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Vol XLII
No. 2

APRIL-
JUNE
1987

ISSN 0019-5014

# INDIAN JOURNAL OF AGRICULTURAL ECONOMICS

INDIAN SOCIETY OF
AGRICULTURAL ECONOMICS,
BOMBAY

*Ind. Jn. of Agri. Econ.*
*Vol. 42, No. 2, April-June 1987*

# ARTICLES

## GROWTH AND EQUITY IN AGRICULTURE*

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Reviewing the state of the Indian economy, the Seventh Five Year Plan refers to some of the salient achievements of planned development. There has been a marked decline in the incidence of poverty. Based on the information available from the National Sample Survey, it is estimated that during the period 1977-78 to 1984-85 the percentage of population below the poverty level has declined from 48.1 to 36.9. Agricultural performance has been particularly impressive, specially in foodgrains. (The foodgrains stocks at the end of June 1986 were estimated around 28.6 million tonnes.) The targets set under the Sixth Plan for coverage of poor families under the Integrated Rural Development Programme (IRDP) and employment generation under National Rural Employment Programme (NREP) and Rural Landless Employment Guarantee Programme (RLEGP) were met. During the Sixth Plan, the targets for elementary education enrolment and for the provision of primary and subsidiary health centres were exceeded.

Based on this optimistic picture of performance, the Seventh Plan envisages that "The percentage of population with a consumption standard below the poverty line is expected to come down from an estimated 36.9 per cent in 1984-85 to 25.8 per cent in 1989-90," and by the end of the century to just 5 per cent. "In absolute terms, the number of poor persons below the poverty line is expected to fall from 273 million in 1984-85 to 211 million in 1989-90, the bulk of this improvement being in the rural areas." As for employment, "Over the Seventh Plan, employment potential is expected to increase by 40 million standard 'person years against an increase in labour force of around 39 million persons. The bulk of growth in employment potential is in the agricultural sector, and within the sector, in subsidiary activities other than crop production." Out of the increase of 40 million standard person years, about 6.9 million person years will come from the crop sector and 11.0 million from the non-crop sector.

### GROWTH OF AGRICULTURE

The analysis of performance and potential of the agricultural sector made below suggests that the capability of the sector to contribute to the alleviation

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* First published in *The Economic Times Silver Jubilee Feature, 1961-1986*, "Indian Economy: The New Phase", December 19, 1986.

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of poverty and unemployment is perhaps over-estimated. Demographic pressure on land resources and environmental degeneration are the two main reasons for this caveat.

Despite wide fluctuations in agricultural production due to frequent natural calamities like droughts and floods, India's agricultural growth since Independence is indeed creditable. The annual rate of increase in agricultural production based on Index Numbers was 2.6 per cent between 1949-50 and 1985-86 (CMIE, 1986). Foodgrains production increased from a three-year moving average of 57.47 million tonnes in 1950-51 to 142.7 million tonnes in 1983-84, giving an annual rate of increase of 2.55 per cent. In fact, the annual compound growth rate of major foodgrains has steadily gone up from 2.16 per cent during 1950-51 to 1967-68 to 2.62 per cent during 1967-68 to 1983-84 and to 3.00 per cent during 1973-74 to 1983-84.* Such sustained increases in a large country like India have been rare, historically and world over.

*Demographic Pressure on Land*

But all this achievement pales into insignificance when viewed in per capita terms, indicating the stress imposed by demographic pressures on the economy. Between 1951 and 1981, India's population has increased from 361 million to 685 million, and by March 1986, is expected to go up to 761 million, more than doubling within 35 years. In another 15 years, by the year 2001, India's population will hit the 1000 million mark. These facts are well known, but their implications for the national economy and particularly for the agricultural sector have not been thoroughly analysed and explained.

