

Poverty Debate in India: A Minority View

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Rural socio-economic change is often inadequately captured by social science research in the field. This happens partly due to perceptions of the researchers and partly due to inadequacies of research tools and approaches. This paper illustrates the situation by presenting evidence on incidence of rural poverty in two villages of Rajasthan as examined through different approaches, during 1963-66 and 1982-84. Households that have become poorer by conventional measurement of income in fact appear better off when seen through different qualitative indicators of their economic well-being. The paper suggests the need for supplementing conventional measurements of income by qualitative indicators of change to arrive at a realistic understanding of rural socio-economic change.

The Fallacy:

- The first step is to measure whatever can be easily measured: This is ok as far as it goes.
- The second step is to disregard that which cannot be measured or give it an arbitrary quantitative value: This is artificial and misleading.
- The third step is to presume that what cannot be measured easily is not very important: This is blindness.
- The fourth step is to say that what cannot be easily measured really does not exist: This is suicide.

A Smith, *Super Money*

I

Introduction

THE paper represents a minority view in the context of mainstream situation where, following the seminal work by Dandekar and Rath [1971], researchers are competing with each other in proving higher and higher incidence of poverty in India with the passage of time. Secondly, the data used here, though rich in depth, covers a small sample. According to this paper part of the problem lies in the methods and distance with which we are accustomed to look at the field realities. Consequently, contemporary field-oriented social science research is often marked by contradictions and inconsistencies between the results obtained by macro and micro-level studies, between the observed or experienced realities and the results generated by field research and between observed developments and the ones indicated by field research. This problem is acute in studies of rural change. Factors underlying such changes are too detailed and at times too complex to be captured by standard and simplistic methods. Hence, inconsistencies between results from different field studies can be largely attributed to methodology. This paper discusses methodological aspects of rural economics, and suggests the need for supplementing standard techniques with methodological approaches appropriate to the field. A case study covering two villages in Rajasthan is presented to illustrate the gap between incidence of poverty when assessed through two different approaches.

II

Methodological Gaps

Methodological deficiencies of field studies in social sciences are often associated

with: (i) the concepts and categories used for identification of rural realities; (ii) the yardsticks and norms employed for assessment or measurement of rural realities; and (iii) the 'communication gaps' between researcher and respondent while using (i) and (ii) mentioned above.

The concepts and categories used to identify and classify rural realities are often too restrictive to encompass the details of petty but collectively significant components of rural characterisation. Appendix A presents a few examples. They indicate the possibility of disregarding variables and their interactions, while using the formal/standard concepts for identification of different facets of rural household economy.

What applies to the choice of concepts and categories also applies to choice of norms and yardsticks. The limited coverage of rural realities, owing to the use of restrictive categories, is further reduced by using standard yardsticks to measure them. The factors that do not lend themselves for easy assessment/measurement through these yardsticks are often bypassed while measuring and quantifying different variables.

These limitations are now increasingly recognised and the need for supplementing the formal concepts and norms by qualitative approaches is emphasised [see Streeten 1974, McCloskey 1983, Sen 1983, Chambers 1986].

Realising the gap between what is reported through formal field studies and reality researchers have attempted to dilute or widen the standard categories and yardsticks. Despite that, inconsistencies between results from different field studies persist. They exist because of several factors, which we may call 'communication gaps'. These gaps take place in three forms:

(i) Difference in the connotation of the same concepts as they are understood by the respondent and researcher. For instance, the connotation of 'manday' or 'man-hour' of labour input as understood, estimated, and reported by a 'not so time-conscious' farmer, may be different from the investigator's understanding.

(ii) Qualitative difference in the yardsticks and norms used by researcher and respondent for measurement of variables. For instance, a farmer reports use of farmyard manure in terms of cart-loads, the researcher attempts to understand and record it in terms of quintals. Establishing quan-

titative equivalence between such categories is often difficult.¹

(iii) Difference in the degree of precision/vagueness attached to the quantitative information by the respondent while giving the response and by the investigator while recording it. For instance, a farmer often reports quantitative information in terms of range of units or hyphenated terms (e.g. 10-12 mandays spent on weeding a plot), while the investigator seeks and, using his best judgment, records it in precise terms. The analyst often goes a step further and subjects these data to sophisticated quantitative techniques which are sensitive to variations as small as a fraction of an hour.

Appendix B illustrates some possible 'communication gaps'. Their extent depends on the difference in the background and working environment of the respondent and the researcher, the relative degree of seriousness with which investigations are taken up by the two, and the ability of investigator to establish precise equivalence between the respondent's report and the researcher's intended record or actual record.

