malafide intentions of our neighbours to disrupt peace in the area. There is hardly any green revolution in Jammu and Kashmir but a similar situation there has turned still worse.

This short book of less than 200 readable pages claims to have a laudable objective of

providing some of the analytical tools needed for serious action. It is quite well-known that food surpluses are available with the developed world, U.S.A., Canada and Australia, for example. The developing countries, on the other hand, are short of food even though at least some of them have enough natural resources. They, however, lack financial resources and in some cases even misplaced priorities or even misguided policies as pointed out in a recent World Bank study. The real dilemma in the food game is this. The book under review does not provide any guideline to overcome such a problem. The resultant problems or exploitation of the weaker sections of the society are inherent in such situations. This is very well-known and does not call for any deep research.

The surplus countries, particularly U.S.A., would do only what suits them at a particular point of time irrespective of the needs of the starving millions or even most difficult situations in other places. Any solution to this problem is really outside the domain of economics and possibly much beyond the scope of such a treatise which is only a collection of papers, some of which appear to be giving highly biased conclusions.

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*Economic and Demographic Relationships in Development*, Easter Boserup, The Johns Hopkins University Press, Baltimore, U.S.A. 1990. Pp. vi+307. \$ 22.00.

The book is a collection of Boserup's writings on matters concerning economic development and demographic change. The essays, written over a period of more than two decades, are introduced by Paul Schultz. As anyone familiar with Boserup's writings will readily agree, the hallmark of her writings is the holistic approach she adopts for unravelling the complex inter-relationships between demographic factors and agricultural development, enriched by valuable insights from fields such as anthropology, archaeology and environment.

The essays are grouped into five sectors dealing with economic development and demographic trends, food, women's employment and fertility, Africa, and policy. What strikes the reader most about these essays is the fact that Boserup has been championing the cause of women, environment and infrastructural development long before it was considered fashionable for the academic community to do so.

The first part contains seven essays on economic development and demographic trends which were written between 1975 and 1986. While discussing the inter-relationship between population and agricultural production, Boserup succeeds in standing Malthus on his head by arguing that it is the population pressure that is responsible for many cases of technological change and patterns of land use. Swimming against the current of the consensus of academic thinking on the subject, she declares that agricultural surplus is not a necessary condition for industrial revolution to take place. What is stressed emphatically is the importance of agricultural infrastructure which is considered as a pre-requisite for agricultural development. "...most modern inputs in agriculture can be used only in rural areas that are better supplied with infrastructure than are most of the areas that supply towns and export markets with agricultural products produced with traditional techniques. Good roads to the villages are necessary, and so are local warehouses, repair shops, an extension network, and

sometimes, large-scale irrigation facilities" (p.50). While emphasising the role of infrastructure, she cautions against the practice of several countries (including India) of concentrating infrastructure in a few regions in view of its impact on migration of labour and its deleterious consequences on agricultural development of the rest of the country.

Part II contains essays on problems concerning food supply and agricultural productivity written during 1970-75. These essays are noteworthy for emphasising agriculture as the engine of growth when the majority of development economists viewed the agricultural sector merely as a source of supply of surpluses which could be mobilised for industrial development. Boserup forcefully argues for directing international aid to the agricultural sector in developing countries so as to narrow the gap between 'burdensome surpluses' in the developed countries and the widening food gap in the developing countries. At the same time, she recognises the dilemma faced by the developed countries in financing agricultural development in developing countries. A disconcerting aspect of economic reality is that the developed countries are net exporters of food and can hardly be expected to be enthusiastic about a plan which could eventually strike at the very root of such exports.

The third part of the book comprises seven essays written between 1973 and 1990 and throws light on the various ways in which women participate in the economic activity of the country as also the impact of the environment on the fertility rate of women. Typically, Boserup tends to differ from those who attribute the high rates of fertility in developing countries to the lack of basic knowledge regarding family planning devices. The high rates are perceived to be the result of conscious decisions of the household regarding family size. Discussing the factors which contributed to a fairly rigid division of labour between males and females, she recounts the limitations imposed by such division on adoption of new agricultural practices. It may be surprising but true that the reluctance of African farmers to undertake the cultivation of foodgrains on a commercial basis is basically due to their perception that food production is a female task. For similar reasons, men in Latin America are not keen on undertaking poultry production. The inter-relationship between population change, female status and rural development differs according to the agricultural system prevailing in each country. The agricultural system in turn is viewed as an adaptation to different population densities and environmental considerations. Technical change affects fertility control through its effect on demand for labour. The substitution of mechanical and chemical inputs for traditional labour intensive techniques could provide motivation for fertility control in peasant families. However, such a policy might lead to an increase in migration to urban areas and its consequent repercussions. Boserup's analysis leads her to conclude that it is better to promote a policy which is a compromise between the labour intensive pattern and the modern input pattern.

Four articles on Africa written over a span of two decades between 1966 and 1985 form the subject matter of the fourth part of the book. Boserup rightly points out that the problems of African agriculture are substantially different from those of Asia. African regions are sparsely populated and have abundant land. This makes it imperative to resort to mechanisation for fuller utilisation of land resources. However, the situation prevailing in the mid-sixties (and continuing in several regions even now) was one of neo-literate traditional leaders dominating the agricultural sector, leading to a curious mismatch between the technologies required to be adopted and the level of skills of the population that needs to use it. Such a situation can be resolved only if greater attention is paid to the type of farming

system that can meet the challenge of changing times.

The last section on policy comprises only two papers. The first one on population growth and employment (1973) and the other on development strategy and demographic transition (1982) together discuss issues pertaining to the role of agriculture, employment opportunities and the choice between labour intensive and capital intensive techniques. Boserup's preference for labour intensive agriculture is not only on grounds of over-population but also because it promotes agricultural savings which could then be used for agricultural investment. Most developing countries in Asia are in the first stage of demographic transition. The second stage is likely to be long, implying rapid growth of population in the next few decades. The policies of most countries in relying on food imports rather than boosting agricultural production domestically would result in undesirable consequences for those countries where the bulk of the population is still in agriculture. Labour intensive agriculture and decentralised rural development are advocated as a means of overcoming these difficulties.

To sum up, the book containing an excellent collection of articles provides rare insights into the multi-dimensional phenomenon of economic development. The richness of the analysis and the inter-disciplinary nature of treatment given to the subject is in sharp contrast to the modern day exercises in modelling which perforce have to confine themselves to a few well-defined and quantifiable variables.

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*Coping with Seasonality and Drought*, Martha Alter Chen, Sage Publications India Pvt. Ltd., New Delhi, 1991. Pp. 254. Rs. 225.00.

Chen has written an important and useful book. As Ela R. Bhatt says in the Foreword to the book: "In analysing the village, its history, its resources, its people, with a deep understanding of local realities and never losing touch with the simple, practical problems that dominate daily life, she has come up with an invaluable document that is, in fact, a tool for social change." The study is inductive and aims at formulating new testable hypotheses rather than merely testing received theory. Her main problem is to study how the households in semi-arid regions respond to seasonality and drought. She finds that the households have different strategies for coping with seasonality and drought. These are not haphazard responses but are deeply ingrained in experience and socio-economic structures.

The study was carried out in 1987 in a village in Dholka taluka in Ahmedabad district of Gujarat and refers to the period 1985-87, when there was severe drought for three consecutive years. The name of the village, Maatisar is a pseudonym. The methods of study adopted were quantitative field surveys as well as qualitative ethnographic methods involving structured interviews, life history interviews, genealogies and participant observation. The study bears the mark of extremely careful and detailed field work. The findings are presented within an analytical framework. The style is lucid and the study abounds in perceptive observations. The time spent on reading the book is rewarding. It is divided into three parts. Part I provides a detailed account of the village, Part II deals with

the strategies adopted for coping with seasonality and Part III analyses the strategies adopted for coping with drought.

The author finds that the village has experienced a moderate economic progress as a result of power driven pumpsets for irrigation, adoption of high-yielding variety rice and improved means of transportation. But between 1950 and 1980, the population has doubled leading to division of landed properties and diminution of common property resource base for water, fodder and fuel, and over-crowding in traditional hereditary occupations. The traditional bonds of caste, community, patron-client relationship and *jajmani* have slackened. The ability of the households to generate subsistence from hereditary occupations has declined. Reliance on local as well as migrant labour market for wage paid work has increased. In this flux, some households have experienced upward mobility while many others have slided down. It would be of some interest to note that as result of commercialisation of milk trade, *Bharwads* (shepherds) have taken to land cultivation and also moneylending. Even among the *Vaghri* (vendor) caste, a traditional labour and vendor group, few households have improved their position. The point is that whatever little upward mobility that has occurred is not confined to the upper castes or even traditionally land owning castes. Another interesting fact that is brought out is the link between political clout that some castes have acquired and the economic benefits their members derive through political links, such as government assistance and institutional finance. There have been important changes in the cropping pattern in the village. The cultivation of *bunti* (coarse reddish grain) has stopped altogether and castor and cotton cultivation have declined. Paddy cultivation and wheat which yield more per acre and which fetch higher price per maund have been introduced. Most households follow a mixed pattern of activities such as cultivation, share-cropping, agricultural labour work, livestock raising, collection of free goods from the common property resource, trading, moneylending, traditional services and seasonal migration. Households rely to a not insignificant extent on non-market sources such as common property resources, traditional *jajmani* or patron-client relationship, kith and kins, neighbours, caste and community relationships and government resources. Increased reliance on wage paid work is generally indicative of deteriorated economic condition. Increasing impoverishment often leads to permanent migration from the village but such migration is preceded by several seasonal migrations. Families without an adult male earner are the most hard hit. Widows have a right on land but find it difficult to obtain a share in other productive fixed assets such as well and bullocks.

Seasonal and sub-seasonal variations are important and the households have devised production, exchange and consumption strategies for coping with seasonality. An interesting finding of the study is that for most occupational mixes, seasonal rhythms do not overlap. Another noteworthy finding is the importance of women in livelihood generation. They participate in most operations in all sectors. They work longer hours and work beyond self-provisioning and beyond market activities. They play a significant role in caste and kinship relationships networking which help manage seasonal shortfalls. Drawing down of inventories, utilising common property resource, seasonal migration, loans from various sources are the strategies adopted for coping with seasonality in a normal year. Local labour market is inadequate to provide year round gainful work. Seasonal migration to other villages or towns or Ahmedabad city for agricultural work or seasonal non-agricultural work such as in brick-kilns or sugar factories stretches for some families upto as long as five months every year. In most cases entire families migrate. Migration for agricultural work in other rural areas is quite important.

The village Maatisar is situated in a semi-arid region susceptible to drought once in five years. During 1985-87, rains failed for three successive years. The author therefore took the opportunity of studying the impact of the prolonged drought and the coping strategies in her survey conducted in 1987. She finds that drought is very much an integral part of the livelihood strategy of the households. To understand the response of the households to drought, it is necessary to distinguish four types of drought, namely, meteorological drought, hydrological drought, agricultural drought, and ecological drought. The response also depends on the duration and the geographical spread of the drought. By 1987, the drought was a prolonged one and it was also widespread, covering large tracts of Gujarat. This considerably reduced the options of the households in regard to the opportunities for gainful work through migration. The potential of common property resources was considerably reduced. There was near collapse of the social support systems, patron-client system, the *jajmani* relations and village or community rights. The author provides a very interesting account of the household strategies for survival in drought situation and vividly brings out how in many cases what used to be a co-operative or co-existential relationship turned into a competitive or even conflicting relationship. With all the limitations of the government relief works, during 1985-87 droughts, in spite of sharp declines in production, relief works provided relative stability in consumption. Habitual critics of government relief works would do well to bear this in mind. Another important finding is that the primary concern of the households was protection of the productive assets and not protection of the conventional standard of living. Contrary to general expectation, declines in consumption standards among labourers were lower than those experienced by other better off classes. *Bharwads*, a well-to-do group, was forced to migrate for the first time in search of fodder. A less known practice of trees being sold or mortgaged as a part of survival strategy is well brought out. Relief measures undertaken by the government are more in the nature of crisis management and lack a developmental perspective. These take into account immediate consumption needs of the affected population but have no bearing on the medium-term needs of fixed or working capital.

The utility of the book is enhanced by a glossary of local words used in the book and a comprehensive bibliography. The main merit of the book is its careful and meticulous investigation brought within an analytical framework and lucid presentation. It lays bare the nuances of real life situation which no aggregative macro study can capture. The reviewer would have liked the author to enquire also into the education, health and housing aspects of the village population. This is important because in dynamic conditions, households with surpluses to spare would be moving ahead fast in acquisition of physical as well as human capital, while the families on the verge of subsistence would be falling behind on both these counts. For example, we have no clue in the study regarding the education, health and housing status of the households who migrate for a few months every year. Missing in the book is the index as well as the reprint of the questionnaire canvassed in the village. These in no way diminish the significance of what the author has accomplished. The reviewer warmly recommends a perusal of this excellent book.

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*Political Economy of Agrarian Reforms in India - The Nexus with Surplus Extraction*, Ritu Dewan, Himalaya Publishing House, Bombay, 1990. Pp. xi+236. Rs. 125.00.

This book incorporates the doctoral dissertation by the author, prepared at the Department of Economics, University of Bombay. The field work for the study was done in the early eighties in Thane district, Maharashtra; but the study also presents the author's observations made in revisits to the Palghar taluka and the two sample villages after a lapse of eight years and thus seeks to update her analysis made on the basis of earlier field work.

The study has made a useful review of the tenancy legislation in the nineteenth century and in the pre- and post-Independence period in India with specific reference to Western India. In the first three chapters are covered the macro perspective in the national and regional level, that is at the state level. The subsequent three chapters are devoted to the micro analysis at the village level on the basis of the field work carried out in two villages of Palghar taluka, one an Adivasi village and the other a relatively developed and larger village, followed by a postscript bringing out the 'changes', if any, during the eighties.

The main finding of the study is that "the stated objectives of various tenancy laws are to regulate rent, grant security of tenure and ownership rights to tenants. These very objectives are, to a large extent, undermined by loopholes built into the provisions of the Act itself." The important loopholes cited are resumption of land by landlords, definition of 'self-cultivation', ineffective purchase, non-establishment of tenancy relationships and the wide-ranging number of exceptions. The author contends that the tenancy legislation, with its built-in loopholes, gave eviction a legal sanction. In Maharashtra, consequently, the number of 'protected' tenants declined by 20 per cent and the land they held by 18 per cent during a short span of three years between 1948 and 1951. Upto 1953, 67,000 tenants were evicted from the four lakh acres they were leasing in. On the whole, both landlords and larger tenants benefited more from tenancy reforms than smaller tenants. On the basis of the data culled from various surveys and studies carried out during the sixties and seventies, the author observes that "due to large number of evictions and manipulations, the process of land concentration has been strengthened."