Data on per capita food consumption, based on the estimates of net availability of foodgrains, computed as net production, (+) net imports, (—) changes in stocks with Government provide a dismal picture. Dandekar (1986) has estimated that per capita per annum gross consumption of foodgrains has increased from an average of 181.80 kg. in 1954-58 to 185.18 kg. in 1976-83, an increase of just 1.86 per cent in 30 years. The only relieving feature in this 'development' is the cessation of dependence on imports. Assuming a normal production of 150 million tonnes of foodgrains and population of 751 million in 1985, Dandekar (1986) has calculated that the net availability (allowing for seed, feed and wastage) of foodgrains from domestic production will amount to 175 kg. per capita per annum, or 480 grams per day, with a calorie value of 1632. Taking into account additions to the calories available from vegetable fats and sugar, his estimate shows that the per capita per day supply of calories in 1985 would amount to 2054, against the recommended norm of 2300 calories. Assuming further that the small deficit of 250 calories will be made up by other items of food consumption, it may be said that in 1985, India's population had a diet which, on an average, was adequate in respect of calories. But, he makes a pertinent point that "in view of the known inequality in the distribution of purchasing power in the

* Courtesy: S. D. Sawant.

population, the conclusion is inescapable that at least half the population lives on diet inadequate even in respect of calories."

Two points are emphasised in the above observation. When agricultural performance is measured in per capita terms, *i.e.*, with population as the denominator, much of the shine on it is wiped off. Second, unless inequality in the distribution of purchasing power is reduced, food for all will remain an unfulfilled objective. The question before us is to what extent agricultural development strategy can help to solve these problems ? Obviously, the growth rate of production must not only be maintained but improved considerably. This will not be easy, but is certainly not inconceivable. A recent FAO study (1982 *b*) has stated that by the year 2000, assuming that India's massive irrigation development plans materialise, and irrigation's contribution to production increases from the present level of 56 per cent to 87 per cent, even with 'low level of inputs,' India's lands will have the capacity to support a population of 1298 million, against the assumed population of 1036 million in that year (vide CSE, 1985, pp. 157-158).

Though it is difficult to share this optimism in view of the increasing degradation of India's lands through soil erosion, waterlogging, salinity, etc., and the rapid increase in the proportion of marginal operational holdings, to which reference is made later, let us assume that the overall availabiliy of food will not be a serious problem for India in years to come. That leaves the question of income distribution and provision of gainful employment for all, and the agricultural sector's responsibility in the matter. Before discussing this issue, let us refer to some other aspects of the country's agricultural performance during the past three decades.

*Disparity in Agricultural Growth*

Though the overall performance of our agriculture was satisfactory, there was considerable inter-regional inequality in growth. There is much concern over the fact that the bulk of the increase in foodgrains production has come from a relatively small area, the so-called Green Revolution belt, and consequently, as Dandekar and several other scholars have stated, "the benefits of the increase in production remained largely confined to the farmers in this area." The Seventh Plan has also stressed that "While India's agriculture has taken massive strides during three and a half decades of planning, its growth and development has not been uniform all over the country. The differential pattern and pace of development, particularly the growth of foodgrains production, has led to regional disparities" (Government of India, 1985 *a*, p. 14). The Plan document also bemoans the fact that less than 15 per cent of the area under foodgrains in the country (mostly the Green Revolution belt) contributed as much as 56 per cent of the increase in foodgrains production in the post-green resolution period (Government of India, 1985 *b*, p. 2).

Several questions arise from these constant references to the accentuation of regional disparities in agricultural development. First, is it correct to say that the benefits of the green revolution have remained confined to the farmers

in that area ? Did not the whole nation benefit from the larger availability of foodgrains and its price restraining impact ? Had the green revolution been stifled on ideological grounds of being 'technocratic', the poor in the country would have been the worst sufferers from foodgrains shortages and their high prices. It should also not be forgotten that the entire nation was saved the humiliation of pathetic dependence on 'foreign food'—as one ideologue put it —, thanks to the green revolution and the farmers who ushered it. Second, is it economically realistic to expect uniform growth of foodgrains production in all regions of this vast country ? Agro-climatic environment varies vastly from region to region. Even the irrigation potential is not uniformly distributed over all regions. Some regions are better suited for foodgrains production than others. It would be perhaps more realistic to expect overall agricultural production to be more uniform inasmuch as regions not suited for utilising the available foodgrains technology—particularly irrigation—could grow non-foodgrains crops more profitably, or develop their horticulture and plantations, and make up the balance. Would it make sense to push Kerala, for example, into growing foodgrains when its advantage lies in developing its plantations ? It would be another matter if the lag in foodgrains production growth in some regions were attributable to the neglect of effort to exploit their full growth potential. Incidentally, information available to us on coefficient of variations in State Domestic Product per hectare of net sown area indicates that the coefficient has, in fact, declined from 41.03 in 1970-71 to 38.43 in 1977-78.*