Depending on the degree of 'communication gaps', the results of different field studies of the same phenomenon in the same area/community may differ. Other things being equal, the possibility of such gaps being wider is greater in the macro-level studies than those of micro-level studies. There are greater opportunities for participant observation as well as prolonged and more intimate contact between the respondent and researcher that help narrow down the 'communication gaps'.²

It is not difficult to imagine the distortions (under-reporting/over-reporting), generated by these gaps in values of different variables recorded through household surveys. Table 1 illustrates the point on the basis of data culled from different studies with which the author has been associated. The data reported in Table 1 relate to the cases where the extensive approach to data gathering was supplemented by subsequent detailed purpose-specific, intensive investigation, following the first stage screening of data. Although the number of observations in most cases is small, they do help illustrate the point.

Important implications of the methodological gaps include generation of inconsistencies of the result from different studies on the same subject and the possibility of

misleading the whole approach of future research as well as future policies relating to specific subjects.

One way to reduce the gaps is to supplement the researchers' approach by the respondents' approach of looking towards the issues being studied. One may profitably look at categories and norms used by the respondent for identification and assessment of variables affecting him or her.

In the following section this approach has been attempted. For the purpose of illustration we have taken one of the most debated themes of the day, viz, the change in incidence of poverty in rural areas.

III

Approach and Data

For studying the change in incidence of poverty we have data for two periods of time covering a sample of farmers' from two villages in the arid zone of western Rajasthan. There are several criteria—e.g., change in household income, consumption level, extent of employment, etc., used by social scientists to assess the change in poverty levels. We have data on net household or per capita income collected by using the conventional concepts and yardsticks to measure income. Additionally, we have included the categories or concepts which farmers/villagers themselves use for assessing

changes in their own economic status. These indicators of their economic status or poverty levels not only help in assessment of change but they also facilitate the understanding of the process of change. They tend to capture existing situation as it operates rather than capture its formally quantifiable proxies. Through use of these norms or indicators, it is easier to reduce the above 'communication gaps' and capture the past despite long periods of recall. Their major limitation is that they involve a more 'investigation-intensive' approach to field research, because they require researchers to approach the respondents' level of thinking and the issues studied. They put greater emphasis on participant observation.

The choice of these 'unconventional' indicators of change in the present study emerged from anecdotal information collected during resurveying the study villages in 1978. They were initially studied (through prolonged stay there, i.e., over 20 days in every month for three years ending 1965-66). The anecdotes suggested the possibility of substantial change in the economic status of households considered poor during 1963-66. The anecdotes were used for developing specific questions and a list of variables, which in the village context, were considered as real indicators of change in the people's economic status over time. These indicators guided the participant observation as well

as collection of quantitative information from 95 selected households. Those households belonged to two villages, one each in Nagaur and Jodhpur districts of Rajasthan. They constituted a part of a larger sample of households studied in 1963-66. Information about and from these 95 households was collected in instalments during 1977-78, 1982-83, and 1983-84 during field work for other projects.⁴ Additionally, details about the whole village situation were collected. Broad information on major changes (since 1963-66) observed in the study villages was also gathered from *chokala* (clusters of neighbouring) villages. The information indicated that study villages were not atypical in terms of these changes. The sub-sample of 95 households consisted of farm households only. It included 35 small and marginal farm households, i.e., who owned less than 4.5 hectares of arid land.

FARMERS' PERCEPTION OF CHANGE

Income data of the sample households were collected using the standard concepts employed by farm management studies in India. Net income data covered the following sources: crop production, animal husbandry, labour/bullock hire, remittances, rental, petty trading, and property income. Net income figures were arrived at by deducting paid out and imputed costs of all in-