The author has examined the various aspects of small cultivators' holdings and the impact of usury, control over produce, wages, commercialisation, credit, marketisation, etc., on the small cultivators. In the large village, the most adversely affected were small farmers, particularly tenants who became landless; the number of small cultivators declined from 91 in 1947 to 60 in 1969, a decline of 34 per cent. The category of small tenants virtually disappeared as a result of dispossession and resumption of land by large farmers.

The study also presents in detail the mechanism by which usury operates or the 'employment guarantee scheme' has been exploited for the benefit of the large cultivators and how the basic situation has actually worsened for poor peasants, particularly the tribals. The exploitation has taken more subtle and sophisticated ways. How proximity to Bombay has placed the richer landlords in an advantageous position is illustrated ably by the author.

The changes that took place in the decade of the eighties such as modernisation, commercialisation, were exploited by the dominant classes, that is, large cultivators; the institutional credit through co-operative credit society and the marketing of surplus through the sale purchase union similarly came to be controlled by the large cultivators.

The story of land reforms and their implementation is thus, by and large, no different than the various other social and economic legislations enacted by governments in India.

The Acts and their provisions are faulty, implementation is half-hearted and the impact is essentially and usually in favour of the dominant class. This is true of the schemes like co-operative credit, co-operative marketing, assistance through employment guarantee, removal of regional imbalances through development programmes, etc. Nevertheless, it is difficult to agree entirely with the author when she states that "Agrarian reforms, invariably and *deliberately preserve effective land monopoly*." For instance, she avers that the new 'independent' state introduced various new forces and sponsored schemes to consolidate its economic and political base. An important illustration of consolidation of dominant class rule is that of the Panchayati Raj which institutionalised and internalised the political base of the dominant class at local, regional and state levels" (pp. 177-178). It is one thing to contend that the consequences of 'developmental' effort have largely favoured the dominant class but it is quite another to conclude that the powers-that-be deliberately meant to achieve this kind of a result. One fears that the author is much influenced (prejudiced) here by political views regarding the socio-economic dynamics in India. She tends to speak in terms of *obiter dicta*, for instance, when she observes that "the building of roads has benefited truck-owning members of the dominant class involved in trading activities" (p. 178). This is a clear case of *non-sequitur*. The results may be what the author seeks to present but it is difficult to conclude that the objectives were narrow and partisan. No doubt road building activity would tend first to benefit the movement of goods but it cannot be gainsaid that eventually, it also confers benefits on all classes, residents in a given region or locality.

To sum up, the study is a good addition to the literature on land reforms; it also provides a useful bibliography and the author deserves praise for a careful and systematic presentation of her data and theme.

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*The Green Revolution Reconsidered: The Impact of High-Yielding Rice Varieties in South India*, Peter B.R. Hazell and C. Ramasamy with contributions by P.K. Aiyasami *et al.*, The Johns Hopkins University Press, Baltimore and London, 1991. Pp. xiv+286.

While there is consensus that the green revolution has been responsible for the marked increases in the outputs of rice and wheat, its impact on the welfare of small and marginal farmers and landless rural poor remains uncertain. Studies published in the seventies concluded that the small and marginal farmers did not benefit from the green revolution and that the inequality in the distribution of land worsened after the introduction of the high-yielding varieties (HYVs). A few studies undertaken in the early seventies revealed that the new technology was scale neutral and that the conditions of the rural poor did not deteriorate. These studies stressed the importance of indirect benefit via lower food prices and the linkages between farm and non-farm sectors in rural India.

The aim of this study is "to understand more fully both the short- and long-term impacts of technological change on rural welfare, and in order to assist in the design of appropriate technologies, policies, and institutional change to enhance the poverty-reducing role of technological change" (p. 4). A team of experts from the International Food Policy Research Institute (IFPRI) and the Tamil Nadu Agricultural University (TNAU) chose the North Arcot district of Tamil Nadu for an in-depth study of the changes introduced by the new agricultural

technology in paddy cultivation.

The authors give many reasons for selecting this district. North Arcot district benefited from the HYVs developed in the late sixties. It reported increases in irrigation and the use of modern inputs. The region is dominated by small scale farms, the average size of farm in 1983 being 1.2 hectare. It is removed from major urban and industrial centres. The region was studied in 1973-74 by a team of Cambridge and Madras Universities, and the IFPRI-TNAU Team had access to the survey data. In 1973-74 about 13 per cent of the paddy area was planted with HYVs. By 1982-83, more than 90 per cent of the paddy area was planted with HYVs. In view of these factors, a comparative study of the region using 1973-74 and 1982-83 survey data was attempted.

The authors highlight some difficulties in utilising the two data bases for assessing the impact of green revolution on production, income, asset distribution, employment and welfare. The major difficulty is that 1973-74 and 1982-83 are not strictly comparable as far as rainfall and irrigation water reserves are concerned. Both years witnessed rainfall level 35 per cent below average. 1971-72 and 1972-73 were years with above normal rainfall and hence the groundwater levels in 1973-74 were good. On the other hand, 1980-81 was a drought year, 1981-82 a normal year and 1982-83 was again a drought year. Realising this problem the Team undertook a sub-sample of households in 1983-84, which happened to be above normal year in terms of rainfall. The weather induced changes contributed to significant changes in cropping intensity, cropping pattern and yield rates. In Chapter 3 the authors note: "During 1982-83 drought, many households were actually worse off than in 1973-74, despite the intervening changes in irrigation and paddy technology" (p. 56). They report: "Compared with 1983-84, agricultural employment was down about 50 per cent during the drought, farm incomes were down 20 per cent on average, and nonfarm business earnings almost disappeared" (p. 56). However, they take 1973-74 and 1983-84 as 'our relevant base for evaluating the green revolution' (p. 37).

For analysing the indirect benefits of agricultural growth to the district's non-farm economy, they construct a detailed social accounting matrix (SAM) using 1982-83 data. They use the extended input-output model with production, household consumption, savings and a few government activities as endogenous variables, and exports, investment and government activities as exogenous variables. The model is used (a) to estimate the income multiplier arising in the non-farm economy given a unit increase in agricultural income, and (b) to estimate what the regional economy would have been like in the early 1980s had the agricultural growth of the previous decade had not occurred. They report income multipliers in the range of Rs. 0.87 to Rs. 1.18 (p. 180).

The authors' conclusions regarding the neutrality of the new technology and absence of adverse effects of the green revolution on land distribution, rural poverty and rural welfare would have solid conceptual and statistical foundation, if they had used data base for two agricultural cycles (e.g., consisting of three consecutive agricultural years as in farm management surveys) for purposes of comparison. Use of one year data base, particularly a drought year, for construction of SAM is also questionable. The drought not only affects the input-output coefficients, but also the nature of linkages among different sectors.

The book also contains papers dealing with issues such as the effect of the green revolution on class polarisation and political alliances, nutritional impact of green revolution, classification of villages, changes in the private sector of a market town and changes in the

provision and use of services in the region.

This study makes an important contribution in assessing the impact of green revolution on a regional economy. It raises many conceptual, methodological and data base questions which require serious attention. Apart from efficiency and equity aspects of a new agricultural technology, its stability (in terms of yield) and sustainability should also be explored in future research.

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*Pauperising Agriculture: Studies in Agrarian Change and Demographic Structure*, N. Krishnaji, Oxford University Press, Bombay, 1992. Pp. vi+259. Rs. 240.00.

This volume published for the Sameeksha Trust consists of a selection of studies by Krishnaji that appeared originally in the *Economic and Political Weekly* from 1971 to 1991 on agrarian change and demographic structure as indicated in the sub-title. Agrarian change and demographic structure are both dominant themes in development literature, but they are usually treated as two distinct sub-disciplines handled by specialists belonging to the two areas. Krishnaji is one of the few scholars who has tried to probe into the dynamic relationship between the two which has a bearing not only on the process of development as such, but also on the lives of millions of people. In one of the pieces brought together in the volume, Krishnaji acknowledges that his interest in this area was stimulated by the late Daniel Thorner's land and labour studies. Krishnaji develops the theme with the skills of a craftsman who knows how to handle vast and clumsy empirical data and the fertile mind of a theoretician who can put forward fruitful hypotheses to lead the enquiry into deeper understanding.

The twelve pieces in the volume are divided into two, the first six dealing with agrarian change and the rest with demographic structure. In the first part a variety of agrarian problems are dealt with, production and productivity, wages and prices, the demand constraint and agrarian relations which reflect all these aspects. The refreshing aspect of Krishnaji's analysis is that he does not permit disciplinary boundaries to limit his probing. Thus though on agricultural prices he begins with standard econometric procedures, he does not hesitate to move on to the non-market and political factors that influence price movements. Similarly, he may start with land relations in Kerala, but naturally moves on to a critical evaluation of the CPI(M) strategy in that state. This freedom of movement is seen even more clearly in part two where the interaction of agrarian change and demographic structure is examined in greater detail. After establishing the impact of demographic variation on the changing structure of land holdings, he wonders why this connection has not received sufficient recognition. And his answer is: "The reluctance to examine the demographic question arises perhaps from the mechanical and religious - but invalid - identification (in this context) of demographic issues or even the word 'demography' with the Chayanovian model of the differentiation of peasantry. Those who look for Chayanov under every bed will no doubt find him lurking there but lose sight of an important component of the process that induce wage-dependence".

Krishnaji's contributions in this area may be familiar to those who have followed them in the pages of *Economic and Political Weekly*. But when the pieces are put together there is a greater coherence (and some unavoidable repetition) about them. They also help one to see the progression of his thought. The earliest of the pieces (of 1971) showed that "only in Kerala and Orissa real wages (of agricultural labourers) have increased during 1950-64 to a significant extent; on the other hand, they have fallen appreciably in Assam and West Bengal and possibly in Bombay region as well; in all other states, real wages have remained more or less in their 1950-51 levels" (p. 13). On inter-regional disparities in per capita production and productivity of foodgrains, his finding in 1975 was that levels of food intake in general and foodgrains consumption in particular are closely correlated across the states to levels of foodgrains production (p. 42), that inter-state variability in per capita foodgrains production had increased substantially after the introduction of the high-yielding varieties, but that variations *within* regions have increased at a faster pace than variations *between* regions, and that they reflect basically the increase in wheat production thanks to the green revolution (pp. 44, 46). An analysis on the relationship between foodgrains prices and the demand for manufactured goods shows that an increase in the former restricts the market for the latter (pp. 97, 107). A high degree of inverse relationship between fertility levels and per capita expenditure is seen from the data relating to rural India (p. 135). The agriculturally rich states of Punjab and Haryana have very low female ratios, whereas the 'poorest states', Orissa, Bihar and Madhya Pradesh are more balanced with respect to numbers of females and males (p. 200) and the highest female proportion is observed among the landless labour households who also have the smallest family size among all rural households (pp. 202-203).

It is impossible, in a brief review, to deal with all these and many more interesting, and at times intriguing findings. I shall, therefore, be selective in my observations. Let me start with the last of the findings given above. What is the explanation for the high female ratio and small family size of the agricultural labourers? Is this related to their poverty ("One of the important reasons why agricultural labour and small peasant households tend to be smaller on average is that they are always..... among the poorest" (p. 225) or something else? Could it be, for instance, that there is a high proportion of widows and consequently female-headed households among agricultural labourers as is hinted on page 223? If that is the case, it can explain also why the sex ratio is high among the landless labour households, why "households with female heads tend to be smaller in size and to have higher female proportions" (p. 211) and why the family size also is smallest among them. This is a case where the causal explanation underlying a statistical correlation requires more careful investigation.

A similar case is what is presented as a paradox: "household size and per capita expenditure are both positively correlated with the size of land but they are themselves inversely correlated" (p. 170). Part of the 'paradox', it seems to me, is the manner in which Table 2 on page 173 is interpreted. It is used to convey that as the total household expenditure increases the average size of households goes up which is the opposite of the relationship between per capita expenditure and family size shown in Table 1 on the same page where as the former increases, the latter gets reduced. But if Table 2 is taken to show that as the size of household increases, total household expenditure also increases, there is neither mystery nor paradox about it! And the evidence marshalled in Table 3 on page 174 to demonstrate that "as the size of the household increases, total household expenditure rises

but per capita expenditure falls" simply supports the commonsense view that larger households have the advantage of economies of scale rather than any paradoxical demographic peculiarity. If the point to be made is that "family size and death rate paradoxes.... arise wholly out of the inappropriate use of per capita expenditure for analysing demographic differentials" and that "the paradoxes disappear once we bring in an appropriate variable such as property holdings into the analysis" (p. 195), it is a proper warning to those who tend to use per capita expenditure indiscriminately as a proxy for levels of living or well-being.

Of greater substance is the manner in which the author uses the two expressions, 'pauperisation' and 'proletarianisation'. In the pieces in the volume the two are frequently used together (e.g., pp. 2-3, 232) and, of course, as empirical phenomena they often go together. But if peasants are the reference group and pauperisation refers to the lowering of their conditions of life (closely related to poverty in the Indian context) but proletarianisation refers to the process whereby those who have an independent means of livelihood are made wage labourers dependent on others to make a livelihood, then it is important to maintain that conceptual distinction. To be sure, loss of land may lie behind both the processes, and the distinction between (independent) peasantry and (dependent) wage workers may be difficult to maintain when peasants have to make part of their livelihood through wage labour and wage workers may have some earnings from the bits of land they may possess or lease-in. I also agree with Krishnaji's main thesis that the passage of land from the poor to the rich is not the sole factor responsible for pauperisation/proletarianisation, and that demographic factors also contribute to that process. But if his main objective has been "to identify the processes that convert independent producers into wage-dependent labourers" as he claims in the Introduction, then his direct concern is with proletarianisation which need not necessarily be associated with pauperisation. But then why is the volume titled *Pauperising Agriculture*? Is there some confusion here about conceptual categories? In any case, *agriculture* does not get pauperised or proletarianised; *peasants* may.

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*Aid and Development*, Anne O. Krueger, Constantine Michalopoulos and Vernon W. Ruttan (with Associates), The Johns Hopkins University Press, Baltimore and London, 1990. Pp. xiv+389. \$ 45.00.