A regionally more balanced growth of foodgrains is certainly desirable, but the pursuit of this objective should not be at the cost of pushing up the marginal cost of production of foodgrains. It would be economically more sensible to assist each region to make the optimum use of its development potential, instead of seeking product uniformity in the growth process. Even with the concentration of foodgrains production in the most favourable area, we are growing foodgrains at a cost and a price which millions in the country cannot afford, which no foreign buyer is prepared to pay, and which is therefore accumulating, perhaps rotting, in Government godowns and on open plinths. The Planning Commission should calculate the cost-benefit consequences of regionally more balanced foodgrains production. The Seventh Plan has cautiously referred to the "decline in productivity of inputs" (Government of India, 1985 *b*, p. 2). Is this a consequence of pushing production to less and less fertile lands ? There is evidence of decline in fallow rotation and grazing land being converted for crop farming. A recent study of cardamom plantation in Kerala has observed that "productivity decline in cardamom has been a consequence of the large scale deforestation taking place in the Western Ghats" (CDS, 1986). The Study Report states: "The policy of the Government emphasised provision of cultivable land in the arable forest land of the State to land hungry peasants and landless labourers." The Report adds: "In the wake of large scale occupation of Cardamom Hill Reserve,

* Courtesy: S. D. Sawant; see also Dholakia (1985).

even areas not at all suitable for raising cardamom happend to be encroached upon" and "lands suitable for cultivation of cardamom have been converted for cultivation of seasonal crops."

*Paradox of Growth*

Another example of dwarfing of agriculture's performance by demographic pressure, observed by conversion of aggregates into per capita terms, is provided by Dandekar. He has pointed out that "in spite of the per capita production of almost 200 kgs., the gross per capita consumption does not seem to rise above 185 kgs. per annum." The anomaly is examined by reference to the increase in per capita Net Domestic Product and its distribution among different sectors of the population. The share of agriculture in Net Domestic Product (NDP) has declined from 58.69 in 1950-51 to 37.48 per cent in 1982-83. But the share of the population dependent on agriculture (cultivators and agricultural labourers) has not declined to the same extent. In fact, the decline during 1951 to 1981 was only one percentage point, from 67.5 to 66.5. Due to the combined effect of the decline in agriculture's share in NDP and the near stagnancy of population dependent on agriculture, the *per worker* NDP in 'agriculture, forestry, fisheries' sector declined from Rs. 1,305 in 1970-71 to Rs. 1 293 in 1981 (Dandekar, 1986).

Dandekar has thus highlighted once again this paradox of growth in overall agricultural production and the declining per worker NDP in agriculture with well marshalled statistical data. The task now is to unravel the analytical significance of this phenomenon for public policy.

In this connection, our first contention is that whatever has happened to the per capita production/consumption of food or to the per worker NDP in agriculture is largely attributable to the denominator (population, labour force), rather than to the numerator (agricultural performance). In other words, the failure is due to our inability to check population growth and to sufficiently diversify the rural economy to reduce the pressure of population on agriculture.

