Vulnerability, Coping and Policy
(Editorial Introduction)

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Vulnerability
‘Vulnerable’ and ‘vulnerability’ are common terms in the lexicon of development, but their use is often vague. They serve as convenient substitutes for ‘poor’ and ‘poverty’, and allow planners and other professionals to restrain the overuse of those words. Some precision can be found in the use of ‘vulnerable groups’ where this refers to pregnant and lactating women, to children, or to disadvantaged communities such as scheduled castes and scheduled tribes in India. More often, though, vulnerable is used simply as a synonym for poor.

Vulnerability, though, is not the same as poverty. It means not lack or want, but defencelessness, insecurity, and exposure to risk, shocks and stress. This contrast is clearer when different dimensions of deprivation are distinguished, for example physical weakness, isolation, poverty and powerlessness as well as vulnerability. Of these, physical weakness, isolation and poverty are quite well recognised, and many programmes seek to alleviate them; powerlessness is crucial but it is rare for direct action against it to be politically acceptable; and vulnerability has remained curiously neglected in analysis and policy, perhaps because of its confusion with poverty. Yet vulnerability, and its opposite, security, stand out as recurrent concerns of poor people which professional definitions of poverty overlook.

Vulnerability here refers to exposure to contingencies and stress, and difficulty in coping with them. Vulnerability has thus two sides: an external side of risks, shocks, and stress to which an individual or household is subject; and an internal side which is defencelessness, meaning a lack of means to cope without damaging loss. Loss can take many forms – becoming or being physically weaker, economically impoverished, socially dependent, humiliated or psychologically harmed.

Failure to distinguish vulnerability from poverty has bad effects. It blurs distinctions and sustains stereotypes of the amorphous and undifferentiated mass of the poor. Poverty is often defined by professionals for convenience of counting, in terms of flows of income or consumption. Anti-poverty programmes are then designed to raise incomes or consumption and progress is assessed by measures of these flows. Indicators of poverty are then easily taken as indicators of other dimensions of deprivation, including vulnerability. But vulnerability, more than poverty, is linked with net assets. Poverty, in the sense of low income, can be reduced by borrowing and investing; but such debt makes households more vulnerable. Poor people, in their horror of debt, appear more averse than professionals of the trade-offs between poverty and vulnerability. Programmes and policies to reduce vulnerability – to make more secure – are not, one for one, the same as programmes and policies to reduce poverty – to raise incomes.

Care is also needed because vulnerability and security start as ‘our’ concepts and are not necessarily ‘theirs’. To correct and modify them to fit local conditions requires decentralised analysis, encouraging, permitting, and acting on local concepts and priorities, as defined by poor people themselves. To date, such analysis indicates that for them, reducing vulnerability and enhancing security are recurrent concerns. Moreover, in recent years, while conditions have improved for some people, hundreds of millions of others have become more vulnerable; through greater exposure to physical or political disaster or threat, through higher costs of meeting contingencies such as health expenditures, or through loss of assets through individual or widespread disasters which have used up their reserves, leaving them less able to cope with future needs and crises.

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Although all were constrained in their options for in a village in a South Indian district, finding that Heyer describes the behaviours of landless labourers rearing of livestock; and mutual support networks. the patterns of eating and food preparation; share-collection of fuel, and gathering wild foods; changing property resources, which includes gleaning, often overlooked. These are the use of common Bengali, highlights four types of activity which are presenting findings from fieldwork in rural West and exploiting community and kinship ties. Beck, reduced consumption, off-farm work, asset disposal, and strategies of those who are vulnerable and poor. Taal, reporting on two villages in the Gambia, shows how the compounded risks and stress of low and uncertain rainfall, price fluctuations, variable access to markets, and adverse seasonal conditions, are met by a repertoire of cropping patterns, crop storage, reduced consumption, off-farm work, asset disposal, and coping was held at the Institute of Development Studies (IDS) in September 1988, leading to this IDS Bulletin. Some 20 people took part, about half of them reporting on recent fieldwork. The focus was at the household level, and the aims were to try to understand better the nature of vulnerability, how poor people cope with risks, shocks and stress, and what should be priorities for policy and research.