TABLE 1: DIFFERENCES IN VALUES OF SELECTED VARIABLES ACCORDING TO METHOD OF DATA GATHERING

Variable	Number and Type of Observation	Unit of Measurement	Value as Per the Choice of Methods (b)		Difference in Values		Reasons for Difference: Items Bypassed by (A) and Captured by (B)
			Method(A)	Method(B)	Absolute A-B	$\frac{A-B}{A} \times 100$	
Average income	78 households (hh) (4 villages)	Rs/hh	6814	7564	-750	-11.0	Income from casual, routine activities based on common property resources [Jodha 1986].
Gross returns	19 hh, 23 plots, (1 village)	Rs/ha	291	334	-43	-14.8	Casual harvest of minor crops for self-provisioning, etc [Jodha et al 1978].
Per worker/day engagement in farm activities	12 hh, 44 workers (2 villages)	Hours/day	6.75	9.58	-2.53	-41.9	Petty and routine farm activities [Jodha et al, 1978, Ryan et al, 1984].
Value of food consumption	32 hh (4 villages)	Rs/person (for 3 week one in each season)	68	79	-11	-16.2	Food items from common property resources/petty self-provisioning arrangements [Jodha 1986].
Use level of tractor	12 tractors (2 villages)	Hours/week	73	105	-32	-43.8	Most part of tractor hiring [Jodha 1974].
Extent of land tenancy	Total leased in/out land, 86 hh (6 villages)	'ha	67	120	-53	-79.1	Tenancy status of plots initially concealed [Jodha 1981].
Cost of food borrowed during drought year	26 hh (2 villages)	Rs/hh	648	822	-174	-26.9	Costs due to interlocked factor markets [Jodha 1977].
Capital investment	78 farms hh	Rs/ha	382	471	-81	-21.27	Accretionary process of capital formation. [Jodha 1967].
Cost of credit from institutions	23 borrowers (5 villages)	Cost as per cent of principal	9	22	-13	-144	Cost of borrowing beyond interest rate [AERC 1971].

Notes: (a) Based on data/information for selected cases, from the studies referred in the last column.

(b) Method 'A' indicates the conventional extensive approach to data gathering through one or two shot surveys using structured questionnaires. Method 'B' involves prolonged and intensive interviews and in most cases participant observations besides what is indicated under 'A'.

(c) These reasons can be related to items mentioned under appendices A and B.

puts from gross income. Being so standardised and so often used, these concepts hardly need further elaboration. However, it may be added that the main purpose of collecting income information during the base period was to relate it to the process of capital formation by the sample households. The income data during the second period were collected to ascertain the extent of contribution of common property resources (pasture, forests, etc) towards household income.

The terms in which villagers narrated change in their own economic status are unconventional, and they require explanation. They are classified under the following five major groups:

(i) reduced reliance of the poor on traditional patrons, landlords, and resourceful people for sustenance, employment, and income;

(ii) reduced dependence on low pay-off jobs/options;

(iii) improved mobility and liquidity position;

(iv) shifts in consumption patterns/practices; and

(v) acquisition of consumer durables.

Information on most of the above items was available from benchmark data on resource endowment, production, marketing, and consumption activities of the sample households. For the resurvey period, it was purposely collected to see the change.

The indicators of change perceived by the villagers can be grouped under categories which are more familiar to economists and used in their professional communication.

They are: (a) indicators of enlarging opportunity sets or increasing number of choices (e.g., in the matter of employment, borrowing, marketing, etc);

(b) indicators of consumption activities with high income elasticities (e.g., travel, slack season purchases, length of maternity feeding of women, etc);

(c) indicators of investment in lumpy consumer durables (e.g., pucca structures of houses, compounds to houses, etc).

CHANGES IN INCIDENCE OF POVERTY

The incidence of poverty in the ongoing debate on the subject in India is judged with reference to poverty line and the changes over time in the proportions of population below the poverty line. Though conceived in terms of per capita consumption expenditure the poverty line is indicated by a figure of monthly per capita income, such as Rs 15 for rural areas at 1960-61 prices, according to Dandekar and Rath [1971] and Rs 65 at 1977-78 prices, according to the Indian Planning Commission (1981). Per Capita annual income of Rs 180 (at 1964-66 prices) may be considered as a poverty line comparable to the one suggested by Dandekar and Rath [1971]. The proportion of sample households in study villages falling below this income level during the two periods is indicated in

Table 2. However, our further analysis follows a different approach. As a first step we compare for each household the annual per capita income (i.e., constant at 1964-66 prices) during the two periods (i.e., 1964-66 and 1982-84). The proportion of households showing more than 5 per cent decline in their per capita annual income is considered as indicator of increased incidence of poverty. The increased incidence of poverty thus revealed is compared with the changes in the economic status of the people revealed by qualitative indicators of change as perceived by the villagers.

The analysis of the income data (Table 2) showed that the average per capita annual income of the sample households was Rs 162 during 1964-66. This increased to Rs 1,050 at current prices during 1982-84. However, when the income was deflated and expressed in terms of constant prices (1964-66 prices),⁵ the figure came down to Rs 175. To arrive at average annual income figures for the base period, the year 1963-64 was not included, because it was a severe drought year. The household by household comparison of per capita income during the two periods (including by pooling the data of households which had split since the benchmark period), indicated that for 38 per cent of the households, the per capita annual income had declined by more than 5 per cent of the base period income. For 47 per cent of households income increased by more than 5 per cent. The remaining households, where per capita annual income changed only within \pm 5 per cent, have been treated as the cases where per capita incomes remained constant during the reference periods.