This book is the result of the collaborative researches of several scholars in the early to the mid-eighties for studying the impact of foreign assistance (aid) on economic development of the countries classified as 'underdeveloped' in the nineties. The United States Agency for International Development (USAID) has been administering bilateral foreign aid from the U.S. to the 'developing countries' since the fifties. It commissioned two leading economists, Anne Krueger and Vernon Ruttan in 1982 to conduct the study on the impact of aid on the basis of available literature which now forms part of this book. These scholars took interest in extending the scope of the original study with the help of several other scholars, notably Constantine Michalopoulos. We now have this extended work in the form of the

present book.

This book nearly stops with the data on foreign aid and development upto 1985 or so and references from the literature mainly upto 1987. Despite being dated in this way and therefore not being the 'state of the art' study in today's context, it represents a remarkable set of contributions on the subject with five live country studies (including India). It offers plenty of lessons from the historical experiences and some prophetic insights into the tasks which lie ahead for the both the 'donors' and the 'recipients' of foreign assistance in the nineties.

The book is extremely well organised and looks cohesive considering the fact that eight different authors have pooled their talents spread over a five-year period. The book contains an introductory chapter and 15 other chapters divided into five parts. The 'Introduction' (Chapter 1) is jointly written by all the three principal collaborators of this work, namely, Krueger, Michalopoulos and Ruttan. It presents a good historical view of the evolution of foreign aid as an 'instrument used by a government to strengthen the economy of another country' (p. 1). It recalls that the first major foreign economic assistance programme was represented by the famous Marshall Plan, officially called the 'European Recovery Program'. However, its focus is on the evolution, growth and impact of Official Development Assistance (ODA), multilateral assistance from the World Bank - International Monetary Fund (IMF) combine and Regional Development Banks (like the Asian Development Bank) as well as the bilateral official foreign aid from the developed 'donor' countries to the 'developing countries' from the fifties to a large part of the eighties. The authors also refer to the emergence and growth of the Non-Government Organisations (NGOs) like the Rockefeller Foundation and the Ford Foundation as supplementary sources of foreign assistance to promote self-help by the developing countries for accelerating their own economic growth.

The authors do well to highlight a variety of motives behind the expansion of bilateral aid including non-economic motives. The latter include such considerations as security; support to favoured political groups/governments; and prevention of spread of communism in the Cold War era. They trace the shifting of the destination of such foreign assistance in recent years and provide partial explanations behind such moves. They highlight the 'aid fatigue' that has lately set in and relate this as a response to the critiques of foreign aid. The critiques have been provided by all shades of opinion markers including the extreme right and the extreme left and they represent the changing moods of public opinion mostly in the 'donor' countries but to some extent also in the recipient countries. Their review from the literature leads to the conclusion that foreign aid is 'not an unmixed blessing'. For this reason, the readers will find a useful introduction to the major issues in the literature in this short chapter of ten pages. The comprehensive bibliography providing extensive 'References' (pp. 341-372) to the literature on the subject from 1950 to 1988 would be found even more useful by the scholars and future researchers studying the rationale and the impact of foreign assistance on economic development.

Part 1 of the book is sub-titled "Theory". It contains two chapters (Chapters 2 and 3) contributed by Krueger and Ruttan. Chapter 2 'Development Thought and Development Assistance' provides the theoretical rationale of development assistance from the developed to the developing countries. The authors examine the motives of both the 'donors' and the 'recipient' countries in complex behavioural terms. They observe that in both cases, "the

motives sometimes have not been consistent with development purposes" (p. 13). The non-economic motives often cause this dichotomy.

The central thesis of Chapter 2 is that economic environment of the developing countries is of 'over-riding importance' in determining the success of development effort. This environment is based on three major parts: (i) macroeconomic policy framework; (ii) the structure of microeconomic incentives; and (iii) physical and human infrastructure as well as institutional framework for development administration. The major lesson drawn by the authors from the studies contained in this book as well as other studies from the available literature is that aid is more effective in promoting economic development when the domestic policies constituting 'economic environment' (described above) are set 'right'. This is particularly relevant for the sectors of industry and foreign trade and policy instruments such as the exchange rates which have maximum impact on the 'outward orientation' of the recipient country's economy. This view goes well with the neo-classical view of the development policies as adopted by the World Bank-IMF for providing loans for structural adjustment to the developing countries suffering from policy distortions. However, it is not fully shared by the policy makers and analysts in all developing countries. The authors do not review the latter point of view.

The primary focus of Chapter 3 ('Towards a Theory of Development Assistance') is on tracing the economic effects of economic assistance. It traces the size of flows of the ODA from 1960-61 to 1967 in the context of the 'two gap' model providing the supplementary foreign saving and foreign exchange much needed by the developing countries.

Part II of the book which is sub-titled "Donors and Recipients" focuses on how the policies of aid 'donors' influence the effectiveness of development assistance in the recipient countries. This part contains three chapters (Chapters 4 to 6).

Chapter 4 on 'Recipient Policies, National Development and Aid Effectiveness' has been jointly authored by Krueger and Michalopoulos. It draws upon available evidence from the interaction between aid and macroeconomic policy, on the one hand and between micro-economic incentive structure and economic performance, on the other. The conclusions of Chapter 2 are further corroborated with the help of 'selective' studies based on empirical evidence.

Chapter 5 entitled 'Donor Policies, Donor Interests and Aid Effectiveness' is written by Keith Jay and Michalopoulos. The authors find plenty of evidence to conclude that while the donors often provide aid in the name of 'economic assistance', they in fact provide such assistance in pursuit of a wide variety of objectives. They find that the donors frequently adopt "various ways whereby the pursuit of foreign policy objectives through bilateral assistance.....tends to compromise economic development objectives" (p. 87). On this score, they find aid through multilateral institutions more effective for supporting development than bilateral aid.

Chapter 6 also contributed by Jay and Michalopoulos further looks at the interaction between donors and recipients and pleads for improving co-ordination between them for 'getting policies right' for improving the aid-effectiveness.

Part III provides studies relating to "Sector Assistance". It consists of four chapters (Chapters 7 to 11). Chapter 7 by Michalopoulos and Vasant Sukhatme is entitled 'The Impact of Development Assistance: A Review of the Quantitative Evidence'. While the authors find that "there is certainly no systematic evidence that aid has been detrimental to growth"

(p. 123), they cannot be sure of the pervasiveness of the positive economic effects of aid in all the recipient countries. They are candid in stating that generalisation cannot be made at the aggregate level for all developing countries in this respect. This is because of 'tainted evidence' due to both conceptual ambiguities and 'data shortcomings' (p. 123). They plead for a country-specific intensive research and evaluation in this respect.

Chapter 8 by Michalopoulos specifically examines issues relating to assistance for infrastructure development. The author observes that in the past three decades, "a significant portion on economic assistance to the developing world has concentrated on physical infrastructure, primarily transportation, power generation, and distribution as well as irrigation and telecommunications" (p. 125). He finds clinching evidence that in many developing countries "aid has made significant contributions in helping create much needed infrastructure" and helped some of them (notably Korea and India) to "become exporters of engineering and construction services" (p. 138). He finds 'maintenance' issues neglected in some countries especially in Africa which "require greater co-ordination between aid donors and recipients".

Chapter 7 by Vernon Ruttan focuses on assistance to expand agricultural production which together with programmes for rural development in general have received a good deal of attention from donors for providing aid to the developing countries. This is due to the dominance of the agricultural sector in the latter economies. While some successes have been noted, aid has been less effective in many cases due to the weaknesses of the institutional responses due to constraints of prevailing political economy. In Chapter 10, Ruttan provides some recommendations for improving the "viability of any large-scale rural development effort" (pp. 183-184) and for improving the quality of life in rural areas.

Chapter 11 by Gayl D. Ness specifically examines the vital issue of the impact of international population assistance. The author finds it difficult to make sweeping generalisations on the effectiveness of various components of foreign assistance for meeting the objectives of national population policy. He does provide some eminently plausible suggestions for improving the effectiveness of aid in these areas.

Part IV containing four chapters provides five "Country Studies" relating to India (Chapter 12), Korea (Chapter 13), Turkey (Chapter 14) and Ghana and Ivory Coast (Chapter 15). The choice of these countries is useful within the constraints of the limited resources and time available with the researchers.

In the case of India, Vasant Sukhatme finds that while foreign aid has been relatively small compared to its population and GNP, aid did play a very useful and critical role in the Indian economy in the sixties when India faced food shortages. Foreign aid also facilitated inflow of higher imports in the later period for supporting growth of Indian industry. The Indian experience of aid has significantly influenced policy making on aid by the donors especially multilateral institutions. The central task of aid administration in India, however, "remains to improve and strengthen institutions, raise productive efficiency, and provide employment opportunities for India's millions" (p. 225).

Korea is generally regarded as the most successful case of absorption of U. S. aid. Krueger and Ruttan concentrate on U.S.-Korea aid relationship. Looking back today, the authors highlight the amazing assessment that in the early sixties, researchers like David C. Cole and P. N. Lyman displayed considerable skepticism that Korea would emerge as an economically and politically healthy entity even with continued U.S. assistance. Krueger and

Ruttan find the turnaround in Korea largely due to Korea's adoption of 'right' domestic economic policies (their favourite recipe for 'success'). The authors draw similar conclusions from the Turkish experience in Chapter 14.

In Chapter 15, J. Dirck Strykar and Hasan A. Tuluy draw upon revealing contrasts of experiences of aid effectiveness in promoting economic development of Ghana and Ivory Coast. The fortunes fluctuated and criss-crossed in both these countries at different times largely due to the nature of domestic economic policy environment. The authors offer a piece of advice for the developed donor countries based on their contrasting study on Ghana and Ivory Coast. In their words, "the donors cannot be absolved of responsibility simply because the existing policy environment is inappropriate, since foreign aid can play an effective role in altering the environment" (p. 302).

Part V subtitled "Lessons" is the most important part for those who are looking for a synthesis of the findings of all earlier chapters. This part consisting of a long single chapter (Chapter 16) entitled 'Some Lessons from Development Assistance' by Krueger, Michalopoulos and Ruttan precisely attempts to do just that. While the authors reiterate their central proposition that an appropriate domestic economic policy package (spelt out in Chapter 2) holds maximum chances of success for enhancing effectiveness of foreign aid, they do bring out several other crucial dimensions of the tasks ahead for both the donors and recipients of foreign aid. They correctly draw the inference that aid has been "most effective in generating growth when it has focussed on those investments that enhance productivity growth" (p. 311). They have further correctly emphasised the development of human resources as the key element of social infrastructure.

Modern development economics endorses the need for emphasis on social sectors like primary health and primary education which as Krueger, Michalopoulos and Ruttan put it, "do not need to draw heavily on external resources" (p. 320). They have noted with concern the increasing share of foreign policy oriented bilateral aid being more recently provided by the U.S. under USAID's 'Economic Support Fund'. They would like to see less of politically motivated aid in the garb of economic assistance. They fully recognise the difficulties faced by the developing countries during transition from 'policy distorted regime' to the new regime of 'appropriate economic policies'. They remind the developed donor countries of the difficulties the latter themselves face "in bringing about needed reforms and structural change in their own economies". This should serve as a useful reminder to the donor countries "not to be excessively critical of developing countries that are attempting similar reforms within a weaker infrastructure and a more fragile political environment" (p. 323).

The book has been written with conviction and the authors do mean well for improving the growth and well-being of the masses in the developing countries. They advocate redirecting foreign assistance to those developing countries which adopt a mix of domestic economic policies which the authors believe would provide the most conducive economic environment for promoting growth. This is close to the Fund-Bank 'prescription' to which the principal authors themselves have contributed their share. The issues of equity and imperfections of the market mechanism in the country-specific situations in the 'laggard' developing economies and the reservations of the indigenous thinkers in these countries on the 'Fund-Bank model' deserved more attention from the authors of this book than they have been able to provide.

In the Krueger-Bhagwati type of theorisation from specialists in International Economics, the most crucial agriculture sector (and its reform) does not find enough space. Unfortunately for such 'friends' of developing countries including the authors of this book, political element in foreign economic assistance is on the rise in the nineties. The recent proposals by certain developed countries to influence foreign aid (bilateral and multilateral) by considerations of human rights, environment, size of defence expenditure and nuclear non-proliferation do not augur well for the authors' desire for greater depoliticisation of foreign economic assistance in the years to come.

Despite these shortcomings, the present book will remain as a work of standard reference on foreign aid and development experiences for the period of 1960 to 1987. It does offer considerable insights for research agenda on this subject even for the nineties.

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*Poverty and Farm Size in India (A Case Study)*, Parkash Mehta and Anjala Kumari, Mittal Publications, New Delhi-59, 1990. Pp. xii+153. Rs. 100.00.

There is a plethora of studies on poverty in India, which is one of the most extensively and seriously studied aspect of Indian economy. The Central Statistical Organisation (CSO) and National Sample Survey Organisation (NSSO) undertake statewise surveys at specified time intervals to provide estimates of the extent of poverty and changes in poverty ratio over time. These estimates and their limitations are meticulously discussed and debated and are readily available in economics literature. Almost all eminent economists and concerned organisations have attempted to study this problem. As a result of this, fairly reliable, well established statistics on incidence of poverty, its causes and impact of various development efforts on it are easily available. The authors of the present book were also tempted to make claims for having studied this vital problem confronting the country. But their inquiry into poverty and farm size in India begins and ends at the level of the title page. The inside pages focus on agriculture in Himachal Pradesh, poverty and farm size and economic holding in the state and a micro level study of capital formation in Kangra district of the state. Thus the title of the book is misleading.

The subject matter of the book is organised in two parts composed of eight chapters. Chapter 1 of the book briefly describes the various agricultural and rural development programmes undertaken in India since 1950, followed by a discussion on agrarian structure of the state in Chapter 2 without relevance to the theme of the book. In Chapters 3 and 4 the authors present their thinking and methodology on poverty estimation in Himachal Pradesh. Two measures are used to infer that there is poverty in the state. First, the authors have contended that minimum wage rate fixed in the state for unskilled labour has not been sufficient to purchase minimum survival ration (p. 62), thus there is poverty, according to the authors. The calculation is based on a highly unrealistic implicit assumption that there is only one earner in a family consisting of 5.41 members. This is a very naive measure and it has serious flaws as an indicator of poverty, because statutorily fixed wage rate may not be the same as actual wage rate; wage rate alone does not determine the earnings which are equally affected by the number of days of employment. As a corollary of this method, if

statutory wage rate in some state is fixed above survival expenditure requirement, poverty would be eliminated, which seems astonishing.

