

## SOCIO-ECONOMIC DEVELOPMENT IN THE ARID REGION OF RAJASTHAN

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### ABSTRACT

The level of socio-economic development and the incidence of poverty was studied for the arid districts of Rajasthan. Poverty was measured by using the head-count ratio, poverty-gap and the Lorenz ratio of the distribution of income. In the western region, 43.34 per cent of the rural population lives under the poverty line and the poverty gap is 29.16 per cent of the required level. Bottom 25 per cent cultivators have only 5.9 per cent of total rural assets but 23 per cent of total liabilities. Most of the debt incurred is for meeting out household deficit. For the study at district level, composite indicators of quality of life, agricultural development, agrarian relations, agricultural infrastructure, input use and industrial development were computed for 1970-71 and 1980-1981. Infrastructural development is low, agrarian relations are pre-capitalist and industrial development is slow. The situation does not seem to have significantly improved during 1971-1981.

### INTRODUCTION

Social situations are reflected and affected by the level and dynamics of socio-economic development. Although every socio-economic aspect cannot be quantified, yet close proxies can be used to develop an understanding of the level, growth and nature of socio-economic development in any region. For presenting the complete picture of socio-economic development, multivariate devices can be used and composite indicators can be developed.

Natural, demographic, social and industrial factors condition the level, nature and direction of development. However, the most important factor is the nature of relations of production. In this paper, an attempt has been made to bring out all these factors at two levels of aggregation : regional level (consisting of several districts) and district level.

### MATERIAL AND METHODS

National Sample Survey and All India Rural Debt and Investment Survey (AIDIS) conducted by the Reserve Bank of India divide the districts in Rajasthan into four regions as follows :

I	Western region	: Barmer, Bikaner, Churu, Jaisalmer, Jalore, Jhunjhunu, Jodhpur, Nagaur and Sikar
II	North-eastern region	: Ganganagar, Alwar, Bharatpur, Sawai Madhopur, Jaipur, Tonk, Bhilwara, Ajmer, Pali
III	Southern region	: Banswara, Dungarpur, Udaipur, Sirohi
IV	South-eastern region	: Jhalawar, Kota, Bundi and Chittorgarh

While presenting results for the nine districts in the western region, we are also giving data pertaining to Pali district, since in many official and non-official reports, Pali is included in this region (Census of India, 1951).

Data pertaining to household consumption expenditure, poverty, employment, indebtedness, land relations and rural labour were available for regions only. These were first processed for the western arid region of the State in contrast to the other three regions. Following this, the level of development and the nature of socio-economic relations in each of the districts in the arid region were examined.

#### Preparation of poverty profile

The poverty measures were computed on the basis of the 2400-calorie norm. The average per capita expenditure required for obtaining this calorie norm defines the poverty line.

For capturing relative poverty, Lorenz ratio of the distribution of income (household expenditure) was computed.

The head-count ratio does not consider the distribution of the poor under the poverty line and the effort required to pull them to that level. This is measured by poverty gap. Poverty gap is defined as

$$I = \sum g_i / qz$$

where  $g_i$  is the difference between the poverty line expenditure ( $z$ ) and the income (expenditure) of the  $i$ th individual, and  $q$  is the number of persons under poverty line (Sen 1983).

Thus, in the present study, four nutrition - based poverty measures were calculated for rural areas :

1. Poverty line expenditure
2. Percentage under poverty line (head-count index)
3. Poverty gap or income gap
4. Lorenz ratio

The data are available at only the regional level and are based on the 27th round of the NSS for the year 1972-73 (NSS, 1983).

#### District Level Indicators

Many composite indicators using several proxy variables for this purpose. (Mehta and Dave, 1987 and Dave, 1985) were developed for district level poverty indicators, since published information for crucial variables was not available. These were:

Q<sub>1</sub> = Quality of life index based on literacy, child/women ratio, and education

Q<sub>2</sub> = Quality of life reflecting the technological level of consumption

A = Level of agricultural development based on productivity of land and labour and degree of commercialisation

AI<sub>1</sub> = Level of development of agricultural infrastructure and use of inputs

AI<sub>2</sub> = Indicator of agrarian relations based on tenancy, labour relations and cooperativisation.

I = Index of industrial development.

Composite indicators were developed for 1971 and 1981 using factor analysis. Ranking method was used to depict the demographic situation; without inequality in development, the rank ought to be 13.5 (since there were 26 districts in Rajasthan in 1971 and 1981).

### RESULTS AND DISCUSSION

The comparative picture of poverty in the four regions of Rajasthan is presented in Table 1. At 1972-73 prices, the cost was Rs. 43.16 per person per day to obtain 2400 calories of energy in the western region and only Rs. 33.94 in the south-eastern region. This could be explained for two reasons: Inhabitants in the arid region consume better quality food grains and other food items which naturally cost them more, and/or, (b) prices are higher in this region than in the other regions. In any case, the poverty line expenditure in this region is substantially higher than in the other three regions. The proportion of persons in rural areas not able to meet even the poverty line expenditure i.e., the percentage of rural population under poverty line, is the highest in the tribal-hilly southern region (83.95 per cent). It is the lowest in the north-eastern region (27.22 per cent).