Unlike poverty, vulnerability lacks a developed theory and accepted indicators and methods of measurement. The articles in this IDS Bulletin provide ideas and material which should contribute towards developing these. Most directly, the first article, by Jeremy Swift (page 41), presents a critique of parts of Amartya Sen’s entitlement theory, and then outlines a new analysis of vulnerability and security based on a classification of assets into investments, stores and claims. Investments can be personal – in education, training and capabilities, or physical – in things, such as housing, land shaping and the like; stores can be of food, or real value, or of cash savings; and claims can be on other individuals or on households, patrons, the government, or the international community. In this perspective, households have portfolios of investments, stores and claims which change over seasons and longer periods, and have strategies for using them to deal with different stresses, shocks and demands.

The next three articles, by Housainou Taal, Tony Beck and Judith Heyer, illustrate the diversity of actions and strategies of those who are vulnerable and poor. Taal, reporting on two villages in the Gambia, shows how the compounded risks and stress of low and uncertain rainfall, price fluctuations, variable access to markets, and adverse seasonal conditions, are met by a repertoire of cropping patterns, crop storage, reduced consumption, off-farm work, asset disposal, and exploiting community and kinship ties. Beck, presenting findings from fieldwork in rural West Bengal, highlights four types of activity which are important for the poorest, but little studied and often overlooked. These are the use of common property resources, which includes gleaning, collection of fuel, and gathering wild foods; changing the patterns of eating and food preparation; share-rearing of livestock; and mutual support networks. Heyer describes the behaviours of landless labourers in a village in a South Indian district, finding that although all were constrained in their options for investment, and none bought land, the asset strategies of two social groups of the landless were strikingly different.

The following three articles are concerned with how vulnerability is linked with deprivation, ill-health, and malnutrition. These are examined at the household level and also within the household. From his fieldwork on river blindness in Guinea (Conakry), Tim Evans describes the effects on households over time of the onset of adult disability through progressive loss of sight, leading to extreme stress and privation and to death and dispersal of other household members. From her study of very poor households in an urban slum in Bangladesh, Jane Pryer finds a strong association of severe child malnutrition with the ill-health and inability to work of breadwinning adults. Jane Corbett then examines vulnerability to sickness, and the high economic costs to households of ill-health, including how sickness make poor people poorer through delayed treatment, the costs of treatment, and loss of earnings.

The last two articles assess programmes of intervention. Alex de Waal bases a critique of famine food relief on his 18 months of fieldwork in Darfur, Sudan (1985–7), concluding that in that context food relief did limit impoverishment, but that it was not significant in directly saving lives – the immediate cause of excess mortality being sickness. Finally, David Nabarro, Claudia Cassels and Mahesh Pant describe the impact on households of an integrated rural development project in Nepal implemented over a five-year period, and argue for support to the complex and well-developed strategies of the poorest in coping with crises and with the annual food gap, stressing access to health, veterinary and credit services, and to off-farm work and markets.

**Perspectives**

These articles are distinguished from much writing on deprivation by being based on direct, personal field research, and the insights derived from patient and sensitive learning from those who are vulnerable and poor. The findings often do not fit normal preconceptions. They qualify and complicate our view of vulnerability and coping. They challenge stereotypes of the poor and of programmes to help them. Readers will identify their own perspectives among those presented. I shall pick out five which strike me as important, and which have implications for policy and research.
Poor people’s priorities

The concepts of poverty which most influence policy are those of the rich, who assume that they know what poor people want and need. By emphasising income and consumption, they neglect other aspects. Nor should vulnerability and security be given more attention than they deserve, case by case. Poor people have many criteria of well-being and deprivation. It is the outsiders who simplify them down to one or two, or a few. In his re-survey after 20 years of two villages in Gujarat, N.S. Jodha (forthcoming) found that the households whose real per capita incomes had declined by more than 5 per cent were, on average, better off on 37 of their own 38 criteria of well-being. Besides income and consumption, they were concerned with independence, mobility, security and self-respect.

The view is common that the poorest ‘live hand-to-mouth’. This simplifies and distorts. Besides food they have other priorities. Although their wants and needs are usually complex, some of what they express as priorities can be captured by the three words survival, security and self-respect. Significantly, Beck found, as did Jodha earlier, how much self-respect can matter to the poorest. Most of Beck’s respondents said that loss of respect was worse than hunger.