Indian planners have consistently under-estimated the likely growth in population and over-estimated the likely shift of labour force from agricultural to non-agricultural sector. As a consequence, agriculture has been burdened with supporting a much larger population and a much larger labour force. The First Five Year Plan which envisaged that the national income could be doubled by 1971-72 and per capita income doubled by 1977-78, had assumed, *inter alia*, that population would grow at the rate of 1.25 per cent per annum during the entire period to which the projections related. The Second Plan revised this assumption upward but still assumed that the population will grow at the average rate of 1.33 per cent per annum during the decade 1961-70 and at the average rate of 1.4 per cent per annum in the decade 1971-80. As it is, during the decade ending 1971 the population grew at an average annual rate of 2.20 per cent and at the rate of 2.25 per cent in the decade ending 1981. "The Planning Commission had just put finishing touches to

its Sixth Five Year Plan (1980-85), when the Registrar General of the Census announced that the country had some 13 million more people than the number estimated by the planners" (CSE, 1985).

As for the classification of labour force, the Second Plan had assumed that the total working force will increase by 19 million between 1951-1961 and by 23 million between 1961-1971, *i.e.*, by 42 million over a period of 20 years or by 33 million during the next three Plan periods. It was stated that "If the economy develops at the sort of rates indicated in Chapter 1, it is reckoned that the proportion of labour force engaged in agricultural occupations 20 years hence (*i.e.*, by 1971) will come down to 60 per cent in place of the present proportion of 70 per cent" (Government of India, 1956). As it is, the percentage of work force engaged as cultivators and agricultural labourers was 70.1 in 1971 and 68.4 in 1981. Such serious miscalculations pertaining to critical parameters like population and labour force and policy failures which resulted from such miscalculations have not been explicitly admitted and the burden they have imposed on the agricultural sector is not fully recognised.

*Impact of Rural Labour Force on Agrarian Structure*

Let us now see what the unrelenting pressure of rural labour force has done to the structure of operational holdings. We believe that the most serious problem which India's agricultural economy will face in decades to come will be posed by what may be termed as marginalisation of the structure of land ownership/operation. During a span of ten years, 1970-71 to 1980-81, the number of operational holdings has increased by almost 20 million, from 70.49 to 89.39 million. During this period, the area operated increased by just 0.67 million hectares. There can be little doubt that by 1990, the number of operational holdings will reach 100 million and the operated land will remain static, or in all probability decline, as it did between 1976-77 and 1980-81.

Obviously, those 20 million additional operators (during 1971 and 1981) could not have been accommodated on the additional 0.67 million hectares of land. The additional holdings materialised from a severe and continuing process of sub-division into smaller operational holdings. Consequently, the percentage of marginal (below one hectare) holdings has steadily gone up from 50.6 in 1970-71 to 56.5 in 1980-81, and by 1990, their percentage is sure to reach 60.

At this rate, by 2001, the pressure of rural labour force on India's rural economy will be unbearable. Sundaram (1984) has estimated that in that year, with a rural population of 720 million, the rural labour force will be about 342 million, a whopping increase of 100 million in a span of 20 years from 1981 to 2001. How many of these 100 million can be accommodated on the shrinking cultivable land? What sort of land ownership/operation structure will be needed to ensure both growth and equality?

It should be admitted that there was considerable scope for orienting agricultural development strategy more purposefully towards alleviation of poverty. This scope was not fully exploited. While accentuation in regional

inequality in the process of growth is perhaps unavoidable to a certain extent, accentuation of inter-class inequality within a homogeneous region could and should have been checked directly through reform of the agrarian structure and institutions. The most recent data from the 37th Round of the National Sample Survey on Assets and Liabilities of Households as on 30th June, 1981, reveals that in the rural household sector about 39 per cent of households with total assets of less than Rs. 10,000 each shared only five per cent of the value of total assets. At the other end, about eight per cent of households with assets worth Rs. 1 lakh each accounted for 46 per cent of value of total assets. Incidentally, inequality in asset ownership is even more glaring in the urban household sector, but the academicians have chosen to concentrate almost exclusively on rural inequality, perhaps because there are no easy academic solutions to the problem, such as land redistribution, in the urban sector.