According to the above figures, 38 per cent of the sample households have become

poorer during 1982-84 compared to 20 years ago. If one goes by the poverty line, i.e., per capita income of Rs 180 per year, the proportion of households below it has increased from 17 per cent in 1964-66 to 23 per cent during 1982-84. But the latter does not include all the households that constituted the group under poverty line during the base period. In other words some households who were below the poverty line in 1964-66 have risen above it during 1982-84.⁶

TABLE 3: INDICATORS OF DECLINING INDISPENSIBILITY OF PATRON'S (RICH PEOPLE'S) SUPPORT/MERCY/PATRONAGE FOR EMPLOYMENT, INCOME AND SUSTENANCE OF POOR HOUSEHOLDS^a

Indicators	Per Cent of Households during	
	1963-66	1982-84
Households with one/more members working as attached/semi-attached labour	37	7
Households residing on patron's land/yard	31	0
Households resorting to off-season borrowing of foodgrain from patrons	77	26
Households taking seed loan from patrons	34	9
Households marketing farm produce only through patrons	86	23
Households taking loan from others besides patrons	13	47

Note: a Details in this and the following four tables relate only to 35 households whose per capita annual income (at constant prices) had declined during 1982-84 compared to 1964-66.

TABLE 2: DETAILS OF INCOME POSITION OF SAMPLE HOUSEHOLDS AT TWO POINTS OF TIME (Per capita annual net income in Rs)^a

Details	Average Situation during		
	1964-66 ^b	1982-84	
		At Current Prices	At Constant Prices ^c
Average per capita annual income (Rs)	162	1050	175
Contribution of different sources of income (per cent)			
—Crop farming	48	43	—
—Animal husbandry	27	33	—
—Labour/bullock hire	14	11	—
—Others (rent, remittance, etc)	21	23	—
Proportion of households with per capita annual income (at constant prices) ^c			
—less than Rs 180 (i.e., poverty line) (per cent)	17	—	23
—showing increase of more than 5 per cent over the period (per cent)	—	—	47
—showing decline of more than 5 per cent over the period (per cent)	—	—	38
—showing positive or negative change up to 5 per cent over the period (constant income) (per cent)	—	—	15

Notes: a Data relates to 95 sample households from two villages one each from Jodhpur and Nagaur districts in Rajasthan.

b 1963-64 being a severe drought year its income figures are not considered.

c At 1964-66 prices.

QUALITATIVE INDICATORS

If one goes by the qualitative indicators of poverty or absence of it as mentioned earlier, a completely opposite picture seems to appear. Tables 3 to 7 illustrate the phenomenon. These tables give details about only those (35 of 95) households whose per capita annual income has declined by more

TABLE 4: INDICATORS OF REDUCED DEPENDENCE ON LOW PAY-OFF (INFERIOR) JOBS IN CASE OF POOR HOUSEHOLDS

Indicators	Per Cent of Households during	
	1963-66	1982-84
Households engaged in ^a		
—food gathering	100	20
—fuel gathering	100	63
—fodder gathering	100	23
Households having members engaged in part-time petty jobs ^b	100	23
Households with members seasonally out-migrating for job	34	11
Households withdrawing their children from school during crop season for work help, earning etc	17	6

Note: a Only items like wild fruits during summer season, and fuel/fodder during post-harvest period are considered. In these cases supply is not a constraint to reduce peoples' dependence on them.

b Jobs like helping in fencing, etc, for getting one meal as wage.

TABLE 5: INDICATORS OF IMPROVED MOBILITY AND LIQUIDITY POSITION OF POOR HOUSEHOLDS

Indicators	Per Cent of Households during	
	1963-66	1982-84
Households selling over 80 per cent of their marketed produce during post-harvest period	100	46
Households retaining up to 25 per cent of surplus for sale up to next rain	0	6
Households purchasing key provisions in bulk	0	6
Households relying on day-to-day petty purchases of key provisions ^a	100	51
Households making cash purchases during slack season festivals, etc	6	51
Households possessing ready cash up to Rs 200 or more at home during slack season	0	26
Households having members who travel by paid transport more than twice a year to outside the district	17	78

Note: a Provisions like chilly, onion, gur, oil, etc.

than 5 per cent during the period under review. Furthermore, these tables present the extent of change in terms of proportion of households whose situation as per the above-mentioned indicators has changed during 1982-84 compared to the base period.