Similarly, very poor people can show extreme tenacity in taking a long view and struggling through sacrifice to maintain the basis of their livelihood. De Waal found a woman in Darfur, on leaving her village in the famine, preserving millet seed for planting by mixing it with sand to prevent her hungry children eating it. The primary aim of famine victims in Darfur was to preserve the basis of their future livelihood. Their strategies, as de Waal points out, were ‘anti-destitution’ rather than ‘survival’.

Strategies: complex and diverse

In the common stereotype, the lives of poor people are simple and uniform. The reality is often the opposite. The coping strategies of those who are poor and deprived vary by region, community, social group, household, gender, age, season and time in history. As the case studies illustrate, most poor people have strategies which are complex and diverse. There are some who seek a single source of support, like the chakkiliyans described by Heyer who for a time accept being at the beck and call of one master. But most poor people do not choose to put all their eggs in one basket. Rather they reduce risk, increase adaptability, and seek a degree of autonomy, by developing and maintaining wider options, through the ability and willingness of different household members to do different things in different places at different times.

The range of means which poor rural people use for subsistence, to maintain their livelihoods, and to cope with contingencies, is impressive. Some are obvious and well known: cultivation, herding large and small stock, labouring in agriculture, off-farm economic activities, mortgaging and selling assets including future labour, begging, theft, and the splitting, dispersal and migration of families. Others which are less visible, less well recognised and less studied, are mentioned in this IDS Bulletin. They include eating less and worse, deferring medical treatment and expenditure, exploiting common property resources (such as the wild foods of West Bengal and Darfur), and share-rearing. In addition, Taal, Beck, Evans and Pryer all mention mutual support. In the Bangladesh slum described by Pryer, some workers had a self-help sickness insurance, and mutual help was common among poor slum women but little talked about. Most of these activities are hard for outsiders to see, and easy to harm by policy interventions which are blind to them.

The investment strategies of the poor also vary. As Heyer found, education can be an unproductive investment for some, with high opportunity costs from children’s earnings foregone. Nor did the poorest in her village buy land, partly because it would entail loss of mobility. Although their economic status was similar, the chakkiliyans and the panadis showed very different social and economic behaviour. More generally, poor people try to diversify their portfolio of assets, defined in Swift’s inclusive sense to include investments, stores and claims, so that they can handle contingencies and bad times better and minimise irreversible loss.

De Waal’s Darfur study also illustrates local diversity. The behaviour of rural people in Darfur during the 1984–5 famine does not correspond with normal outsiders’ expectations. They returned to their villages in order to cultivate, walking away from relief food to re-establish the basis of their livelihoods. This can be interpreted partly in terms of two local conditions: a relative abundance of wild foods; and a low level of past contact with government, including no previous experience with relief food supplies.
Famine behaviour in Northern Ethiopia is different: there, people are more inclined to move to roads in distress, having in the past been supported by government in crises. Part of the diversity of strategies derives thus from people’s past experience, and in turn affects how best to intervene.

**Changing degrees of vulnerability**

In parts of the rural South, trends can be discerned which make poor people more vulnerable. To be sure, where their incomes rise, they have the means to make investments, to build up stores, and to establish claims which make them less insecure. Where services improve, isolation and vulnerability diminish. Where tenure of land, water and trees is clearly vested in the poorer, they become more secure. But in some countries and regions, especially in sub-Saharan Africa, declining real incomes imply increasing vulnerability, and in addition, there and elsewhere, four trends with negative effects can be found.

The first is a decline in patron–client obligations. These are disliked more and more by clients who find them demeaning, and sought less and less by patrons, who prefer a cut-and-dried casual wage relationship to more open-ended responsibilities to dependent clients. Patterns here are not uniform; the South India case presented by Heyer is a partial exception where patrons paid relatively high wages to those who accepted labour attachments.

The second trend is declining support from the extended family. Not just in urban areas, the tendency is towards smaller consumption units, as noted by Taal in the Gambia, and towards the nuclear household. The weakening of wider family obligations then leaves households more exposed.

The third trend is rising costs of contingencies. Weddings, bridewealth and drousy have tended to rise, except for the very poor and destitute who simply cannot afford them. Perhaps more seriously, medical expenses have risen. Whereas in the past, only relatively inexpensive indigenous medicine was available, many poor people now have access to more expensive allopathic treatment. A new form of impoverishing vulnerability is costly treatment for sickness which is not cured, as illustrated by the case history of Abdullah’s family described by Pryer.