Abolition of Zamindari and such other intermediary tenures was indeed a radical reform for this purpose, despite some of the loopholes. But beyond this, performance of land reforms has been dismal. The land ceiling legislation was not sincerely implemented. Its wanton evasion was knowingly ignored. The damage done is irreversible, forcing this author to take a highly unpopular view that the land ceiling legislation has now lost much—though not all—of its potential to make a significant contribution to poverty alleviation. As for the tenancy legislation, while some States—like Gujarat and Maharashtra—utilised it to enhance social justice, a large number of other States have connived at its non-implementation. Share-cropping and concealed or fraudulent tenancy are still rampant. Given the political will, there is still considerable scope for deriving social justice from purposeful enforcement of tenancy laws. The failure in speedily implementing the less spectacular but nonetheless crucial land reforms such as updating and correcting land records and consolidation of holdings indicates disorientation of priorities. Last but not the least disturbing is the phenomenon of privatisation of "common land" to which some scholars have drawn pointed attention. Common Property Resources (CPRs) play a significant role in the life of the rural poor. Based on data from over 80 villages in 21 districts in the dry region of seven States, Jodha's study (1983) reveals that "the per year per household income derived from CPRs ranged between Rs. 530 and Rs. 830 in different States, higher than the income generated by a number of anti-poverty programmes in many areas." Regrettably, the area under CPRs and their productivity are declining. "Large scale privatisation of CPRs has taken place mostly during the last three decades. Privatisation of CPRs was done largely to help the poor .... However 49 to 86 per cent of CPRs ended up in the hands of the non-poor in different areas." Kurien (1986) has elucidated the deleterious consequences of privatisation of common property for the weaker sections. "Traditional rural society was hierarchical and inequitous, yet it was also of mutual obligations. But growing privatisation of resources and the commercialisation of economic activity have almost completely marginalised the weaker sections who find increasingly that they have to buy things which they formerly used to receive in the form of traditional claims ... Special men-

tion must be made of the manner in which common property resources—grazing lands, waste lands, forests, water resources—are coming to be eroded through the interrelated processes of privatisation and marketisation."

## EQUITY

Degradation of forests and dwindling of grazing land are also hurting the poor most (CSE, 1985). The point we wish to emphasise is that while anti-poverty programmes are launched by the dozens, social and economic processes which continuously deplete the resources from which the poor derive their income and employment and make their traditional skills redundant are either not noticed or ignored and effective action to stop such processes is rarely taken. Thus, what the Government gives to the poor through its anti-poverty programmes is taken away, not too unstealthily, by the social process dominated by the rich.

In the context of the scenario depicted above, what sort of agricultural development strategy can conceivably help the agricultural sector to contribute more positively to the objective of growth with equity? It is obviously beyond our competence to suggest something quite original in this regard. At best, we can refer to some of the major issues which have sprung up from an earnest debate on alternative strategies.

The Indian planners and policy makers have been keenly aware of the stupendous problem of growth and reconciling it with equity. The approach to the problem has maintained its facade but not the weightages of its internal composition. It is not necessary to chronicle all the shifts in approach from Plan to Plan and over the three and a half decades of development planning. Much has been written on it. The Fifth Plan was perhaps more specific on development strategy and initiated what has come to be known as a direct attack on poverty, which however was not restricted to target oriented special anti-poverty programmes. The Fifth Plan recognised that poverty abolition would entail a massive transfer of resources from the top three deciles to the bottom deciles.

In the Seventh Plan, the emphasis on asset and income redistribution is rather muted. There is hardly any search for new, imaginative and innovative approaches to reduction in assets and income inequalities. Since the poverty levels have come down significantly, according to the Planning Commission, what is now needed, in its view, is a more determined effort to push forward the current anti-poverty programmes and implement them more efficiently. The emphasis now is on science and technology for the solution of the poverty problem. To quote from the Deputy Chairman's Preface to the Seventh Plan: "Recent experience suggests that by harnessing the forces of modern science and technology, it is possible, as never before, to ensure that chronic poverty need not be the inevitable lot of a majority of humankind." This is what is often derisively characterised as a 'technocratic' approach to development.