Table 1. Poverty indicators for regions of Rajasthan, 1972-73 (computed from NSS, 1983)

Measure	Region			
	Western (arid)	North-eastern	Southern	South-eastern
Average expenditure for obtaining (2400 calories (Rs)	43.16	35.67	41.03	33.94
Population below poverty line (%)	43.34	27.22	83.95	32.59
Poverty gap (expenditure)	29.16	26.66	30.24	30.24
Lorenz ratio (expenditure)	0.2596	0.1423	0.2565	0.2920

On an average the monthly expenditure of the poor falls short of the poverty line expenditure by 29.16 per cent in the western region. This proportion (i.e. poverty gap) is also the highest in the southern region though it is not as high as the Head-count measure would suggest. This implies that in the southern region most of the poor are well below the poverty line. Substantial effort would, thus, be required to pull them up to the poverty line.

#### Assets and liabilities profile : Distribution of means of production

In a predominantly agro-based rural economy, analysis of the production relations in agriculture is of paramount importance in understanding the nature and causes of poverty. This analysis hinges critically on the ownership of land and implements, and control of credit and product markets. An insight into these relations can be obtained by the analysis of data generated by the All India Rural Debt and Investment Survey of the Reserve Bank of India. Results based on the studies relating to assets liabilities (AIDIS, 1974) are presented in Table 2. They reveal that in the western region, the bottom 25 per cent of cultivator households own only 3.3 per cent of land by value and 5.3 per cent of implements. The distribution of these assets is so much skewed in the favour of the top 25 per cent asset holders that their ownership of value of land and implements is 13.8 and 21.7 times that by the bottom 25 per cent households. In contrast to the asset position, the poorest of asset holders account for very high proportion of total liabilities. It is also interesting to note that of the other non-cultivators, the top 25 per cent households control 96.4 per cent of dues receivable (Mehta and Prashad, 1988). As expected the asset position of the agricultural labour households is precarious.

Table 2. Distribution of assets and liabilities of cultivators in Rajasthan (computed from AIDIS, 1971-72)

		Western (arid)	North- eastern	Southern	South- eastern
Total assets	Q <sup>1</sup>	5.3	3.0	18.3	8.6
	M	18.6	12.8	22.3	17.1
Value of land	Q <sup>1</sup>	4.4	2.4	14.7	5.6
	M	16.1	9.3	18.0	11.1
Implements	Q <sup>1</sup>	3.3	4.4	14.7	11.5
	M	13.8	67.2	17.5	22.2
Liabilities	Q <sup>1</sup>	23.5	16.1	27.8	17.2
	M	46.0	29.7	32.7	34.1
Dues receivable	Q <sup>1</sup>	0.6	3.6	10.0	15.6
	M	9.4	5.2	12.3	30.7

Q<sup>1</sup> = First Quartile, bottom 25 per cent asset holders

M = Median, bottom 50 per cent asset holders

Income earning capacity of the rural population is critically dependent on the ownership of productive assets including land, livestock, implements, and transport and other equipment. Almost all agricultural labourers and artisan households own productive assets worth less than Rs. 2500 in western as in well as other regions (Table 3). Similarly, nearly 31 per cent of cultivator households are asset-poor in this region. The tribal southern region is the worst sufferer. Of the other non-cultivators, 80 per cent have productive assets worth less than Rs. 2500. However, the remaining 20 per cent hold almost all dues receivable (i.e. financial assets). Thus a minority of non-cultivators, mainly professional moneylenders and traders, control most of the credit resources in the western region (AIDIS, 1974).

Table 3. Percentage of households, in Rajasthan (year 1971) having productive assets worth < Rs 2500

Households	Region			
	Western (arid)	North-eastern	Southern	South-eastern
Cultivators	31	13	50	23
Agricultural labourers	100	96	100	90
Artisans	98	100	100	99
Other non-cultivators	80	92	93	100

#### Operation of the lease-market

In a recent study, we presented results regarding the lease, labour and credit markets (Mehta and Prashad, 1988). According to this study, in the western arid region, 9.44 per cent households have reported leasing-in and 3.47 per cent leasing-out of land. Both the proportions are the lowest among the four regions. Pattern of leasing activities of cultivators are different. In the western region partial leasing-out is less prevalent and is mostly confined to the larger land-owning groups. In contrast, leasing-in is mainly by the smaller land owning households. This pattern is in sharp contrast to those in the other regions. In the north-eastern and south-eastern regions middle peasantry is becoming dominant. In the southern and western regions, ownership farming is the dominant feature, though in the western region feudal exploitation of the small tenants is continuing (Mehta and Prashad, 1988).

#### Credit market

Availability of the extent, purpose, source and terms of credit determine the extent and nature of exploitation. As revealed by the All India Rural Debt and Investment Survey 1971-72, the average debt per cultivator household in the western region is the highest in the state (Rs. 1075) and only Rs. 576 in the southern region, the same per agricultural labour household is Rs. 545 and Rs. 101, respectively (AIDIS

development is, as expected, reflected in the below average performance of agriculture in almost all districts except in Pali. In fact, the performance seems to have deteriorated in almost all the districts between the period 1971-1981.

As a consequence of poor development, most of the districts in the region continue to have low physiological density of populations. Still, urban growth during 1971-1981 accelerated in Jodhpur, Bikaner and Barmer districts. It has been above the State level in Churu, Jalore and Sikar in 1981. Much of the urbanisation and migration is without the pull effects of agricultural and industrial development and it may have serious sociological consequences.

### CONCLUSIONS

The analysis of socio-economic development in arid western Rajasthan reveals an overall level of the forces of production and the production relations in this region in general and in most of the districts in particular. A deeper study of socio-economic problems and the dynamics of sociological phenomena is all the same required for policy planning in this region.

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