The fourth trend is localised, but severe in areas of recurrent famine such as the Sahel, where interventions to provide support for the vulnerable tend to come late. This is mortgage, sale or loss of tangible assets in order to obtain food, culminating in loss of means of livelihood and destitution. Many millions in sub-Saharan Africa, after the crisis of 1984–5 are more vulnerable than before, because they have used up or lost most or all of their tangible assets, and have so little opportunity to build them up again. In consequence, it now requires a less severe crisis to bring them to dependence on outside support.

These trends to greater vulnerability are not universal. But where they occur, they pose problems for policy. The question is whether and how the state and the international community should and can be open to claims which were formerly met by patrons, kin and the disposal of tangible assets.

**Assets, contingencies and livelihoods**

Contingencies impoverish in different ways. Households have different strategies and exploit or cash their assets in different combinations and sequences.

Following Swift’s separation of tangible and intangible assets into investments, stores and claims, the strategies of poor people can be seen as the management of a complex portfolio of assets, each with a different profile. The criteria of poor people themselves deserve empirical investigation, but some characteristics of tangible assets that appear important can be noted: on the positive side, divisibility, ease of sale or mortgage, and good price including avoiding a distress sale and maintaining value in bad times; and on the negative side, bad effects of disposal of assets can include loss of production, diminished value of labour power, and loss of self-respect. The strategies and sequences of coping with crises vary by household and by local conditions, but Corbett’s (1988) comparative analysis of studies of four famines found that an early step taken by poor households when they see bad times coming is to change their diet and eat less, reflecting in part the priority they give to preserving those assets which provide their means of livelihood.

One view has been that while poor people have assets such as livestock, they should not receive support since they can sell them and so remain independent. In contrast, it can be argued that past crisis interventions have often come too late, after
poor people have become poorer by disposing of productive assets, or after they have taken debts or obligations which prejudice their livelihoods, and that future interventions should come earlier.

The care of adult bodies
The main asset of most poor people is their bodies. General and measurable concepts like ‘labour power’, ‘labour availability’ and ‘dependency ratio’ blunt this sharp point, and miss the stark personal reality. The good ethical and humanitarian reasons for providing health services and reducing suffering from sickness sometimes serve to divert attention from the economic aspects of ill-health, analysed by Corbett. These include the plain facts that the poorer people are, the more it matters to be able to work and earn, the more they depend on physical work, and the higher are the personal costs of physical disability.

At the same time, the bodies of the poorer are more vulnerable than those of the less poor: they are more exposed to sickness from insanitary, polluted and disease-ridden environments both at work and at home, and to accidents in their work; they are weaker, with malnourishment and previous sickness tending to reduce resistance to disease and to slow recovery, and the poorer have less access to prophylaxis or to timely and effective treatment. Worse, in rural tropical conditions, these and other adverse factors usually combine in a seasonal syndrome during the rains when high exposure to infection, hard work in cultivation, food shortages, isolation, indebtedness and low access to health facilities, occur together and interact. The time when it most matters to be able to work is then also for many the time when they are physically weakest and most at risk.

Among the physical factors which impoverish, accidents have been neglected, yet many of the poor are exposed to disabling accidents. Rural activities such as quarrying, mining, fishing, hunting, building, brick-making, ploughing, and herding, and urban activities – in factories, transport and construction – are often physically hazardous. The resulting accidents are rarely counted and little considered in the literature, yet again and again, individual case studies of destitute households reveal an accident as the event which impoverished – disabling an adult, especially a breadwinner. At a sudden blow, the body, the poor person’s greatest and uninsured asset, is devalued or ruined. From being an asset, at one stroke it becomes a liability that has to be fed, clothed, housed, and treated. A livelihood is destroyed, and a household made permanently poorer.

Medical costs, too, can impoverish. Where treatment is sought, as Corbett and Pryer show, it often entails heavy expenditure until the household exhausts the tangible assets it can sell or mortgage. Where the treatment fails but the sick person survives, this leaves the household destitute and with a dependent adult to support. Once the household is assetless and chronically poor, the costs of any further treatment may be spread in only small amounts, which are then, as Pryer found, greatly exceeded by the earnings foregone from work lost through disability.