There is however one reference in the Preface which I must cite and endorse. Along with the reiteration of the need to sustain the tempo of modernisation and social development, the Preface observes: "Simultaneously, we must evolve new structures, new attitudes, a new moral code, a new work ethic, a sort of cultural revolution, if you wish, which lays emphasis on dedication and commitment. . . . " Somewhat rhetorical, but the reference to attitudes, moral code, work ethics are very welcome and opportune. I only wish, the contents of the moral code and new ethic were spelt out in the context of development strategy whose principal objective is social justice.

The Preface refers to "the dream of Mahatma Gandhi to wipe out the tears from the eyes of each and every individual in our country." But the Mahatma also spoke of Trusteeship, exhorting the capitalists and the landlords to renounce the rights and privileges of ownership. At the Round Table Conference he had proclaimed: "When Independence comes, every title to property would be subjected to scrutiny, and confiscation ordered where necessary." The Plans talk constantly about poverty and its alleviation but scrupulously avoid even a mention of unmerited affluence. Do the planners believe that poverty would be eliminated without touching affluence ? Is the ethics which permits poverty to be generated and sustained different from the ethics which generates affluence ?

## STRUCTURAL ISSUES

This brings us to the major critique of the development strategy pursued during the planning era. Let us first put it in moral terms before it gets enmeshed in the technical jargon. Briefly it says: equity oriented policies and programmes pursued within the cast-iron inequitous economic structure—of ownership of assets—will not only be self-defeating, but may prove counterproductive, through a 'trickle up'. More simply, a direct attack on poverty without an equally direct attack on the structure, which has bred poverty and continues to do so, is an illusion at best, fraud at worst. The dilemma of 'A Moral Man in an Immoral Society' which the philosopher Neibuhr has posed !

A simulation model developed by Sinha *et al.** (1979) shows that "a spill over effect of a net injection of one rupee to the rural bottom class would result in an overall increase in income of Rs. 1.916 in the rural areas, distributed in Re. 0.213 to the bottom class, Re. 0.520 to the middle class and Rs. 1.183 to the top class (apart from an income generation of Re. 0.640 in the urban areas)" (quoted by Kurien, 1986). Another simulation model worked out by Adelman and Robinson (1978)—which I had cited in an earlier paper (Dantwala, 1983)—leads to a surprising conclusion that "most anti-poverty policies eventually help the rich and the middle income groups more than they help the poor. This is so even when, as in our experiments, the rich are taxed quite progressively to finance the programs, the programs are designed so that their initial impact is quite specific in favouring the lower income groups, and there is no graft, corruption, diversion, or stupidity in their execution. This

* The models in the book are based on Indian empirical data.

trickle up effect was evident in a great many different policy experiments and is difficult to avoid. Second, our experience with a wide range of policies indicates that it is much easier to make the income distribution worse than to improve it."

Summing up the findings of some of these studies and his own analysis, Kurien (1986) observes: "What strategies such as target group programmes attempt to do is to achieve through administrative interventions some *redistributions* in favour of those who do not have resource power. The interventionist strategy, therefore, is an attempt to correct the structural *consequences* without altering the structural *characteristics*."

What may be called the 'Sinha-Adelman-Kurien' thesis deserves a serious debate. The thesis, to repeat, is that given the structural milieu, policy interventions of the poverty alleviation type benefit the non-poor more than the poor. The essentiality of structural change cannot be questioned. It is, however, necessary to be more specific about the components of the alternate structure compatible with available resources. Second, since the existing power structure will not be interested in bringing about the desired structural change and would, in fact, do its utmost to prevent such change, who will accomplish this task and how ?

The economists should not evade this question on the ground that it is for the political scientist and activists to provide the answer. Lastly, will the altered structure endure and retain its benevolent character without a supportive change in the value system of the new power base ? It will not be realistic to assume that the new economic structure will automatically generate an appropriate value system. We know that the structures have changed but the values needed to support the structure did not is an old structure-superstructure theme. If the change in ethics without the change in structure is futile, so is the change in structure without the change in ethics. We are back to the stimulating structure-superstructure debate.

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