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INEQUALITY AND HUMAN DEVELOPMENT PROGRAMME

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NIAS Policy Brief

Case for an Asset Based Indicator of Vulnerability

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Much of the discourse on poverty in India has been on the extent of poverty. Implicit in this focus is an assumption that the estimates of poverty also capture the extent of vulnerability. This may have been true in the early 1960s when Dandekar and Rath defined their poverty line. In the near famine conditions of that time, the poverty line based on calorie content captured those who were at risk of hunger, if not starvation. The poverty line thus also provided an indication of the level below which households were vulnerable to starvation. But as the possibility of large scale starvation has receded in the decades since then, it becomes important to consider vulnerability to a variety of earning related risks and not just that of hunger or starvation. It is then important to ask: do current measures of poverty diverge from those of vulnerability? And if they do, what can be done to provide a more comprehensive picture of the Indian experience of deprivation?

The Issue

Vulnerability has been seen, by Allen (2003) and others, as the susceptibility to the effects of events, shocks and stresses without the capacity to absorb these changes. Households with a higher proportion of older people may be more susceptible to health events, just as those in ecologically sensitive regions may be exposed to natural disasters. A significant part of the ability to absorb these events, shocks and stresses lies in the economic strength of a household. In a discourse dominated by the poverty line based on calorie content related to patterns of consumption expenditure, it is convenient to assume that these estimates can also reflect the ability of a household to absorb events, shocks and stresses, that is its vulnerability. But there are several reasons why this need not be the case.

To begin with, the consumption based estimates relate to a specific point of time, whether it is a week or month for which the data has been collected. It is not designed to take into account fluctuations in consumption and earning. A household may be above a poverty line defined by consumption during the week that forms the reference period for a consumption survey but may still be vulnerable to the shocks and stresses of fluctuating income. For the poor, the ability to cope with sudden shocks and stresses may vary depending on their access to coping options. For instance, a household in a region with effective state support for food would be less vulnerable with a lower consumption expenditure than one in a region where such support does not exist. A similar difference would exist between regions where there is greater community support and those where such support is absent. A poverty based estimate based on consumption is also not designed to deal with the challenge of dissaving. A household could meet its basic consumption needs by borrowing but the process of repaying the loan may be exploitative. This would be particularly true in cases where the repayment is in labour under conditions bordering on those faced by bonded labour. The amount borrowed could take the household away from starvation and closer to the poverty line, even if it does not actually rise above the line. But the net effect would be much less acceptable if it leads to the dissaving household being vulnerable to exploitative socio-economic relations.

An effective policy regime would be sensitive not only to the acute distress of extreme poverty but also to the vulnerability of households without the economic capacity to absorb events, shocks and stresses. Indeed, long-term strategies for better health and education may need to focus not just on those facing extreme poverty at a point of time but also on those who are vulnerable.

There is thus a need to consider, in addition to consumption-based poverty indicators, an indicator that is better suited to capture economic vulnerability. One approach to developing such an indicator would be to focus on the assets of a household. Assets are usually accumulated by households only after meeting essential consumption such as food and clothes. This is seen in the very low share of assets in the lowest decile of the consumption expenditure data of the National Sample Survey. Assets also provide an insurance against extreme poverty as they can be sold when the need arises. They can also be offered as collateral against borrowing if required to sustain consumption. The assets in a household are thus a better reflection of the capacity to absorb events, shocks and stresses. Not having access to any asset would indicate extreme vulnerability, just as a higher quantity of assets in a household would reflect lower vulnerability.

The first step towards providing a place for assets in our estimates of deprivation would be to develop an asset based indicator of the distance from absolute deprivation. One such index was developed by Pani (2020). The index is based on the expectation that a household that has no assets will have the least ability to absorb adverse events, shocks and stresses. A household with such an extreme level of vulnerability can be said to face absolute deprivation. The index then goes on to capture the distance from absolute deprivation. In its choice of specific assets the index is sensitive to the fact that the value of an asset varies according to the place of the household in the economic hierarchy. At the lower end of the economic hierarchy, a low value asset could be sold to prevent a household from facing starvation. The same asset would have a negligible effect, if that, on the living conditions of a household towards the top of the economic hierarchy. In order to be sensitive to the differences among the poor, the assets chosen for this index are primarily those that the poor tend to own. The index of the distance from absolute deprivation (IDFAD) is then given by the following:

$$IDFADj = \sum_{i=1}^{N} nisi$$

where,

IDFAD=distance from deprivation of the household j
n=number of predetermined assets, i, in the household
s=normalised value of asset i