The importance to the whole household of the physical capacity of adults is highlighted by the studies of both Evans from Guinea, and Pryer from Bangladesh. Evans’ model of the progression of river blindness in a husband shows appalling pressure placed upon other members of the household, leading to malnourished children and the early death of his wife. Pryer’s finding – that households where an adult earner had been sick during the previous month were two and a half times more likely than others to have a severely malnourished child – carries the same implication. Much attention has been focused, correctly, on the health and well-being of women and children, and nothing should detract from that. But what we now see is that among the very poor the health of a breadwinner, whether male or female, is critical for the well-being of the rest of the household; and that preventing disability in breadwinners, or curing it, can also prevent malnutrition in children. Indeed, the cheapest way to prevent child malnutrition may often be to prevent adult sickness, and the most sustainable way to overcome the malnutrition of a child may often be to overcome the disability of an adult.

Implications for policy
The most general policy implication of these perspectives is to question our assumptions. In Heyer’s words, ‘what seems obvious is often wrong’. The solution is again and again to enquire of the poor what they want and need, and to strive to understand their conditions and how they cope. The answers will point both to interventions which enable them to be better off in their own terms, and, often, to a change of priorities and programmes.
For poor people, there are trade-offs between vulnerability and poverty or, to put it positively, between security and income. Some programmes, like the Integrated Rural Development Programme in India, seek to raise incomes but at the same time entail a loan and indebtedness. But poor people all over the world are reluctant to take debts which increase their vulnerability. One implication is, therefore, that government programmes which, whatever their benefits, make poor people indebted or in other ways more vulnerable, should be treated with caution. Such vulnerability can be reduced through group loans, and through insurance which covers the debt if the asset is lost. Reducing vulnerability can be as important an objective as reducing poverty.

More specific policy implications are presented in articles in this IDS Bulletin. Without summarising these, some which stand out are:

To monitor vulnerability and act on asset indicators. Early warning systems are now many. As Swift points out, low assets would be good indicators of vulnerability. The question is whether it is feasible to monitor the assets and exposure of vulnerable communities and groups so that action can be triggered early enough to prevent or minimise further impoverishment at times of stress.

To put floors under the vulnerable. The Maharashtra Employment Guarantee Scheme provides a model of how, given the administrative capability to respond, poor people can be empowered to demand and receive work and remuneration when they need it. Food-for-work schemes require less sustained administration, and can have the same effect – putting a floor under the poor to enable them to survive a bad time without having to become poorer. It seems more cost-effective, besides more humane, to use such means to reduce vulnerability and prevent impoverishment than, once people are poorer or destitute, to try to enable them to recover.

Guaranteed markets at good prices for whatever poor people sell at bad times are another form of floor. The items sold vary locally, including livestock, poultry, firewood, charcoal and other tree products, and jewellery. Where people are going to sell these anyway, maintaining the prices they fetch can only help those who have to sell.

Cheap and accessible food is another form of floor. Whatever their defects, programmes such as Andhra Pradesh’s cheap rice help the poorest, providing they have access to buying it. Assuring basic food at low prices is one of the safest ways of mitigating poverty and reducing vulnerability.

To improve fallback food. The neglect of famine crops and wild food in agricultural research promises scope for quick gains through the international transfer of germplasm, and for big gains from breeding. The need for a non-toxin variety of the fallback food kassari dal (Lathyrus sativus) is mentioned by Beck. In this case, a low toxin variety bred in Canada is being transferred to Ethiopia where other fieldwork in Mali are improving communications to areas where wild foods are abundant, and enabling poor people to buy food cheaper in bulk (pers. comm. Susanna Davies).
research is also going on. There are probably many similar opportunities, unexploited because famine and fallback foods have not until recently been considered important or of professional interest.

To stress even more the provision of effective health services free or at low cost. Health services which are cheap or free, and accessible and effective, emerge from studies in this IDS Bulletin as more important than ever. They have a greater role in reducing vulnerability and limiting impoverishment than has been recognised. Adult health, especially the health of breadwinners, is more important than many have supposed for the nutrition and health of children. Many considerations bear on the new fashion for fees and cost recovery as part of structural adjustment. But one point to stress in the debate is that charges for health services threaten to delay or deny treatment precisely to those who most need it, and to deter, hurt and impoverish those who are most vulnerable.