The concept of economic holding is the second measure employed by the authors to study the incidence of poverty. Based on the cropping pattern followed in the state, per hectare value of output is worked out and using this figure a corresponding size of farm required to produce output worth Rs. 1,685 (which is taken as the expenditure level below which there is poverty) is estimated. For obvious reasons, this exercise revealed to the authors that except in one district no farm size in the state is uneconomic, which did not please the authors who took a lot of pains to prove the existence of poverty. Then the authors discovered that they have not deducted the cost of cultivation from the value of output (p. 83). To rectify the situation the authors approached the farmers attending the *Kisan Mela* at Himachal Pradesh Krishi Vishwavidyalaya campus and obtained information from them on the cost of cultivation (footnote, p. 83) but not caring about the validity and appropriateness of such data for the purpose of the study. Finally, the authors succeeded in reaching the other extreme conclusion that almost all the farmers in the state are unable to earn income above poverty line (p. 85). It is surprising that the authors have considered only crop production income as the income and have not cared to include income from animal husbandry, off-farm employment, orchards, etc., to arrive at the correct income level which is relevant for determining the population living below poverty line. The second part of the book discusses capital formation on selected farms in Kangra district of the state - an aspect which has not been remotely related to the title of the study. This part seems to have been added merely to enlarge the size of the book.

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*Future Directions for Indian Irrigation: Research and Policy Issues*, Edited by Ruth Meinzen-Dick and Mark Svendsen, International Food Policy Research Institute, Washington, D.C., U.S.A., 1991. Pp. xiv+333.

The International Food Policy Research Institute (IFPRI) has entered into a collaborative programme with the Indian Council of Agricultural Research (ICAR) for understanding the options and complexities of future policies of agricultural growth in India. This is a part of the same programme. Fourteen studies were commissioned to address a carefully selected range of topics. These were then discussed in a workshop held at Ooty in April 1988 following which substantial revision and editing was done. As a result of this procedure, the edited volume has considerable coherence which many workshop proceedings lack.

The book consists of five parts. The first part provides the overall perspective through three excellent papers. A. Vaidyanathan has discussed the current scenario from economic and managerial perspective while C.G. Desai has dealt with physico-technical dimensions of resource availability. These are then complemented by the third paper in the section that undertook temporal and regional analysis of the available land use and financial data on irrigation for finding the sources of future growth. It is a well-researched paper by one of

the editors, Mark Svendsen. He identifies five other areas that need attention while continuing the current extension programmes. These are: (i) conjunctive use of ground and surface water, (ii) performance improvement of existing systems, (iii) intensive use of existing groundwater extraction sources, (vi) integrated development of irrigation and other agricultural inputs and (v) improvement of irrigation technology.

The next three parts are titled "Improving System Performance", "Introducing and Sustaining Managerial Improvements" and "Groundwater Development in Eastern India" which indicate their contents. Parts II and IV, squarely address the first three of the five themes brought out in Svendsen's paper. Two papers in Part II deal primarily with performance of irrigation systems, two others with conjunctive use of surface and ground water. But that is not to mean that these are the only papers dealing with those subjects. Understandably, there is considerable overlapping. On the whole, the volume provides valuable information about meaningful performance indicators and potentials for performance improvements in the existing irrigation systems. It also provides valuable insights into different dimensions of conjunctive use and their estimation procedures.

The fourth part contains two papers explaining different facets of the problem of intensive use of groundwater in the area where the problem exists, namely, the Eastern Region. Inclusion of Tushaar Shah's paper on Gujarat was inappropriate. Indeed, Shah's excellent paper on conjunctive use of water on canal command could have been included alongside B.D. Dhawan and K.J.S. Satya Sai's in Part II. Complex problems of groundwater exploitation in the Eastern Region deserve full attention through a whole section and the two papers have done full justice to that. It is also an area where different, sometimes conflicting, approaches have been adopted by the authorities from time to time. The authors have substantiated their views while favouring one or the other.

In contrast, Parts III and V are not so satisfactory. Part III takes up the logical issues that follow performance management; what should be the kind of management intervention for upgrading performance. But this is an area on which lots and lots have been written and almost every author has a distinct discourse. Three papers included in Part III along with an article length and content rich overview by Anthony Bottrall, constitute a mixed bag. Outstanding is Ramesh Bhatia's paper on irrigation financing and cost recovery policies. Although based on the case studies from Bihar and Haryana, Bhatia was able to introduce the multi-dimensional problems of policy formulation in this area. Unfortunately, another paper in this section has only rudimentary ideas for a significant contribution and another, an interesting case study of a drinking water programme, has only a tangential relevance. Bottrall, however, within a few pages, has done justice to the section title.

The fifth part contains a single paper by Mark Rosegrant of IFPRI, which introduces a class of economy-wide macro models - through a prototype - for assessing relative benefits of investment opportunities in different irrigation development activities. The author does not explain what was wrong with the currently used opportunity cost-shadow price approach that begs such models. Are not economy-wide comparisons implicit in the cost-benefit analysis? The simplistic assumption necessary for computations of macro models may not be a good trade-off against the inevitable problems of imputation arising out of a thorough comprehension of the economy as in the case of cost-benefit analysis.

The book is tremendously valuable. There is no other volume to my knowledge which introduces one to the wide range and distinctive kind of current issues in the irrigation scene.

There are policy issues, financial issues, technological and organisational issues, socio-political and political economic issue, research agenda and methodological issues. The only major current issue that has failed to draw the attention of the editors is the rising problem of secondary salinisation. This certainly deserves attention in a study of future sources of growth, and is a question integrally related to performance of existing systems and conjunctive use of surface and groundwater. But for this all other major issues have been presented in brief but scholarly ways. Most of the authors have substantiated their arguments with case studies and many of them have also enlisted issues for further research.

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*Making Economies More Efficient and More Equitable: Factors Determining Income Distribution*, Edited by Toshiyuki Mizoguchi, Noriyuki Takayama, Masaaki Kuboniwa and Tsuyoshi Tsuru, Kinokuniya Company Ltd., Tokyo, Japan and Oxford University Press, New York, 1991. Pp. xxv+473. Yen 9,000.00.

It was two hundred sixteen years ago that Adam Smith wrote the classic: *An Enquiry into the Nature and Cause of Wealth of Nations*. He provided a standard paradigm of the capitalistic economic system for understanding the nature and cause of wealth of nations. Production of output and distribution of income have been taking place under a variety of economic organisations in different countries. About two years ago the *Journal of Law and Economics* had an article by Anthony Boardman and others which examined the performance of a variety of productive enterprises under different economic organisations in a wide spectrum of countries. While the Boardman study is very rich in its empirical content and identifies factors that contribute to better business performance, it may be noted that economists are still groping to find answers to questions such as what is an economic organisation that is best? Why did the Russian communism fail? What is the role of the State? Can the development strategies of Newly Industrialising Countries (NICs) be replicated in other countries?

It is within this wider context that one may wish to examine issues related to the nature and cause of differences in income distributions of countries which differ in initial conditions and economic institutions - because economic welfare of a society ultimately depends on its income and wealth distribution. In particular we would like to seek answers to the following types of questions: Does greater economic efficiency in production necessarily lead to greater inequality in income distribution? What institutional mechanisms and what policy measures can both improve the mean income and reduce income inequality? If one were to choose between more mean income and less inequality, what should be the trade-off between these two measures? How are measures of social welfare related to indices of poverty and income inequality?

The Institute of Economic Research of Hitotsubashi University, Kunitachi, Japan, organised an international symposium on "Making Economies More Efficient and More Equitable: Factors Determining Income Distribution" in November 1989. Revised versions of the symposium papers edited by T. Mizoguchi and his colleagues constitute the book under review. From the title one expects to find a blend of theory and empirical evidence

to shed light on factors that affect income distribution so that one can devise economic policies to alter the income distributions in a desirable direction. The book has seventeen papers of good and heterogeneous quality. The paper by H. Choo (Chapter 1) gives a good analytic framework to identify the factors that affect income distribution. He employs this framework to explain the relative equity observed in the income distributions of Japan, Korea and Taiwan. Economists from developing countries would like to have some insight into income distributions and their determinants in the NICs. In addition to Choo's paper, the papers by Won-Duck Lee on Korea (Chapter 4), Y. Terasaki on Hong Kong (Chapter 5) and H.T. Oshima on the Asian income distributions (Chapter 6) provide valuable empirical evidence regarding the role of gender discrimination, education, industrialisation and liberalisation on the income distribution. Excepting Hong Kong, all the other NICs have relative equity in income distribution, contrary to the widely-held belief that liberalisation and export-led growth would lead to greater income inequality. The relative position of the poor, however, is not known through the income inequality measure (Gini coefficient) used by these authors.

Oshima provides empirical evidence from Asian countries to test the Kuznets' inverted U hypothesis which states that income inequality would first increase in the course of development and then decrease. He finds that Kuznets' hypothesis is not supported by the Asian experience, except in the cases of Japan and Korea. He notes, as suggested by S. Kuznets, that there are diverse factors which affect income distributions. He identifies some of them to explain the differences in income distributions in several Asian countries. Y. Hayami and M. Kikuchi examine the changes in income distribution over two decades in a Philippines village very close to Los Banos where the International Rice Research institute is located. While the experience in Indian Punjab showed that the green revolution increased the income inequality, Hayami and Kikuchi find that in the Philippines village, which benefited from the green revolution, the income inequality remained almost constant from 1974 to 1987. They attribute this to the creation of non-farm employment for the villagers within the village and in the nearby towns. With increasing spread of green revolution in India, this finding must be of some interest to the policy makers and researchers in India to emphasise research on non-farm employment in rural and semi-urban areas.

*Glasnost* introduced by M. Gorbachev has enabled researchers to have greater access to data and other information to know more about why Communism has failed in Russia and other East European countries. Some economists in India who continue to examine the issues with leftist squint eyes believe that the failure of Communism in those countries is not because of any flaws in the economic foundations of Marxism but because of the political necessity that forced these countries, particularly the U.S.S.R., to devote much more of their resources to 'guns' and very little to 'butter', thereby creating severe scarcity of essential consumer goods and forcing their citizens to loose confidence in their system. This reviewer found the papers by T. Erdos (Chapter 10) and M. Kuboniwa (Chapter 13) very illuminating on issues such as the reasons for the failure of Communism and the type of economic reforms the Communist countries ought to have. Erdos says: "Any reform must include an improvement in economic efficiency, and allow for an increase in income disparity, rather than seeking to reduce the degree of disparity." The primary focus of the reforms must be to increase the economic efficiency and at the same time to prevent the lowest income group from suffering a further decline in real income. He says that in Hungary many firms operate

with substantial losses because, until recently, about 40 per cent of prices were fixed or centrally controlled. He states that in Hungary wages are not adjusted to reflect performance; instead it is the performance that is adjusted to the nearly equalised level of wages. The author states that the distribution generated by the market-oriented reforms is far superior to the distribution in a Stalinist model economy, but it requires modifications to regulate discrepancies in wages and incomes.

Kuboniwa spells out the two stages of Communism visualised by Marx - "from each according to his ability to each according to his need". He then traces, employing the tools of the neo-classical welfare economics, the main features of M. Otsuki's theory of distributive fairness according to labour in an economy with social ownership of capital. But he argues that this theory, when applied to the first stage of Communism in which resources are scarce, would imply equal dividend on social capital to each. It would not then motivate producers to increase efficiency of production. What Erdos and Kuboniwa seem to suggest is that Communism or Marxism lacks incentives to increase productive capacity and hence the transition from the first stage to the second may never take place. The paper by A. Shevyakov (Chapter 11) presents some information regarding the conditions in the U.S.S.R. during *perestroika*. In 1989 the average per capita income increased by 13 per cent from the 1985 level. The number of people with an average income of upto 75 rubles per month decreased by 1.4 times from the 1985 level. Following this growth in personal income, unsatisfied consumer demand reached a staggering level of 70 billion rubles. The list of goods in short supply, according to Shevyakov, was increasing, and in 1989 it included even common every day items. Perhaps these circumstances are consistent with the earlier remark on the reasons advanced by some Indian economists for the breakdown of Communism in the U.S.S.R.

T. Mizoguchi and Y. Matsuda (Chapter 12) examine and compare the income distributions in China and India. They find that in China the rural income inequality is higher than the urban income inequality, whereas in India the situation is just the opposite. While the Chinese data are more up-to-date, the Indian data used by the authors were only upto 1973. Hence, one must exercise some caution in the authors' comparisons of income inequalities between China and India. However, the following observations made by the authors are worth noting. In China the rural-urban income differentials are much less than in India and the rural income inequality in China is much more than in India. They offer three main reasons. China had successfully embarked on land reforms much earlier than India and it also developed rural-based manufacturing industries. The Great Cultural Revolution between 1966 to 1978 not only freezed migration to urban areas but also mobilised young people from urban areas to be resettled in rural areas.

In Chapters 14 and 15, R. Boyer and B. Rowthorn examine wage formation and wage disparity in OECD countries respectively. Wages constitute the main component of personal income distribution in these countries. They base their studies on the so-called 'Fordist model' of mass production and mass consumption that leads to a compromise between workers' union and the managements regarding wage contracts. S. Bowles and T. Tsuru present (Chapters 16 and 17) both theoretical and empirical findings on a new 'reserve army' (or 'labour discipline') model for determining the equilibrium market wage as a function of rate of employment. Under this model it is presumed that the effort of a worker is related to the offered wage and the reservation wage, the latter being dependent on the labour market

conditions.

Having reviewed some of the salient features of the book, I shall now exercise the normal privilege accorded to a reviewer and offer critical comments. As mentioned earlier, there is a heterogeneity in the papers. This heterogeneity stems from two factors: (i) level of concern with income distribution *per se* and (ii) the relative emphasis between theory and empirical observations. One would like to see a judicious mixture of theory and empirical evidence as we find, say, in papers of Choo, Kuboniwa, Oshima, Panfila Ching, Bowles and Tsuru. However, one cannot but admire the information and insightful content of the paper by Erdos. While some papers deal with income distributions, others deal only with wage formation, making one wonder whether the last part of the book fits into the theme of the symposium directly at all.

None of the papers, except the papers by Erdos and Kuboniwa, deals directly with the dual problem of efficiency and equity. The income distribution is characterised by the mean and dispersion, both. The symposium's focus was more on differences in dispersion through Gini coefficient (and its decomposition) over time and across space, both within and between nations, than on comparing income distributions with respect to both mean and dispersion. This observation makes one question the inclusion of the words 'more efficient' in the title of the symposium and the book. The basic conceptual and theoretical issue of choosing between different income distributions characterised by different means and different dispersions is not addressed at all. Some of the questions raised at the end of the second paragraph of this review on the relation between economic welfare and indices of poverty and income inequality are not addressed by the papers.