Table 3 indicates the extent of decline in the reliance on patronage and the support of the rich (patrons) for the employment and sustenance of the poor households, i.e., the households that have become poorer since 1964-66 (Table 2). Some of the indicators, such as the practice of attached labour, seed loan in kind (at exorbitant interest rate), marketing produce only through patrons, depending solely on patrons for credit, and residence on patron's land necessitating supply of unpaid and unaccounted labour services to the patrons, have inherent an element of exploitation of the poor. The poor people's ability to dispense with these practices is the surest indicator of their improved economic status. Despite several socio-economic reform measures such as anti-bonded labour laws, etc, the poor people continue to accept these exploitative arrangements by patrons. They tend to give up these arrangements only when they become economically more independent.⁷

The inferior or low pay-off jobs (including food gathering from the fast-declining common property resources) are usually taken up by the poor in the villages (Jodha 1986). The recourse to such jobs declines as one improves his or her economic condition. Table 4 indicates that the group of households that have become poorer in 1982-84, as per the formal income criteria, had relied more on these inferior options during the base period when they were relatively rich. Now, despite increase in their poverty (i.e., reduced per capita income) their preference for inferior jobs has declined, as indicated by proportion of households under relevant categories under Table 4.

Several indicators in Table 5 reveal that general liquidity of the group of households that have become poorer is better now (i.e., in 1982-84) than it was during the base period, when income-wise they were relatively rich. Their ability to make purchase of provisions in bulk by paying for it in a single instalment, cash purchases during summer season festivals, and keeping significant amount of cash in hand during the slack season are definite signs of improvement notwithstanding the decline in their formally recorded income position.⁸

The consumption pattern, particularly in terms of inclusion of items which poor people rarely use, is another indicator of substantial change in the economic condition of these people. Now there is a much higher proportion of the concerned group of households (Table 6) who frequently consume better quality food items,⁹ offer better maternity diet to women for a longer period, and where women and children regularly wear shoes. The only item where the situation seems to have deteriorated is the proportion of households regularly using

TABLE 6: INDICATORS OF SHIFTS IN CONSUMPTION PATTERN OF POOR HOUSEHOLDS

Indicators	Per Cent of Households during	
	1963-66	1982-84
Households occasionally consuming green vegetables during non-crop season	0	100
Households consuming curries mainly made from cereals ^a	100	14
Households using milk/milk products regularly	34	6
Households consuming sugar regularly	0	20
Households consuming rice on non-festive occasions also	0	14
Households with adults skipping third meal in the day during the summer (scarcity period)	86	20
Households where women and children wear shoes regularly	0	86
Households where maternity feeding to women provided up to a month or more	6	23

Note: a As per the local saying one who cannot afford vegetables, etc, eats cereals with the help of poor quality curry made of cereals only.

milk and milk products. This is, in fact, a side-effect of improved milk marketing facilities in the villages. The sale of milk has helped raise the share of livestock income in total income (Table 2), but has also reduced the opportunities for self-consumption of milk and milk products.¹⁰

The situation regarding the changes in the possession of consumer durables seems more impressive (Table 7). Pucca structures of houses, provision of doors and gates, compound walls, separate quarters for humans and livestock in the house, and better facilities for women are important indicators of positive change in the economic status of the people. The higher proportion of the households possessing these items in 1982-84 compared to the base period indicate a substantial improvement in their economic position.

The detailed explanation of these changes falls outside the scope of this paper. However, it may be mentioned that a combination of factors has led to the improved condition of the households in the study villages. Occurrence of these factors observed in several villages of the districts of Nagaur, Jodhpur, Pali, and Sikar in western Rajasthan would suggest that the changes reflected through study villages may extend to wider areas of the region.

The possible factors responsible for improved economic conditions of sample households include the following:

(i) A continuous spell of good rain years during 1974 to 1978.

(ii) Possibility of double cropping in sandy loam soils without change in rainfall or irrigation due to *raya* (a minor oilseed) crop

for post-rainy season, brought by seasonal migrants to Punjab in the early 1970s and its spread in the dry region without any research and extension effort. The net returns from this crop are higher than the main rainy season crop like pearl millet.

(iii) Coverage of larger area by moisture conserving practice of bunding, which in association with timely ploughing through tractors helped in adoption of hybrid pearl millet like BJ4.

(iv) Facility of milk marketing which generated regular cash income and also induced changes in the composition of animal

TABLE 7: INDICATORS OF CHANGE IN ASSET POSITION OF POOR HOUSEHOLDS

Indicators	Percentage of Households	
	1963-66	1982-84
Households having houses with		
—fully pucca structure	0	14
—partly pucca structure	9	52
—only kutchra structure	91	34
—gate with doors	6	43
—compound wall/fence	13	52
—separate provision of stay for humans and animals	6	52
—private place (bath room, etc) for women	0	23
Households possessing:		
—quilts of cotton	6	20
—quilts of old rags	94	80
—radio	0	7
—bicycle	0	3

holding discouraging ownership of unproductive animals.