De Uvaal’s Darfur study draws attention to the importance of protecting the health, especially of children, in famines. Relief food can have a vital part to play in reducing suffering and in preventing impoverishment, depending on local conditions; but de Uvaal’s conclusion that in the 1984–5 famine in Darfur, the cause of excess mortality was sickness, not lack of food, points to the importance of immunisation, of clean water, and of enabling people to stay where they are instead of migrating to disease-prone concentrations in camps around towns.

In epidemics, to help not only sick adults, but also their dependants. In microcosm, Evans’ study of river blindness in Guinea gives hints and clues for scenarios for AIDS in rural areas, as its acute phase becomes prevalent. River blindness differs in that those afflicted become disabled and die more slowly than with AIDS, and so are dependent for longer, but there are also strong similarities. With concentrations of acute AIDS, the progression of decline described by Evans for a household would affect whole communities, with rising dependency ratios, increased child labour (and withdrawal from schools), decreasing areas under cultivation, greater vulnerability to other diseases, declining capacity for mutual support, and out-migration by older children. In such conditions, the priority will be not just to care for the sick but to sustain the survivors, who will include the very old and the very young.

Implications for research
Policy for research is one key to better practice. Besides the articles which follow, recent empirical research (e.g. especially Rahmato 1987) has shed new light on vulnerability and coping. But much also remains to be known and understood. Some research priorities are indicated in contributions to this IDS Bulletin. Many more could be suggested. Among those that merit mention are:

- Developing simple and sure methods for enabling poor people to analyse their conditions and identify their priorities;
- developing and testing indicators of vulnerability. These might include households’ net assets, labour power, dependency ratios, access to food, and exposure to external stress and shocks;
- assessing the modes, costs and benefits of prevention rather than cure – of reducing vulnerability and preventing impoverishment compared with enabling recovery;
- assessing and comparing vulnerability and assets within households, between groups of people, and between regions and continents, and how these change over time, with special attention to (a) groups and areas where vulnerability increases, and (b) impoverishing costs of medical treatment; assessing and comparing coping strategies under stress, including sequences of response, thresholds between types of response, and the value and use of different sorts of assets;
- the effects of civil disorder (war, raiding, refugees, thefts, etc.) on vulnerability and coping strategies. This is a gap in this IDS Bulletin, and would include effects on both (a) the economic environment, including local markets and the quantity, quality, and reliability of supply, and cost of food and other basic goods for purchase or barter, and (b) household strategies, including farming practices, food storage and intra household availability and division of labour;
- relief and development policy, and the fit and effects of alternative relief policies and practices in different conditions and on different groups. This includes the relative importance for survival, limiting suffering, and sustaining livelihoods, of food relief, cash relief, cheap food including bulk purchase, food-for-work, fodder relief for livestock, employment guarantee schemes, small loans, purchase of tangible assets poor people sell at times of stress, health and medical interventions, and ways of strengthening and supporting people’s present strategies for coping.
the effects of adult disability and death on household viability, strategies and behaviour. This could build on the work of Evans and Pryer, and the longitudinal studies of Nabarro, Cassels and Pant, and would be of special relevance in regions where the acute phase of AIDS becomes endemic.

Conclusion
The conclusion has to be humility. Through the new insights from their fieldwork and analysis, the contributors to this IDS Bulletin show how ignorant, and sometimes how wrong, we in the development professions have been. Through local study and individual cases, they also show how varied is that universe of vulnerability and poverty for which we seek simple explanations and single solutions. Most who read these articles will feel unease at the confidence with which in the past we have combined ignorance with error. They may speculate too on how wrong we continue to be.

The lesson for the future is to enquire and question, doubting what we think we know, and learning from and with those who are vulnerable and poor, as contributors to this IDS Bulletin have done, and to do this, not once, not in one locality, and not for one group only, but again and again, in each place, and for each sort of person. For that is the surest path to better understanding, and to action that will better fit and serve the diversity of conditions and people and their changing priorities and needs.

References
Jodha, N.S. (forthcoming) ‘Social Science Research on Rural Change: Some Gaps (A Footnote to Debate on Rural Poverty)’, in Pranab Bardhan, Rural Economic Change in South Asia: Methodology of Measurement