From a methodological perspective many of the papers rely on a decomposition analysis of the Gini coefficient, noting fully well that such a decomposition cannot isolate the partial effects of various factors. One can extend the notion of a multiple regression to the second and higher moments of a distribution to study the partial effects. It is possible to express the mean and variance of a log-normal income distribution to be functions of certain factors that affect the distribution. By dividing the entire income distribution into sub-samples, one can estimate such generalised regressions of the second moment to study the partial effects of various factors on income distributions. It is only then that one can devise appropriate policy schemes for changing the income distributions in a desirable direction.

In Tsuru's paper the comparison of regression coefficients of different regression equations (in Tables 2 to 4), and calling the differences significant, is not backed by any statistical credibility. One should use a pooled regression with dummy variables and use 't' test to arrive at more meaningful statistical comparisons.

There are several minor shortcomings such as spelling errors, omission of units of measurement, etc., which are difficult to control when one is editing a volume of contributed papers. It is hoped that the Institute of Economic Research, Hitotsubashi University, will continue its tradition and organise another symposium on the topic raised in the latter part of this review, *viz.*, on "Welfare Comparison of Income Distributions and Designing Poverty Alleviation Programmes".

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*Economic Consequences of 1977 Cyclone in Andhra Pradesh*, B. Raghavulu Naidu, Sri Venkateswara University, Tirupati (A.P.), 1989. Pp. viii+294. Rs. 107.00

*Disaster Management*, Edited by B. Raghavulu Naidu, Sri Venkateswara University, Post-Graduate Centre, Kavali (A.P.), 1989. Pp. 127. Rs. 50.00.

Although cyclones are a global phenomenon, their occurrence and intensity are more frequent and severe in developing countries. Tropical cyclones affecting the Indian sub-continent are generally formed over the South-East Bay of Bengal particularly in the months of October-November. Occurrence of cyclones in Coastal Andhra Pradesh is a recurring feature. These cyclones are not only affecting the socio-economic fabric of the people adversely but are also causing devastating damage to the economy of the region as a whole. Disaster management, therefore, assumes greater importance and urgency in reducing the distress of the people and rejuvenating the economy of the area. In this context, the two books under review dealing with the economic consequences of cyclones and disaster management are worthy of consultation and consideration.

The first book under review is focused on assessing the economic consequences of the 1977 cyclone in Andhra Pradesh. It is divided into seven chapters. The first chapter provides the background to the study. The author starts with a brief review of disasters that have rocked the different parts of the world in general and India in particular. The different facets of disaster management are also briefly touched upon. The objectives and the methodology are presented. It may be pointed out here that a more rigorous treatment of the methodological perspective with better statistical tools and techniques would have resulted in a far more accurate quantification of the information collected.

In the second chapter, the economic effects of cyclones are discussed in general mostly in theoretical framework. The loss of capital assets, loss of stocks and production losses are the main economic effects of cyclones. These economic effects, both direct and indirect, leaving disturbing undercurrents in the economy, are elaborated with the support of suitable examples from all over the world.

In the third chapter, the author examines the incidence of cyclones, their effects and relief measures undertaken in Andhra Pradesh. During the period from 1892-1984 the Andhra Coastline was subjected to 60 cyclones and the incidence of severe cyclones is observed to be increasing since 1969. The cyclones that occurred in 1979, 1983 and 1984 are also briefly discussed vis-a-vis the role of government, voluntary organisations and financing institutions. The effects of the 1977 cyclone on the economy of Andhra Pradesh are dealt with in detail in the fourth chapter. The author has made estimates, based on secondary data, of the loss to the human population, livestock, crops, assets, industries, infrastructure, etc. About 10,000 people died and five lakhs of livestock perished. 7.1 million persons were affected and 30 lakh people were rendered homeless. The loss of crops and the total loss were estimated at Rs. 336 crores and Rs. 1,000 crores respectively. The State Government incurred an expenditure of Rs. 17.5 crores and Rs. 68 crores on relief and rehabilitation programmes respectively.

The results of the case study of Krishna and Guntur districts which were the worst affected due to the 1977 cyclone are presented in the fifth chapter. The author has collected very

exhaustive and valuable information and data through personal interviews with the respondents on various aspects of the cyclone affected people and the areas. The damages caused to the people were estimated occupationwise and farm sizewise and also blockwise and distancewise (from sea). This chapter which makes an interesting reading is the focal point of the book. The author has made a successful attempt in neatly presenting a detailed account of the 1977 cyclone and the coverage of the various aspects of the economic effects of cyclones is good.

An attempt is made in Chapter 6 to assess the role of government and voluntary organisations in relief, rehabilitation and reconstruction programmes in the sample villages. The author has estimated the total loss at Rs. 28 crores and the total aid received at Rs. 9 crores which formed about 33 per cent of the total loss. The author has also attempted to identify the problems in the implementation of the programmes. It is observed that the revival of the agricultural economy received inadequate attention after the 1977 cyclone. The appropriateness of aid was also questionable, as huge quantities of wheat were distributed in the sample villages, which were not consumed by the local people. The summary and recommendations are presented in the last chapter. The broad strategy for the integrated development of cyclone prone areas suggested by the author deserves careful consideration at the policy formulation level.

The book is a good addition to the scanty literature available on the subject. However, the references given at the end of each chapter could have been given at the end of the book under a single bibliography. On the whole, the author deserves rich encomiums for his commendable effort in bringing out this valuable document. This book will be of immense use to the students of social sciences, particularly of Economics, policy makers, planners, administrators, donor countries and voluntary organisations.

The second book under review contains 16 chapters presented at a national seminar on 'Disaster Management', organised by Sri Venkateswara University. Of these, four papers are found to be outstanding. The editor of this book has provided an excellent background paper covering briefly the important areas of disaster management, viz., prevention, preparedness, forecasting and warning, evacuation, rescue and relief, rehabilitation, reconstruction, assessment, planning, financial arrangements, insurance and education and research. Two other papers, one by G. Sai Baba and another by D. Narasimha Reddy are concerned with drought management. These two papers are of importance for planning and management of drought-prone areas and for developing a drought watch and management system. In yet another paper, E.L. Quarantelli has made an excellent analysis of the organisational problems and human resources in disasters and provided important recommendations for disaster planning. The rest of the papers included in the book have touched the issues superfluously and are found to be of very poor quality in material and presentation. As such, the book, on the whole, is found to be uninteresting and highly disappointing.

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*Rural Poverty in India: An Analysis of Inter-State Differences*, Rohini Nayyar, Oxford University Press, Bombay, 1991. Pp. viii+297. Rs. 350.00.

The book is a revised version of the author's doctoral dissertation submitted at the University of Sussex in 1984. The reasons for publishing this after seven long years are, however, not mentioned. It is divided into two parts, besides an 'Introduction'. Part I entitled "The Dimension of the Problem" consists of six chapters and Part II on "Underlying Factors" contains six chapters which includes a concluding chapter.

It is mentioned that the study has two basic objectives: (1) to provide estimates of rural poverty on a statewise basis for the period 1960-61 to 1983-84 and to analyse the various dimensions of the poverty problem and (2) to identify the factors underlying interregional differences in rural poverty.

Chapter 2 provides a very brief review of literature and discusses the various concepts of poverty. In Chapter 3, the author has used two poverty lines for quantifying the degree of rural poverty in terms of two alternative calorie norms of 2000 and 2200 calories. For the years 1961-62, 1970-71 and 1977-78 quantity figures for the different items of consumption are available and appropriate conversion factors have been used to compute calorie intake. Thus the author has computed separate and independent poverty lines for 13 major states (excluding Jammu and Kashmir and Kerala) for the three years. This approach is very appropriate as it takes care of inter-spatial and inter-temporal changes in the consumption habits. This is an important and significant departure from the usual contemporary approaches. Computation of poverty gap along with conventional head-count ratio and the Sen index is also welcome as it has some policy implications: it gives the total shortfall in the complete removal of poverty. For studying the trend in poverty, state-specific poverty lines for 1960-61 have been deflated using consumer price indices of agricultural labourers. However, one point in this chapter is not clear. It is not mentioned how 'expenditure on food corresponding to the poverty line defined in terms of the calorie norm' (p. 29) has been calculated for obtaining the total expenditure, and why total expenditure corresponding to a specific calorie level has not been directly computed to obtain the poverty line.

Chapter 4 ('The Dimensions of Malnutrition') contains a detailed discussion on protein calorie malnutrition, other nutritional deficiencies and also on rural death rates and infant mortality rates. This covers conceptual aspects and a review of empirical work done by research workers in these fields. However, there are no explicit references to poverty except in the first and the last sentences. The chapter starts with a statement "We have estimated the incidence of rural poverty in terms of the undernourished, classifying those with inadequate intake of calories as poor" (p. 62). In the last paragraph the author writes: "The causes of widespread malnutrition in rural India are obvious. The basic problem is poverty: a lack of purchasing power means low intakes of food ...." (p. 83). These two sentences contradict each other and the first one is not consistent with the contents of earlier chapter.

Chapter 5 ('Other Aspects of Poverty: Health and Education') discusses the availability of medical services and health care in rural India, and also evaluates the education system. Although these have something to do with the levels of living, the author does not clearly bring out their relationship with poverty. The second section of Chapter 6 discusses the overall rural inequality which has only distant relationship with relative poverty.

Chapter 7 in Part II identifies that the prices of cereals and per capita production are the two important factors having some bearing on rural poverty. Once this is accepted, one may

agree that the problem of poverty may be tackled (1) by providing food at cheaper prices and (2) by increasing the real income of the people. Creation of a proper public distribution system and rigorous implementation of land reforms have been advocated by the author in Chapter 8 ('Prices and Production of Food') and 9 ('Land Reforms and the Pattern of Land Distribution'). However these two chapters could have been condensed without disturbing the main line of the arguments. Chapter 10 on agricultural labour does not fit in the text and probably could have been consigned to an appendix.

Chapter 11 discusses the various government policies which are grouped into (1) Employment-oriented Programmes, (2) Nutrition Programmes and (3) Public Distribution System. The author analyses almost all the schemes but comes to a rather naive conclusion that "there is need to have an integrated programme of poverty alleviation and rural development encompassing the provision of employment ...." (p. 271).

Chapter 12 provides the summary and conclusions of the study. The author does not prescribe any policy suggestions except for making few general observations that policies should be reoriented to generate more employment and incomes and the government should follow labour intensive technology.

The study suffers from a few technical problems. Sen index satisfies transfer axiom if there is no change in the number of poor persons. Also it does not satisfy replication axiom. So it is not a proper index to study change of poverty over space and time. Cross-checking by computation of Spearman's rank correlation coefficient is superfluous when a relationship has already been established parametrically. The proportion of agricultural labourers as an explanatory variable creates some specification problems. There are a few editorial mistakes as well. The author has used terms like poverty, under-nutrition, standard of living almost interchangeably. The coefficient of variation in the distribution of holdings for the year 1977-78 has been approximated by that for the year 1982 but it is not explicitly stated anywhere.

The reviewer is of the opinion that although there is a lot of material in the book, overall integration is lacking. Sufficient care has not been taken in organising and editing. A serious reader is bound to be disappointed with the book.

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*The Political Economy of Agrarian Change: Nanchilnadu, 1880-1939*, M.S.S. Pandian, Sage Publications India Pvt. Ltd., New Delhi, 1990. Pp. 192. Rs. 175.00.

It is an accepted fact that agricultural transformation/agrarian change holds the key for economic progress in countries like India. Such a transformation or change is more or less related to the expanding capacity of the farm people to play an increasingly effective part in accelerating output. In this book what the author means by 'agrarian change' has not been specifically stated. It may, perhaps, be inferred that the author wishes to trace how the then existing polity, institutions and social order had impeded the capacity of the farm people to increase production. One fails to understand how the then prevailing polity, institutions and the relationships that existed in the distant past have a bearing on the prevailing conditions in India today and on the conditions of the peasants of the study areas (Nanchilnadu) in

particular which now forms part of Tamil Nadu. This remark is significant because the author, in his opening chapter, refers to the failure of the green revolution in bringing about equity and to the spate of enquiries tracing the causes to the improper implementation of land reforms, insufficiency of inputs, inadequacy of credit and other facilities. He also speaks about the Marxian methodology of looking into the mode of production without taking into account the conditions prevailing. The author states that he is deviating from the Marxian methodology and is out to find out the relationship between the productive forces and others in the society and establish the concrete reality of production conditions. He says that he would also enquire into the working conditions of productive forces in relation to the existing political framework. In short the author's surmise that the existing political framework has had a bearing on the production conditions cannot be denied. But then his analysis of the working conditions within the political framework of the pre-Independence era does not suit the purported reference to the failure of green revolution. Hence, the practical significance and social relevance of this study in the present day context seem to be very little. If one ignores this defect, we find in the work under review a very good analysis of the then existing agrarian situation in Nanchilnadu which formed a part of the erstwhile Travancore State, during the period 1880-1939. The reasons for the choice of the period under review have, however, not been spelt out.

The author examines the productive forces upon which the agrarian set-up in Nanchilnadu was based in the late nineteenth century and the early twentieth century. He examines in detail the link between production relations and productive forces. Taking into account the static internal conditions, he emphasises the role of external conditions, which are taken to be the changes introduced by the erstwhile Travancore State during the period under review, in weakening the productive forces to reproduce. In fact, the entire enquiry centres round the point as to establish how actions of the erstwhile Travancore State and the British colonisation policies had weakened step by step the capabilities of the internal structure of productive forces in producing more.

The book is conveniently divided into eight chapters. Quoting profusely from several documents and other secondary sources, the author has clearly established how under the then existing system, the peasants were kept under conditions of near subsistence. The state, the temples and the local lords claimed a lion's share of the produce. The peasants and agricultural workers were at the brink of poverty. The misery of the peasantry had increased on account of the climatic insecurity, fluctuations in paddy prices, etc.

After, thus, dealing with the then prevailing conditions of peasantry in Nanchilnadu during that period, the author deals extensively about the evil effects of colonial integration in Travancore. This had forcibly increased the misery of the peasants.

In the beginning of the present century, the Travancore State began to interest itself in improving irrigation in the study area and efforts were initiated on the 'Kodayar Dam Project'. But it was ill-conceived and due to improper planning, the project could not achieve the anticipated benefits. The state's main aim, here also, was to improve its revenue through water charges, and it was not very much concerned about improving agriculture. The irrigation works in the area were improperly maintained, the irrigation organisation was disrupted and the peasants were made to suffer.