(v) Reduced incidence of guini-worm among adult workers in the recent years which often incapacitates them during the crop season. This happened due to Drought Prone Area Programme (DPAP) provision of piped groundwater supply for drinking, replacing traditional practice of using pond water.

(vi) Off-season employment under rural works programme/DPAP and regular off-farm jobs to some people.

(vii) Institutional reforms helping people in getting lands including house sites and reduction in indebtedness.

(viii) Gains to poor as a byproduct of factionalism among the rural rich, where each faction tried to woo the poor for their support.

Table 8 summarises the changes in the situation with reference to some of the factors mentioned. The data relate to the 95 sample households.

TOWARDS RECONCILIATION

(i) The first inference from the perusal of information under Table 2 on the one hand and Tables 3 to 7 on the other, is that the extent of increased incidence of poverty reflected by Table 2 is not borne by the qualitative indicators of change under the remaining tables.

Part of the explanation could be that we have considered all households, whose per capita annual income has declined by more than 5 per cent of base period income, as

having become poorer over time. They may include some households who were rich enough and a fall of 5 per cent in their income did not make them much poorer. However, the data for households grouped according to level of decline in income were also examined. The emerging number of observations in each group became too small to be meaningfully reported. However, the inferences from retabulation, which could help to satisfy the above objection may be mentioned:

(a) The proportion of households showing qualitative improvement in economic conditions as per the above indicators were not very different in the case of sub-groups of high and low income households, which suffered decline in their per capita annual income as per Table 2.

(b) Even the 23 per cent of sample households who were below poverty line (i.e., per capita annual income of Rs 180 at constant prices (Table 2), had a fairly large proportion of households that showed improvement in their economic status as per the qualitative indicators discussed above.

(c) There was a small number of households in the group that neither faced decline in their per capita annual income nor slipped below the poverty line and yet did not show improvement in terms of qualitative indicators.

Thus the main explanation may lie in the use of specific approaches to assess and record economic change affecting the rural households. Furthermore, change in economic status revealed by qualitative indicators is an outcome of gradual change over a period of time. Difference of per capita net income at two points of time may not capture this change. The measurement of income at one point in time captures only the current transitory component of income. The permanent components (accumulated transitory components) of income in the past are not captured. This reinforces the need for revising the research approach to understand the dynamics of rural change, and to cover permanent components, of income besides the transitory components, each of which may not move in the same direction.

(ii) The reported case study is so small in its coverage to encourage any generalisation of results. However, this does indicate the need for complementing formal concepts and norms by more informal categories and methods to capture a greater extent of reality through social science research in the field. It also underscores the importance of participant observations and in-depth micro-level investigations in field studies

(iii) Intensive and qualitative information gathering may prove costly. Hence, this approach can be used for generating relevant indicators (proxies) that can form part of the large-scale, formal data-gathering projects. Furthermore, the insights received through such intensive investigations can help in the better interpretation of results from extensive studies.

TABLE 8: POSSIBLE FACTORS UNDERLYING QUALITATIVE IMPROVEMENT IN CONDITION OF SAMPLE HOUSEHOLDS SINCE 1963-66^a

Factors	Units of Observation	Average (Per Year) Situation during		Remarks
		1963-66	1982-84	
Extent of <i>raya</i> ^b crop	Percent of total cropped area	0	26	
Extent of hybrid pearl millet	"	0	38	
Extent of irrigation	"	1	4	
Extent of tractor cultivation	"	7	68	
Extent of bunding	No of plots	43	134	Mostly by hire Cumulative totals
Households selling milk	No	5	36	
Unproductive animals per productive animal	No	6	2	Cows and buffaloes only
Off-farm regular jobs	No	7	29	
People affected by guini-worm ^c	No	58	4	
Litigation cases	No	27	5	
Non-workers per worker	No	3.9	3.2	
Households benefiting from:				
i Institutional reforms	No	0	18	Got land animals, debt reduction etc, since 1986.
ii Factionalism among the rich	No	0	29	

Notes: a Data relate to 95 sample households only.

b *Rayu*, a high value small oilseed post-rainy season crop, has spread without any research or extension effort in the region.

c Guini-worm disease caused by drinking water from ponds. Piped water supply under DDAP scheme helped reduce it.

(iv) A factor which can enhance the complementarity of the macro-level and highly quantitative studies on the one hand and intensive and micro-level research on the other is close links of principal researchers with the field situation.

(v) This case study indicates the need for a fresh look at the conceptualisations underlying the measurement of the level and change in rural poverty. The complementary use of quantitative and qualitative concepts can help improve our understanding of the dynamics of poverty.

(vi) To the extent that the incidence of poverty can be partly inferred from observance of poverty indicators, the next problem relates to the possibility of measurement of these indicators for comparative studies. To the extent a part of the indicators of change discussed in this paper may be area or community-specific, their use for inter-community comparisons will be limited. Thought may be given to evolution of some indices on the pattern of currently

debated 'Quality of Life Index' as against gross domestic product, etc, as a better indicator of a nation's economic well-being.

Notes

- 1 In ICRISAT's village level studies, the measurement problems have been handled by physical weighing or measuring of the quantities reported in volumes. Such conversions were done on random basis to evolve equivalence between two categories. See Binswanger and Jodha [1977].
- 2 Various types of measurement errors emanating from aforementioned factors will influence the results depending on the type of analysis. For instance, if a variable is measured with a random error, that will not affect the estimate of its mean and regression estimate if it is the dependent variable in a multivariate regression. But it still will bias towards zero its coefficient if it is used as a right-side variable in a regression. On the other hand, systematic measurement error may cause more or less problems, depending on the mode of analysis and

nature of the error. Systematic measurement error will bias the mean but may not bias the regression. This may be added that systematic mismeasurement over time should not lead to the obfuscation of changes in the variable that is being mismeasured. If mismeasurement errors themselves do not change over time, valid conclusion on dynamics can still be drawn.

- 3 Our sample does not include a landless household. There were hardly any landless households (except traders, etc) in the study villages. In fact, landlessness of the type observed in high population areas can hardly survive in the arid lands. Furthermore, a number of sample households of benchmark period had split over time. For the purpose of comparison at two points of time data of such households were pooled to reconstitute original households.
- 4 Data during 1963-66 were collected as a part of the field work for the author's PhD thesis [Jodha 1967] and land transformation studies of Central Arid Zone Research Institute (CAZRI). The data for subsequent periods were gathered while collecting information for ICRISAT's research projects on Farmers' Group Action for Watershed Based Resource Development in 1977-78, and Role of Common Property Resources in Farming Systems in 1982-84 [Jodha 1986].
- 5 Income during 1982-84 was deflated by the extent of increase in gold price in the villages. The logic of using the change in gold price as index of inflation is that one *to/a* (10g) of gold fetched the same quantity of bajra (pearl millet)—the staple foodgrain of the people—in 1982-84 as it fetched in 1964-66. However, gold price per *to/a* has increased by about six times since then. For further details on this approach see Jodha [1985]. The calculations based on changes in consumer price index for agricultural workers in Rajasthan during the period under review also indicated the price change of similar magnitude (i.e. 5.7 times).
- 6 In terms of rainfall and crops 1963-64 was a complete drought year. As per the *an-nawar* system of crop assessment 1964-65 had bumper crops, while 1965-66 had average crops. The year 1982-83 had above average crops while crops were below average during 1983-84. On an average cropwise the period 1964-66 was slightly better than 1982-84. This influenced the income positions of the sample households to some extent. Of 95 sample households, 35 had less per capita income during 1982-84 compared to 1964-66. A part of it could be due to life cycle related factors such as increased number of members especially dependents in the households. However, due to a variety of factors 22 of the 35 households had income below poverty line during 1982-84. This included seven households who were already below poverty line and 15 households who were above it during 1964-66. There were 11 households who moved above poverty line during the same period.
- 7 Reduced reliance on patronage of rich (and on inferior) options such as Common Property Resource (CPR) activities, could be both supply-determined and demand-

Appendix A

EXAMPLES OF CONCEPTS/CATEGORIES AND YARDSTICKS/NORMS USED BY SOCIAL SCIENCE RESEARCHERS TO IDENTIFY AND MEASURE VARIABLES COMPRISING RURAL REALITIES AND FACETS OF REALITY LIKELY TO BE BYPASSED BY THEM

Concepts and Norms	Aspects Covered	Facets Bypassed
Household income	Cash and kind inflows (including imputed values of major non-traded items).	Ignores time context and transaction partner context of income generating activity; disregards flow of low value self-provisioning activities with significant collective contribution to sustenance of the people.
Farm production	Production from all farm enterprises.	Series of intermediate activities (often considered as consumption activities), which facilitate the final output from farm enterprises in self-provisioning societies.
Food consumption basket	Volume and quality of formally recorded food items.	Ignores seasonally varying streams of self-provisioning items/services.
Household resource endowment	Only privately owned land, labour and capital resources.	Ignores households' collective access to common property resources; access to power and influence too.
Factor/product market	Competitive, impersonal interactive process of framework.	Ignores distortions, imperfections, etc, due to factors like influence, power, affinities and inequities.
Farm size grouping	Based on owned or operated landholdings (often standardised for productivity and irrigation).	Ignores totality of asset position including household's access to common property resources, its workforce which determines households' ultimate potential to harness land resources and environment for sustenance.
Labour input	Labour as standard unit expressed in terms of man-hours or mandays, etc, (Differentiation based on age and sex not withstanding).	Disregards heterogeneity of labour of same age/sex in terms of differences in stamina and productivity; ignores differences in intensity of effort of a self-employed worker and hired worker. (In appropriate imputation of value of the labour of self-employed worker is done on the basis of wage rate of hired or attached labourer).
Capital formation	Acquisition of assets.	Ignores accretionary process, and petty accretions which are important collectively.
Depreciation of assets	Book-keeping-value based reduction in the worth of the asset.	Ignores continued usability and recyclability.
Efficiency/productivity norm	Quantity and value of final produce of an activity (based on market criteria)	Ignores totality of the operation of the system directed to satisfaction of multiple objectives rather than single criterion.