Besides, the state placed restrictions on grazing and resorted to reservation of forests. This added to the miseries of the peasants. There was inadequate availability of green manure.

The conversion of dryland and tank beds into paddy fields destroyed the physical balance. The peasants were thrown open to market forces, which again added to their miseries.

In the beginning of the present century, the changes in the state's policies affected the distribution of social product. Changes in the rules of remission of land revenue, new and increasing burden of land revenue, enhanced taxation on dryland, etc., had adverse impact on the peasantry. They were thrown open to the market forces and were driven to a crisis of poverty, forcing them into heavy indebtedness. They lost their lands and agrarian technology stagnated. These findings are really worth noting.

Thus the study proceeds to explain step by step the process of impoverishment of the peasantry due to the existing social structure and relationship and also due to the policies adopted by the state and by the evil effects of the expansion of colonialism. On the whole, the study provides a very cogent and interesting reading. It is written in a lucid style. It provides useful historical insight into the problems of the peasants in the study area during the period under review. The author must be congratulated on his painstaking efforts in culling out details from several state documents, numerous historical records, writings and speeches. No doubt the book will be a good addition to the existing stock of literature on Economic History.

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*India's Rural Problems*, K.N. Prasad, Concept Publishing Company, New Delhi, 1991. Pp. 472. Rs. 470.00.

There have been a plethora of publications in recent years on India's Rural Problems. The book under review by K.N. Prasad of Patna University, a reputed teacher in Economics and a researcher of long standing departs from other books especially in the style of writing. There is less of description and more of itemised presentation with focus on points of interest to the reader. The paras are short, often not exceeding two or three sentences. The statistical data are chosen with care and are presented to illustrate the points made in the text.

The book will appeal to readers who want a quick and a pointed survey of a problem. It is addressed not only to the students but to the general reader. The book contains 22 chapters and covers all the important problems in the area of study such as Agriculture-Industrial Relationship, Productivity of Indian Agriculture, Marketing, Food Problem, Agricultural Price Policy, Land Reform, Irrigation, Green Revolution and Mechanisation, Rural Development, Rural Poverty and Inequality, Rural Unemployment and Role of Agro-Industrial Complexes in Rural Development. The book will be of interest to under-graduate and graduate students taking courses in Rural Development and also to those who are appearing for competitive examinations.

The inadequacy of the book is that the data presented particularly in the Chapter on Food are dated. It stops with the year 1985. Similar inadequacies are seen in other chapters also. The price of the book is beyond the reach of the individual buyer and will not be found to be competitive.

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*The Farm Policy Game: Play by Play*, Lauren Soth, Iowa State University Press, Ames, U.S.A., 1989. Pp. xxxii+277. \$ 29.00.

Games which farmers play while they earn their income depend much on whom they are playing with: they play for their sheer survival against nature with uncertainty around, dreading the visitation of drought, floods and pestilence; against market agents, handicapped by scant information and imperfections in market; against political agencies with declining vote power; finally, against other farmers themselves riven by spatial differentiation and product specialisation for market sharing. Given the diverse interests by farm groups, trade lobbies, individual sensibilities and institutional susceptibilities, farm policy tends to be more technologically determined than oriented towards any of the groups, particularly when conflict resolution among them is glossed over. Statements on farm growth, employment and rural welfare seem more of pious expressions than those functionally defined and socially relevant. While one could dispute the sorry state of affairs painted, the criticism of ad hocism in farm policy can never be trivial.

The publication under review is a book of essays written by the author on issues related to the American agriculture in its national perspective and in relation with global agriculture and economic development. There is a vivid, comprehensive biographical sketch of the author by Richard S. Kirkendall. The essays cover 27 topics on Farm Politics and Policy, 14 on Energy and Transportation, 23 on Environment and Resources, 12 on U.S. Soviet Relations, 15 on Food Consumer Issues, 12 on Foreign Agricultural Development and 17 on World Trade. These essays shed a very interesting light on the nature, structure and evolution of farm policy in the United States and its relation with the rest of the world, be it on crop subsidies as a part of food disposal game covering the aspects of price and income stabilisation of the U.S. farmers, on the one hand, and poverty alleviation in the food starved countries, on the other.

In discussing about the structural changes in U.S. farm economy, as characterised by a high growth in large farms with strong agribusiness tie-ups, the emergence of part-time farmers who could exploit the potentials of technology and manage farms efficiently while at the same time having part-time jobs elsewhere in factory, business and commercial pursuits is highlighted. The concept of agripower is articulated pointing that agripower reveals three layers, viz., large and industrialised farms, agribusiness firms and public farm agencies including state agencies, university institutions, etc. It is suggested that a review of the 'corn pone' opinions or the ancient shibboleths would be necessary to improve the effectiveness of farm policy. Among them, it is emphasised, the concept of parity has lost its relevance and can be dispensed with; the anti-consumerism, stoked by farm lobbies, seems unnecessarily inimical and harmful and has to be modified; and the family farm is the weakest link and it could be sustained only with special instruments such as size limits of the law on irrigation from federal water resources, adjustments in credit preference, and subsidies to limit size expansion. Farm supply management could be organised better through price supply, post-production arrangements than those like acreage control. Policy needs a change on these lines.

The discussions about the 'oil shock' and its impact on agriculture and transport sectors are interesting. The question of crop pattern modifications in response to energy crunch, going back to the 'organic farming' and the debates on gasohol-corn-sweetner game reveal

the basic facets of power structure and powerful lobbies and how they bamboozle economic rationale and how they attempt to secure tax subsidies and incentives. Conflicts between grain cartel and oil cartel in energy management are described in a number of essays. Production of gasohol from corn is argued against and the changing emphasis on corn as a source of fuel as against the notion as a source of food with very small minor gains for farmers are documented. As regards new issues and problems of energy management, it is suggested that the university should handle the problem of 'chemical agriculture kick' and intensity research on substitutes of energy frugal crops for energy expensive ones, nitrogen fixation genes and plants and organic methods of farming. Environmental considerations should examine the trade-offs between efficiency of farm production and conserving farm resources for sustained growth, and protecting public health. Taxing fertilisers and other plant protection chemicals could probably be a policy option to induce rationalisation of their use, thus satisfying the environment criteria. A new conservation ethics is emphasised for soil management to improve the growing capacity of land for higher productivity in the long run. On food consumers' interest, food processing technologies and public health issues are viewed in the context of meat packers' lobby and the Federal regulations. Similarly, while discussing the raging controversy between dietary tabs and nutrition goals, the need for dependable and usable information is stressed. The view for reducing welfare expenditure is countered by showing the implication of curtailing the Food Stamp Programme on the poor, poverty, nutritional imbalance and social tension.

Another important aspect of the papers is related to U.S.-Soviet relations in food trade transactions. The benefits of such a trade to the U.S. farmers are emphasised and this economic interdependence through trade is considered to a much smaller extent than political and military (security). For the effective involvement of the U.S. in foreign agricultural development, American assistance should focus on increasing the capacity for agricultural production in the recipient developing countries which would in the long run complement the U.S. exports through improved income changes in demand. That the U.S. aid strategies had been influenced, on many occasions, relatively less by consideration of trade and food than political propensities has been brought out succinctly. The reluctance, for example, to support programmes to increase in the output of cotton, tobacco and edible oils in the recipient economies has been noted.

The role of the U.S. in world trade is discussed with penetrating analysis and, at one stage, the inherent weakness of arguments of 'free traders' in the U.S. is exposed as they seek protection against imports from developing countries through a system of quotas, tariff and the like while demanding unbridled competitive market for exports of their products. A need for greater understanding of the underlying factors of world trade, inclusive of fiscal and monetary policy of participating countries is stressed. The discussion on export subsidy, and on talks on trade under the General Agreement on Tariffs and Trade in terms of U.S. exports provide interesting insights which might help developing countries like India in developing their trade policy.

At this stage of development marked by liberalised trade, structural transformation and economic growth with emphasis on free market economy, one would be cautious about the terms used, *viz.*, free market, competitive market, etc. There is no free market economy anywhere, as could be seen from the discussions in the book, due to structural infirmity and inequity in the ownership of and access to limiting resources. It is emphatically stated that

"maintaining a true free enterprise economy can not be done by just *laissez faire* policy. It takes *constant vigilance and enforcement* of competitive rules of the game" (emphasis supplied). This would imply that the state does not simply wither away but ensures a market friendly economy where market strategies and management decisions are interactive and transparent by design. The book presents many and variegated aspects of the problems and issues of the U.S. farm economy and farmers. It provides excellent materials for use in class room interactions in any agricultural policy course. To an outsider the relevance of guidelines by the state for action and monetary incentives that go with it provide an opportunity to unlearn much of the shining attributes of unbridled free markets. One would feel comfortable with the term 'market friendly' and that depends how friendly one expect to be.

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*Fishery Sector of India*, U.K. Srivastava, Bakul H. Dholakia, S. Vathsala and K. Chidambaram, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi, 1990. Pp. xxviii+437. Rs. 295.00.

In the last decade ending in 1990 there has been a mushrooming growth of literature on various aspects of fishery development though most of the endeavours are replete with off-repeated and common place generalisations based on infirm and repetitive data. The book under review offers little respite as it is an interesting blend of pious hopes and living realities. Limitations of the present book flow not from lack of professional competence but largely from inherent inadequacies of data which have been copiously drawn from a variety of resources. Most of the findings and policy prescriptions both in respect of marine and inland fisheries are not much at variance from the earlier published works of Indian Institute of Management (IIM), Ahmedabad, namely, *Marine Fish Marketing in India* and *Inland Fish Marketing in India*.

Chapters 1 and 2 give a synoptic view of the fishery sector and conventional economic indicators of the Indian economy. Chapter 3 reviews the status of the fishery sector. This chapter running into 122 pages constitutes the main body of the book and it is highly informative and useful particularly in regard to the treatment of industrial fisheries of marine origin. It deals with almost all aspects of pre-harvest and post-harvest management. However, certain findings may provoke animated controversy. For instance, the authors make out a case for foreign collaboration for establishing prawn seed commercial hatcheries and feed mills for producing prawn feed (p. 331). Even fiscal and non-fiscal incentives have been proposed. It is doubtful that there will be sustained demand both for seed and prawn feed keeping in view the sluggish trend in growth of brackishwater area under culture witnessed in the past. However, their suggestion for diversification in export trade through joint venture (p. 330) deserves to be studied in depth. The findings of the authors on the present state of brackishwater fish farming technology are quite succinct when they remark: "There should not be hesitation on our part to import technology wherever necessary whether it is for seed and feed production, hatchery and pond management or engineering technology." The reviewer also shares the apprehensions of the authors with regard to leasing of brackishwater areas to poor fish farmers who may not have the wherewithals to take up highly capital intensive technology of brackishwater fish farming. It is disheartening to note

that the treatment of freshwater fisheries of rivers and reservoirs is devoid of analytical content. While discussing freshwater culture, the authors have remarked: "Freshwater fish culture could be the only answer to bridge demand-supply gap" (p. 106). This statement is too cavalier and sweeping to be taken seriously as experience of over three decades reveals that the share of culture fishery in inland fish production rarely exceeded 10 to 15 per cent of the total landings during various Plan periods due to techno-economic and structural rigidities. Chapter 4 dealing with processing and marketing is a rehash of the earlier works by IIM, Ahmedabad but Tables III.3 and III.4 (pp. 424-431) detailing marketing practices and cost and marketing margins will be of immense use to researchers and policy makers. Chapters 5 and 6 dealing with training and research, and domestic and export demand and future strategies are quite useful as reference material. Chapter 7 on constraints on growth of marine fisheries, and brackishwater and freshwater fisheries is not only well written but lends lot of realism to constraint analysis by offering radical suggestions such as reduction in incidence of taxation on vessels (p. 273) and rationalisation of premium rates for crop insurance (p. 280). Chapter 8 dealing with the strategy for fishery development is the core of the present work and the recommended policy prescriptions of operational significance should occupy the minds of all those who matter in fishery development. The most redeeming feature of the book is the treatment of project profiles (pp. 335-396) which can serve as an invaluable guide in project evaluation for fishery workers particularly for non-economists.

Supplemented with V.G. Jhingran's magnum opus, *viz., Fish and Fisheries of India*, the present endeavour fills the gaps to an appreciable extent in respect of financial and economic aspects of fishery development along with futuristic strategies. Like Jhingran's book, the present work is a laboured digest that may prove to be of immense use as a reference book.

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*Economics of Potato in Himachal Pradesh*, D.R. Thakur and T.V. Moorti, Daya Publishing House, Delhi, 1991. Pp. xviii+178. Rs. 110.00.

Potato cultivation occupies a mere 0.6 per cent of the total cropped area in India but this cash crop contributes 1.7 per cent of the total value of output from agriculture. Potato produces more food per unit area and per unit time thus helping to meet the food needs of the burgeoning population. Over the last two decades, potato production and productivity have registered higher growth rates than the principal cereal crops of rice and wheat in the country. In ushering in the potato revolution, the two potato growing states of Himachal Pradesh and Uttar Pradesh have made notable contributions. The growing importance of potato in the agricultural economy in the various states has attracted the attention of policy planners and researchers alike. The book under review is a welcome addition to the literature.

It may be pointed out that the locale of the study is the tribal district of Lahaul-Spiti in Himachal Pradesh and the reference year is 1982-83. In the cold desert region of Lahaul-Spiti where monoculture is practised, potato cultivation plays a vital role in the farm economy since about 36 per cent of the total cropped area in the district is occupied by this crop. The potentiality and productivity of seed potato are remarkably high since "tuber yields as high as 470 q/ha have been recorded on some progressive farms in Lahaul valley". The book is

organised into seven chapters. The introductory chapter provides the historical background of potato production and marketing in Lahaul and Spiti district, besides the objectives of the study. Chapter 2 gives an insight into the socio-economic conditions of the population while Chapter 3 is devoted to an analysis of input-output relationship of potato vis-a-vis the other selected crops like wheat, barley and buckwheat in Lahaul tehsil and for potato, wheat and barley for Spiti tehsil. Chapter 4 gives an estimation of the availability of various farm resources and projects the credit needs for the adoption of optimum farm plans by the potato growers. Chapter 5 analyses the trends in area and production of potato and discusses the price spread, marketing pattern and supply response of the sample potato growers. The problems faced by the farmers in the production and marketing of potato are presented in Chapter 6. The main findings of the study are summarised in Chapter 7 of the book.

The book is a pioneering research study in the inaccessible areas of the state and the authors deserve unstinted praise for this achievement. However, it is felt that it would have been more appropriate to call it 'a case study of Lahaul-Spiti district', keeping in view the fact that the district accounted for only 9 per cent of potato area in the state while Shimla district claimed the lion's share of 52 per cent of the total state area under the crop during 1982-83. It is observed that while studying the input-output relationships of the sample crops, the authors have fitted the Cobb-Douglas production function. The explanatory variables of fertiliser, manures and seed have been aggregated ( $X_2$ ) in the functional analysis without explaining the reasons for doing so and secondly the regression coefficients for the aggregated explanatory variable ( $X_2$ ) are not given in Table 3.1 for marginal farms and in Table 3.3 for large farms (pp. 33 and 35). Aggregation of independent variables is done on the basis of certain compatibility or to overcome the problems of multicollinearity but it needs to be made known in order to make the methodological approach clear for appraisal of the results critically. Importantly, the marginal value productivity-factor cost ratio for the aggregated variables cannot provide specific recommendations for increasing or decreasing the input use level for the individual inputs which have been aggregated. In the case of potato cultivation, seed and fertilisers are important factors accounting for a significant share in the cost of cultivation and resource use efficiency in these inputs is essential to improve productivity and returns in potato. Moreover, technically wrong statements like "in Lahaul returns to scale for wheat and barley were found to be more than one but the same were not found to be statistically significant" (p. 34) have been made instead of saying that the sum of regression coefficients was more than one and so on. In a similar vein, the statement to the effect that "the district Lahaul-Spiti which has a peculiar agro-climatic condition enjoys almost a monopoly in the production of disease-free seed potato" (p. 75) does not hold good since Shimla district is endowed with equally good agro-climatic conditions for potato cultivation and produces the bulk of seed potatoes in Himachal Pradesh. It has been asserted by the authors that "the harvesting period of potato in this district (Lahaul-Spiti) happens to coincide with sowing time of the crop in the plains. It is for this reason that Lahaul-Spiti potato has come to be known as 'Seed Potato'" (p. 81). This statement is not correct technologically since the attributes of seed potatoes are: (a) tubers are true to type, (b) reasonably healthy, *i.e.*, free from virus infection, (c) free from fungal and viral diseases and (d) free from insect damage and nematode infestations and in the right stage of sprouting. Freshly harvested potatoes cannot be immediately planted for potato

cultivation, without breaking the dormancy through treatment. The coincidence of harvesting time of potatoes in the hills and planting time in the plains does not alone make the hill tubers seed potatoes unless the specified attributes of seed potato are possessed by them.

The optimum farm plans have been worked out both for Lahaul area and Spiti area but the credit requirements for the Lahaul valley only have been estimated and not for Spiti valley on the ground that the farmers in this valley are 'illiterate' and do not appreciate the need for credit. This is a specious plea. The supply response for potato was found to be positive and in the long run, the number of years required for adjustment would be about 28. The authors have not investigated the agro-economic rationale behind this phenomenon which could be attributed to the monoculture and unique suitability of the area for potato production, particularly seed tubers, with concomitant remunerative returns.

The authors do not appear to have carefully edited the manuscript before sending it to the publishers for publication. For instance, on page 54 an incorrect statement is made that the linear programming technique is described in Chapter 2 which is titled 'Socio-Economic Profile of Sample Households'. Some of the references in the bibliography are not complete and strictly given in alphabetical order. Himachal Pradesh Seed Potato (Control) Order, 1976 is variously described so much so that it is called Himachal Pradesh Seed Potato Produce Act, 1976 (p. 5). Himachal Pradesh State Seed Certification Agency was set up in 1978 but the authors are blissfully oblivious of this fact (p. 88) and suggest the need for a 'full fledged seed certification department'. The book abounds in certain other avoidable factual errors, grammatically wrong construction of sentences and spelling mistakes like 'Nilgiris (Preface), drought animals (p. 19), year-marked (p. 87) and so on, which detract from the quality of the work done in this respect. All said and done, the book provides a deep insight into the production and marketing of potato vis-a-vis other crops in inaccessible hill areas of Himachal Pradesh.

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*Increasing Access to Food: The Asian Experience*, Edited by D.S. Tyagi and V.S. Vyas, Sage Publications India Pvt. Ltd., New Delhi, 1990. Pp. 455. Rs. 250.00.

In the post-war period, most developing countries of the world pursued a combination of policies to achieve self-sufficiency in foodgrains. The results of these policies were dramatic in terms of increasing aggregate food availability and achieving self-sufficiency. But the paradoxical co-existence of self-sufficiency and hunger forced many countries to rethink about their policies. For the question was not one of 'physical' access but 'economic' access to foodgrains. The book under review brings together the experience of six developing Asian countries (India, China, Indonesia, Philippines, Sri Lanka and Thailand) in achieving access to food.

Most of the countries covered in the book support high and rising populations. Together these countries cover nearly 43 per cent of the world's population. China alone feeds one-fourth of the world's population on seven per cent of world's land (S. Wen). Hence their

success in feeding the teeming millions is remarkable, more so when viewed against adverse land-man ratio. This is quite in contrast with the African experience where the population pressure is not high.

Raising food output is a necessary condition for achieving better access to food. In an aggregate sense, most of the countries studied have achieved self-sufficiency or near self-sufficiency. In India, physical and economic access to foodgrains, as measured through net per caput availability and declining real food prices, has improved (Tyagi). China has been able to feed its large and growing population despite stagnant per capita availability and its dependence on imports. Indonesia and Sri Lanka are self-sufficient in rice. Thailand produces much more than its domestic requirement. This self-sufficiency came about due to technological, institutional and infrastructural policies supported by price incentives. In the Indian context, the role of technological and other non-price factors is unequivocally supported, but a more cautious view is adopted about price policy (Tyagi). China has used price policy for procurement and distribution but not for providing signals for resource allocation. Price incentives offered in the post-Mao phase raised both procurement and production. Government has now replaced quota system with contract system which offers greater scope to government to respond to market conditions (Wen).

However, price policy in Indonesia led to over-stabilisation of prices making private trade (storage) unprofitable and burdening BULOG with accumulated stocks (R.R. Piggott and E.M. Treadgold). Thailand offers a unique example of successful experiment with free trade. It has the most liberalised trade regime where the producers respond to world market signals. Today Thailand is a large exporter of agricultural commodities and has a large share in the world market of rice. Agriculture earns about 60 per cent of total foreign exchange earnings (C. Konjing).

Despite an understanding of the role of price incentives, most countries followed the 'cheap food policy' which suppressed producer prices to subsidise consumers, largely urban. Thus 'planned prices' in China led to producer taxation of the order of 27.5 per cent of agricultural national income (Y. Rui-Zhen). This is besides explicit food subsidy which is provided to the consumers (in China, 11 per cent of government expenditure in 1985). It is undesirable both for efficiency and equity, particularly when viewed against the fact that the public distribution system (PDS) is untargeted. Indian PDS is found to be urban-biased, untargeted and expensive (S.L. Bapna). This is in contrast with the Sri Lankan experience where rural and deficit areas and poorer classes are better served (S. Pinnaduwage and P. Abeygunawardena). In China rural residents are excluded from subsidised food distribution. Urban pressures are so strong that hikes in retail food prices are invariably accompanied by hikes in urban wages. Lack of faith in the private traders is a common experience in many developing countries.

Attempts to achieve self-sufficiency were made in an autarkic framework. With the sole exception of Thailand, other countries insulated their agricultural economies from the rest of the world. In China, domestic prices of major foodgrains have remained below international prices discouraging domestic production (Wen). Thailand follows comparative advantage and allocates 57 per cent of its arable land to rice. Domestic rice prices move closely with international prices.

Institutional reforms are important in achieving various goals of food policy especially in societies where man-land relations are unequal. In this context the Philippines study is

important (A.J. Ledesma). It has an agrarian structure where 70 per cent of the farms occupy nearly 10 per cent of the farm area. No wonder poverty levels are high (estimates go upto 74 per cent). The Philippines study enumerates several legislative measures taken by the government for land reforms but does not indicate their effectiveness. In contrast, China performed much better thanks largely to its strong socialist commitment supported by party and bureaucratic channels. The Philippines study also disappoints readers as it is totally silent on the country's self-sufficiency status, on how the government provides foodgrains to its consumers, what are the price and non-price instruments used, what are the government agencies entrusted with the task of management, and so on.

Public distribution is one form of reaching the poor. The other is through direct intervention in providing nutrition and health services. Papers on Indonesia (H. Syarief) and Sri Lanka explicitly deal with it. Indonesia is the fifth most populous country in the world with low nutrition levels, high infant mortality and low life expectancy. Despite adequate food supply in an aggregate sense, distribution problems remain which, coupled with poverty and low education, cause malnutrition of high levels. The paper recommends holistic multidisciplinary socio-technological approach to tackle the health and nutrition problems. Sri Lanka, of course, is a success story. Its social development indicators are comparable to any advanced country of the world.

The lessons for India are evident. The pace of food production must be sustained at least to match the rise in population. This would require that incentive levels of foodgrains producers must be kept high, besides continuously breaking through new technology. Domestic controls, movement restrictions and taxation through procurement and trade policies have eroded the crop profitability and slackened the pace of investment in agriculture. A somewhat open economy environment would benefit the food producers and invite more resources, particularly in rice and wheat, purely on efficiency grounds. There is also a need for making public distribution more sharply focused towards the poor, and avoid taxing producers to subsidise non-poor consumers.

The book is based on the research work done by the Kellogg scholars and would be immensely useful to those interested in the food policies of Asian countries.

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Ashok Gulati

*When the Harvest is in: Developing Rural Entrepreneurship*, Edited by Shailendra Vyakarnam, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi, 1990. Pp. x+278. Rs. 350.00.

A large part of interest in entrepreneurship stems from the fact that economic development is the outcome of purposeful human activity and hence promoting entrepreneurship is the key to it. The word and its meaning has travelled a long way; first referred to in military expeditions in the 16th century, in civil engineering activities in the 17th century and describing the economic activities in the 18th century. Richard Cantillon identified the unique risk bearing function of entrepreneurs. But the agrarian world prompted by intelligent and active farmers was then not considered as entrepreneurial function. J. Schumpeter brought innovation into the concept, as entrepreneurs are not solely guided by profit and

they do not form a social class like the capitalists. In the seventies, P.M. Kilby provided an extensive sketch of entrepreneurial tasks in an under-developed economy. Recent interest in rural development coupled with the problems of poverty and unemployment has brought the concept of rural entrepreneurship to the fore. It is not simply redistributive justice alone but of increasing the productive capacities of the poor and their participation in the development process which has become more important. Against this background, the attempts made by the scholars who have contributed to this book deserve a warm welcome.

The book is an additional information piece on the subject. Its analytical framework is refreshingly new and the content in a majority of the papers presented is easily digestible because of its conceptual clarity. The studies make a contribution towards gathering more ideas in a practical setting. The themes dealt by the authors vary but, without losing the thread, they point out to a direction in which entrepreneurial resurgence is a possibility in the rural areas. The difficulties in defining rural entrepreneur have been surpassed, certain attempts in their creation by promotional agents and voluntary organisations have been covered, country references and evaluation of projects made and alternatives to traditional entrepreneurship brought out. Thus the theme of realising the 'harvest' brings out clearly the exploratory character of the study - though the sub-themes vary. In summary, the substance gets the better of the form and that in different ways. It makes an interesting reading and a modulated recapitulation of concepts from real rural situations and analysis based on evidence from varying historical, economic and social backgrounds. Rural entrepreneurship is considered an urge not only to respond to the needs of economic growth but household income generation as well. As a result, the findings in the book get credibility.

The papers presented in the book are divided into four sections covering the role of development agencies, rural communities and statement of their needs, voluntarism in development and finally the agenda - the way forward.

At the outset, the editor's summary provides a refreshingly new definition of rural entrepreneurship which is very close to the reality as emerging skills and capital in the rural area tend to migrate. There is also a tendency to repeat the existing activities by the new entrepreneurs. The 'copy cat' mentality and the non-availability of service organisations are discussed in the Pacific Island experience. The experience of promoting entrepreneurship inspite of its prohibitive costs has been well brought out (pp. 3-13). The narration of Industrial Development Bank of India (IDBI) experience in India is yet another 'trumpet' in the saga of institutional interventions. The learning experience of IDBI is the same which was authored by many earlier. In contrast to this, another author presents a different version of the experience of National Bank for Agriculture and Rural Development (NABARD) 'without doing anything for their promotion' (p. 160). The experience of Integrated Rural Development Programme (IRDP) in India has been well brought out by Ravi S. Srivastava who argues that the "pre-entrepreneurial emphasis has to be changed in favour of a strategy where raising productivity becomes an important objective" (p. 36). The key determinants of entrepreneurial networking appear complex and multi-dimensional in nature (p. 60) in Ireland's experience. The role of local government is absolutely vital (p. 69) and the community led initiative demonstrates how a community can be re-built (p. 82). An important and useful suggestion for the policy makers that they should listen to the bottom up messages reaching them (p. 93) is useful. People's involvement in change, understanding the community structures and its response to change is yet another theme (p. 106). Another interesting

conclusion emerging in a different case is that the problems encountered by the developmental strategists are 'behavioural' (p. 113). Co-operatives as a form of organisation have not been without their problems and Soviet collective enterprises have succeeded in that 'the boundaries of enterprise and the community are the same' (p. 135). Lack of co-ordination and overlapping of functions are highlighted in Sri Lankan's case. Integrated community can respond more effectively to change than a community which is made up of a number of individual private farming units. The case examples in 'social' entrepreneurship and the role of voluntary organisations stress the need for socially conscious and committed development programmes in India (p. 145) as an alternative to traditional entrepreneurship. Training for community enterprise provides an effective structural response to economic development problems in highlands and islands. These entrepreneurial approaches have also been tried out in India in the case of some tribal entrepreneurs. A critique of entrepreneurial research and an architectural design for further research make an interesting reading. The dynamics of locational incentives is to make the external environment less hostile and entrepreneurship for rural development has to be in favour of the rural poor who are still the majority. Some successful experiences like the Central Jawa Enterprise Development Project, female petty-entrepreneurs and the strategies for self-employment provide some lessons in enterprise building.

At the end, one would find that all the rural realities have been presented in one form or the other, irrespective of vast differences in the regional patterns studied, to make the book highly interesting. The book is a contribution to the subject in understanding the dynamics of rural entrepreneurship in varied settings and in clarifying our vision of rural communities emerging as professional entrepreneurs.