Appendix B

EXAMPLES OF 'COMMUNICATION GAPS' (UNDER THREE CATEGORIES).

(1) Possible differences in connotation of same concept as understood by respondent and researcher.

Concept	Connotation As Per:	
	Researcher	Respondent
Food consumption	Total food	Major food items excluding petty self-provisioning.
Produce	Total	Final produce excluding items harvested during the intra-season period.
Manday	Formal work hour 8-10 hours, etc	Total work time often more than 8-10 hours.
Hired labour	Hired+exchanged	Only hired.
Unemployment	Involuntary unemployment.	Disguised unemployment treated as full unemployment.

(2) Possible gaps in yardsticks guiding respondent's quantitative responses and researcher's recording of responses which may make it difficult to establish perfect equivalence between the reported and recorded quantities.

	Item	Researcher
Length/area	Modern units (metre, hectares, inches, etc	Traditional—foot-lengths, steps, arm-lengths, finger widths.
Weight/volumes	Modern measures such as kilograms, quintals, litres, etc,	Cart-loads, bag fulls, volume based measures (barrels, etc).
Production	Modern measures, quintals, etc	Self-sufficiency periods of subsistence-requirement, e.g., total production equal to 6 months of requirements, etc.
Time	Precise—days, hour, etc	Vague in terms of proportion of a day or a week, etc, i.e., half-a-day, 1/4 of a day, etc.

(3) Degree of precision/vagueness associated with responses as they are given and recorded.

Item	Recording by Researcher	Reporting by Respondent
Labour input	Exact days/hours	Ranged units, e.g., 5-7 hour, 10-12 days, etc.
Grain yield	Exact quantities in modern measures/units (quintals/kgs, etc)	Range: e.g., 5-6 bags or 50-55 quintals, etc.
Input use/output sold	Exact quantities	Range in terms of proportion: 1/5 to 1/4 of bag, etc.

determined options. However, in our study we have included only demand induced cases. For instance, the patrons now given up by the concerned poor households were still (at the time of resurvey), in the same business of offering facilities like site for living, crisis period food and money supply, etc. However, they didn't have many of relevant customers to work as attached workers. The poor who left their patrons now have their own house site and united facilities of credit, marketing, etc, from others, including from co-operatives. The factionalism between rural rich indirectly favouring the poor, on the one hand, and some public programmes, on the other, seem to have helped the poor in getting rid of exploitative patronage (Table 8).

In the case of dependence on CPRs, only those activities have been considered where supply was not a constraining factor. They included collection of wild fruits (*ker sangari*, etc) during summer season and fuel/fodder accumulation during the period soon after the harvest of crops.

8 The very first anecdote which provoked me

to undertake this investigation related to the liquidity position of the rural poor. During my 1978 revisit to one of the villages, I was talking to a villager whose room I rented during my early (1963-66) stay in the village. A woman labourer arrived there to collect her wages for the work she did for my landlord. To avoid her, he pleaded non-availability of change and called her two days later. The woman promptly untied a knot in her *lugari* (sari), took out change and said "you need change for how much—Rs 100? Rs 50?". Contrast this with the situation during 1963-66, when, if by mistake I failed to carry change, there was nobody in the village who could offer me change for Rs 100, and I had to visit the district place/neighbouring town to get change for Rs 100.

9 Of the 35 households more than 20 used to offer tea made with *Jaggery* during my frequent visits to their houses for data during 1963-66. During revisits I found all of them using sugar instead of *Jaggery* for the same purpose.

10 The cash nexus induces farmers to part with

practically all of their milk supplies, leaving little milk for self-provisioning or for sharing (butter/milk, etc) with others in the villages. Cases were observed where households producing as much as 10 liter of milk a day brought milk from the tea shop to prepare tea for the visitors (including myself).

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