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*Evaluation of Agricultural Extension: A Study of Haryana*, J.S Yadav, Concept Publishing Company, New Delhi, 1992. Pp. 207. Rs. 160.00.

In evaluating an extension project we generally seek answers to the following questions. Is it worthwhile to have the project? Who are benefiting from the project? Should the project continue in the present form? Yadav in his book has examined in depth some aspects of the Training and Visit (T & V) system of extension introduced in India with the assistance of the World Bank. Though the study has been conducted in Haryana State, the findings have implications not only for India, but for other developing countries as well.

The author has measured the profitability of the T & V system of extension by using four methods, namely, net present value, internal rate of return, pay back period and benefit-cost ratio. All the measures proved positive and the author has "concluded that the investment made in Haryana on the T & V system has been quite worthwhile" (p. 162).

In the T & V system, contact farmers play a crucial role in the dissemination of recommended technologies to the general (non-contact) farmers. The author has found that the contact farmers had higher levels of adoption and knowledge in respect of improved practices in paddy, bajra, wheat and gram than the non-contact farmers, and the differences were statistically significant in each case (Tables 6.2, 6.4, 6.6, 6.8 and 6.11, 6.13, 6.15, 6.17).

The contact farmers also had a significantly more favourable attitude towards the T & V system of extension as compared to the non-contact farmers (Table 6.22). The findings, according to the author, "indicated the success of the T & V system of extension in Haryana".

Here it is difficult to agree with the interpretation of the author. The objective of extension work should be to disseminate the benefits of modern technology to all the farmers. The study, on the contrary, had shown that under the T & V system of extension, the benefits of modern technology (higher adoption, more knowledge and favourable attitude) had not percolated to all the farmers, and the contact farmers which constituted only 10 per cent of the farming community were benefited.

Further analyses have shown that the contact and non-contact farmers did not differ significantly in respect of costs and benefits in the cultivation of paddy, bajra, wheat and gram (Tables 6.28 to 6.35). According to the author, the "overall analysis indicates that for almost all the crops, the difference between mean scores of contact and non-contact farmers for costs and benefits is negligible.... Evidently the benefits accruing from the T & V schemes are neutralised by the higher costs the contact farmers have to pay for the inputs...." Such findings do not help to come to any conclusion in respect of the T & V system.

The benefit-cost ratio of paddy, bajra, wheat and gram were positively and significantly correlated with the adoption and knowledge of improved practices of these crops (Table 6.36). A test of significance of difference in the mean values of benefit-cost ratio of the contact and non-contact farmers probably would have been more meaningful.

In describing the extension situation in India prior to the introduction of the T & V system, the author has stated that "...during the last quarter of a century or so all such efforts were rudimentary in form...." (p. 61). Can we forget about the vastness and contribution of programmes like CDP, NES, IADP, IAAP, HYVP, SFDA, MFAL, etc., from the fifties to the mid-seventies in agricultural and rural development in India? The T & V system of extension was put up on the development infrastructure and development psyche created by these programmes.

The study has covered the four agro-climatic zones and four major crops of Haryana. The respondents were literate cultivators maintaining farm accounts. Such a valid study has indicated that the benefits of the T & V system of extension were accruing to 10 per cent of the farmers who were fortunate to be selected as contact farmers. This would perhaps create a small number of rural elites and encourage social disparity. The study has provided an opportunity to have a hard look whether the T & V system of extension in the present form would bring real benefit to the farmers. In policy implications the author has aptly said that "the mechanism of transfer of technology should be modified as to ensure transfer of educational input to the general farmers through the involvement of contact farmers in the T & V programmes" (p. 163).

The book has a nice get-up but the publishers should aim at 'zero-error' publication.

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*Chinese Grain Economy and Policy*, Chen Liang Yu and Allan Buckwell, C.A.B. International, U.K., 1991. Pp. xv+263. £ 40.00.

The challenge before the post-revolution political leadership in China was to transform a 'semi-colonial and semi-federal Chinese Society' into an egalitarian 'socialist' order. To this end China adopted the path of planned economic development based on social ownership of means of production and considered 'the gradual socialist industrialisation of the country' as its aim. The reasons for according the highest priority to industrialisation are not far to seek. It was thought that industrialisation could provide the material basis for the technical transformation of the national economy and, through it, the twin over-riding objectives of preserving economic independence and modernisation of national defence could be attained.

However, China did not imitate the Soviet model of economic development in its entirety. One of the main causes for such a deviation was the difference in initial conditions prevailing in their agricultural sectors. For instance, "the per capita grain growing area, per capita grain output and per capita income in Russia in 1928 were, respectively, four times, more than twice and five times that of China in 1952" (p. 32). Thus while Russia was able to extract agricultural surplus for industrialisation for a long time, China found it necessary to first generate surpluses. Its backward agriculture was incapable to shoulder the responsibility.

The book under review presents a fascinating account of the evolution of Chinese agricultural policy, more specifically grain policy since 1952 to the mid-eighties. The task was indeed formidable, because the Chinese agricultural policy lacked consistency and experienced continuous oscillations.

The book is divided into three parts. Part I entitled "Background and Hypotheses" contains three chapters. The first chapter presents a rich and vivid account of basic features of Chinese agricultural development. To mention a few: (i) Only 10.4 per cent of the total land area is under cultivation, per capita cultivated land in China being 0.1 hectare as against the world average of 0.34 hectare. (ii) Irrigated area in China (1980) totalled 44.6 million hectares accounting for nearly half of the total arable land and giving China one of the highest irrigated ratios in the world. (iii) The value of agricultural output which accounted for 45 per cent of the GNP in 1952 declined to 29 per cent in 1984, though it registered an eight times increase over 1952. (iv) Between 1952 and 1984, the area under grain cultivation declined by 9.5 per cent, the decline being faster since 1978. (v) Despite the fall in grain growing area, output of unmilled grain products increased by 149 per cent, i.e., from 163.9 to 407.3 million tonnes, the annual trend growth rates for rice, wheat, soybean and tubers being 3.0, 5.1, 4.7 and 1.7 per cent respectively. This could be possible due to the adoption of productivity raising devices such as shift of growing area from low-yielding to high-yielding crops, large injection of modern inputs such as fertiliser, increased mechanisation, and most importantly, enhanced and improved irrigation and drainage conditions. (vi) And still, as the authors conclude, "food consumption for the last three decades can be summarised, as a low average consumption level with large temporal fluctuations; large disparities inter-regionally and between cities, towns and the countryside; and low level of energetic and nutritional contents from animal sources" (p. 19). One should hasten to add that such a situation can be attributed to the high population growth on the one hand and only a marginal improvement in the per capita disposable income on the other" (p. 24). Also, it needs to be emphasised that "the Chinese food distribution system has been successful in providing basic food nutrients to most of the people most of the time" (p. 20).

The development of Chinese agriculture, however, did not take place in unilinear way, but as mentioned earlier, only through oscillations. Thus the second chapter takes a historical review of the agricultural development policy. It spells out an intrinsic relationship between strategy, policy and agricultural production. The authors argue, and rightly so, that 'political environment' has been a crucial determinant of agricultural policy in China. Thus they discern two broad policy patterns and also identify the corresponding periods. The policies pursued during 1952-57, 1961-65 and 1978-84 are called Policy Pattern A, and those pursued during 1958-60 and 1966-77 as Policy Pattern B.

The authors attribute the former to the political environment influenced by 'realism and pragmatism' and the latter to 'ultra-leftism and romanticism'. The latter was the period of Great Leap Forward and the Cultural Revolution. Obviously, between the periods, the policy instruments differed widely. Thus the latter period (Policy Pattern B corresponding to 1958-60 and 1966-77) witnessed a stress on heavy industry, collectivisation as a form of rural institutions and production organisation, direct control over decision-making and production management, and tight control over pricing and marketing system accompanied by poor farm prices. With the help of the already available literature, the authors tend to show that during this period the Chinese agriculture met with a 'failure'.

The Policy Pattern A stood for the reversal of the above-mentioned policies. It is characterised by the emphasis on balanced and diversified development, reliance on co-operatives, indirect controls and improved farm prices. Thus it is during this period that a shift from collectivisation to co-operatives took place; that direct controls were substituted by indirect control system giving greater degree of freedom in decision-making to the peasants as basic production units; that local management became more responsive; and that improvement in farm prices and recourse to free markets and private plots production made agricultural production profitable and attractive. This policy came to be known as 'the contracted responsibility system' since 1978 and ultimately gave rise to the present day 'household responsibility system', and the central feature of Chinese agriculture today. The authors have shown that it is this shift in agricultural policy that has been paying rich dividends to China.

In the third chapter, though brief but rigorous, the methodological issues are spelt out. It primarily deals with supply response analysis. It is argued that due to the fundamental institutional and managerial differences between China and the market economies of the West, supply response functions need to be modified. The authors have identified five features as special characteristics of Chinese supply model, *viz.*, sectoral definition of supply, a focus on output and not on area, the workings of the price systems, the importance of self-subsistence, and the formation of expectations.

Part II of the book contains four chapters. The first two (*i.e.*, Chapters Four and Five) deal with the statistical analysis and discussion of supply response functions, and the latter two (Chapters Six and Seven) are concerned with domestic consumption of grain products and grain imports and exports respectively.

Thus following a genuinely sectoral approach, supply response is estimated for total grain output and separately for rice, wheat, soybean, and other grain crops, and also for some of the provinces. The specifications are further enriched by incorporating variables not only such as weather but also 'time' as a proxy for technological improvement, and 'dummies' indicating shift in the policy patterns.

The estimated supply equations demonstrate that in addition to the motive of self-subsistence, the level of prices and profitability influenced positively the producer's supply response behaviour. Further, while technological improvement reflected well (except soybean crop) in improving the production conditions, natural environment, especially changes in weather, proved to be an important obstacle to overcome. Lastly, the impact of oscillating policy patterns was found to have a crucial bearing on the success or failure of Chinese agriculture.

Thus to quote the authors, "the most important finding in terms of supply response analysis is that there were three policy factors which most influenced agricultural development: government policies on rural institutions and production organisation; on decision-making and production management; and on pricing and marketing system. These three factors were organically integrated with each other and created the policy patterns to which agriculture was exposed" (p. 114). From this the authors arrive at a more general conclusion. They hold that a "sound understanding of the producer's supply response behaviour with appropriate protection of their interest to encourage their initiative and enthusiasm for farming is the fundamental condition for the successful development of the agricultural sector" (p. 115).

In the sixth chapter, a detailed analysis of the food distribution system and trends in food consumption, also separately for urban and rural areas, is made. In China, grain and all, other food products have been rationed. To ensure food to all, the marketing system of foodgrain products was completely planned, and for fixing monthly standard requirement of food the rural and urban population was divided into nine categories. With the introduction of the contracted responsibility system in 1978, however, peasant households became the basic units of grain production and distribution. Once the obligation of selling fixed amounts of grain products to the state and the local government is met, peasant farmers have the full responsibility for allocating the remaining grain for different purposes. This does not mean that the government intervention in the marketing and distribution is done away with. "The Ministry of Grains specifies the total purchasing, total supply for domestic consumption, the adjustment in national grain reserve and the level of imports and exports. It also spells out the detailed figures for provincial purchasing, supplying and trade from one province to another which is then implemented by provincial government" (p. 117).

Regression equations are estimated to establish the causal relationship between the quantity of foodgrain consumed (dependent variable) and grain output, population growth, personal disposable income and price of foodgrain products (independent variables). It was observed that despite fundamental differences in the distributional system between urban and rural areas, grain output and population growth exerted a positive influence on consumption while price of grain affected it negatively. Personal disposable income had no significant correlation with consumption in urban areas mainly due to controlled foodgrain supply with the instrument of the rationing system. In rural areas, on the other hand, higher disposable income encouraged the peasant households to retain more grain for family consumption.

Chapter 7 outlines the basic features of China's trade pattern. China exports mainly rice and soybean, and imports wheat products. China's trade policy is motivated by four basic considerations: exploiting the principle of economic rationality, the distributive motive, dealing with the shortages in domestic production and political considerations. For instance, China went for massive imports of grains during 1961-65 due to the collapse of domestic

production. Similarly, despite a considerable change in the direction of China's grain trade during the last three decades, on the basis of regression, it is found that "in addition to the price signals of the world market and the shifts in trade policy, domestic production and consumption together worked as the key factors in determining China's grain trade" (p. 166).

The third and last part (Chapters Eight to Ten) is devoted to future outlook for production, consumption and trade. The discussion is obviously based on projections. It is expected that with one per cent rate of growth between 1980 and 2000, China's population will be of the order of 1.20 billion. On the basis of the assumption of per capita consumption, China's grain consumption requirement by 2000 will be between 321.23 million tonnes (low scenario) and 345.96 million tonnes (high scenario). Similarly, grain requirement for feed, seed and industrial uses is expected to be between 133.3 and 183.6 million tonnes, 29.5 and 38.1 million tonnes respectively.

Further, in view of the nature of supply response and its above-mentioned determinants that are likely to remain unchanged, the author's projection of grain production varies from 500 million tonnes (low scenario) to 585 million tonnes. Obviously, the country will have to struggle hard to realise the projected target. According to the authors, three factors, *viz.*, "securing arable land for grain growing, raising massive funds for productive investment in the sector, and getting the price right" will be crucially determining the actual performance. However, they hope that despite all the difficulties that the country may encounter, production of 543 million tonnes (medium scenario) will be 'the most probable outcome'.

This, in a way, spells out the prospects of China's grain trade. Considering all the evidence, the authors convincingly argue that "there will be no substantial impacts on the world grain market solely due to foreseeable changes in China's domestic grain supply and demand" (p. 218).

China is in the midst of its economic reforms initiated since the mid-seventies. These economic reforms may be summarised as a step towards establishment of "market regulated economic mechanism formed under the guidance of the socialist planning". However, the controversy regarding the pace of these reforms is yet unsettled. One view has been favouring price and wage reforms to deepen the liberalisation programme and wants market mechanism for grains to be established by the mid-nineties. The other view advocates control of rapid and worsening inflation and the stabilisation of the economy. It holds that the price and wage reforms should be slower and market mechanism may be achieved by the end of the century. Yet another view demonstrated by the events in June 1989 is that the "economic liberalisation could only succeed if it were accompanied by political democratisation" (p. 222). Whatever may be the outcome of the struggle, the authors are optimistic of China's capacity to face the greatest challenge of the 1990s to feed its population.

Thus the authors can claim a total success in presenting a 'complete' book on "China's Grain Economy and Policy", rich in content, rigorous in methodology, and lucid in style.

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