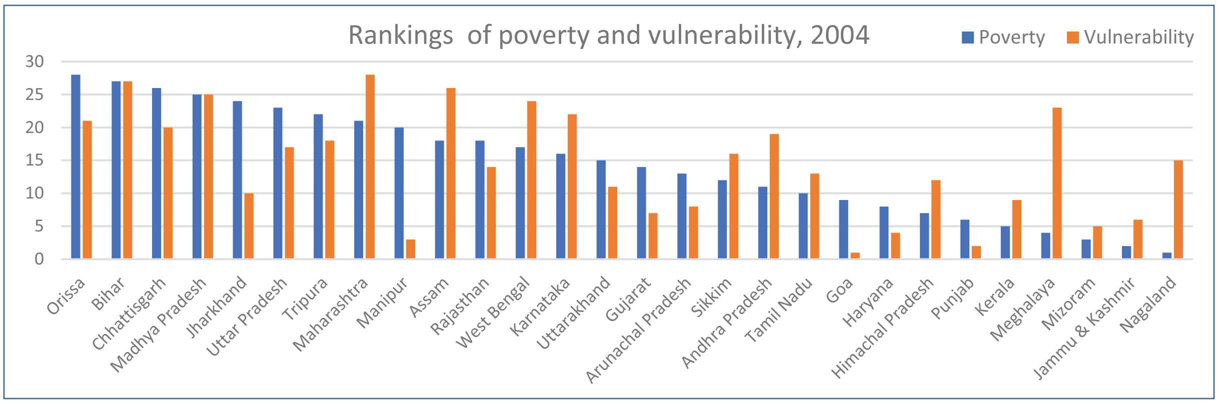
The measure defines those households without any of the assets as facing absolute deprivation. The sum of the normalized value of the assets possessed by a household then gives us an indicator of its distance from absolute deprivation. One can also define a particular distance from absolute deprivation as a vulnerability line and have a headcount of households below it. But if the purpose is only to compare the condition of a household vis a vis deprivation cross-sectionally and/or over time, such a vulnerability line need not be defined.

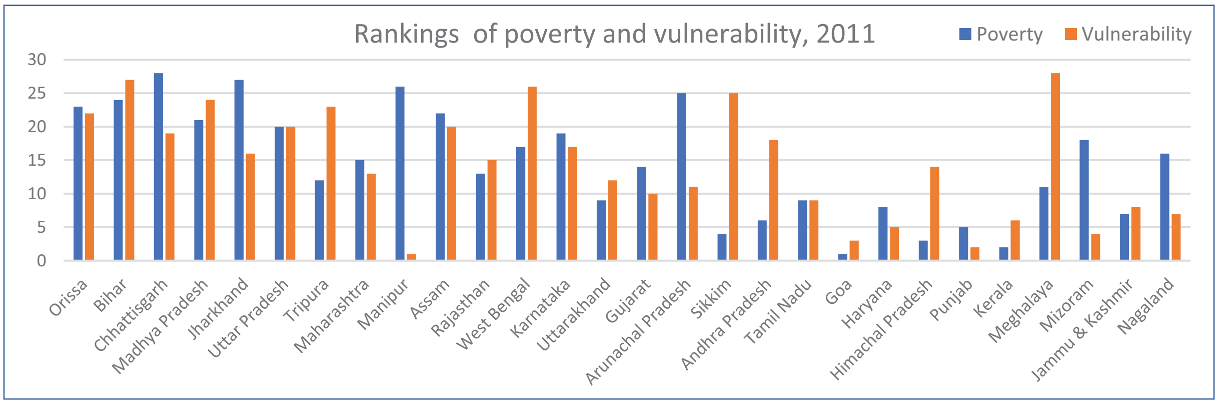
The findings

An analysis of the asset based vulnerability and consumption based poverty shows similarities in various respects. Especially at a macro level co-movements of poverty and vulnerability along with state income show a predictable pattern. Both indicators are consistent, with the numbers below the poverty line declining with increases in per capita state income, and the distance from absolute deprivation increasing with per capita state income. Also, as state per capita income increases over time poverty and vulnerability are reduced in the majority of the Indian states. The exceptions being Mizoram and Nagaland in the case of poverty, and Meghalaya in the case of vulnerability.

Despite these similarities, when these estimates are compared at the individual state level, significant divergence is seen between them. There are, no doubt, a few states where poverty and vulnerability coexist. Bihar and Madhya Pradesh suffered from higher aggregate poverty as well as vulnerability in 2004 and 2011. But the patterns that emerged from the IDFAD estimates of vulnerability across states are not always consistent with the estimates of poverty. West Bengal, in 2004 and 2011, despite having a lower average distance from absolute deprivation, does not appear among the poorer states as found by the poverty headcount. Conversely, Jharkhand and Chhattisgarh despite having a higher headcount of the poor in the consumption based poverty indicator, do not figure out among the most vulnerable states.

The divergence across states becomes even more prominent when we look at the state rankings in poverty and vulnerability in 2004 and 2011 in Figure 1. In 2011 Uttar Pradesh and





Tamil Nadu and in 2004, Bihar and Madhya Pradesh are the only states that had similar rankings in poverty and vulnerability. In all other states, the two rankings differed significantly, indicating that states with the highest poverty need not also suffer higher vulnerability and vice versa.
Figure 1: State rankings in poverty and vulnerability

The divergence is also observed in terms of the relative changes in the state ranking over time. There are a few states, in which state rankings in both, improved over time, in some states the two deteriorated and in some other states they moved in different directions. For example, as shown in Table1 in Maharashtra, Madhya Pradesh, Kerala, Tamil Nadu and Andhra Pradesh, poverty and vulnerability rankings improved. These states achieved greater success in reducing poverty as well. Conversely, in states like Jharkhand, Jammu and Kashmir, Meghalaya and Manipur the two rankings deteriorated, indicating, that even though these states improved in terms of their poverty and vulnerability indicators over time, they fell behind the other states in terms of the pace of reduction. In the remaining 19 states, the two indicators have not reflected the same direction of change.

Implications

Poverty and vulnerability have been seen by the policymakers as two sides of the same coin whereas, in reality, they are not always the same. The two estimates show similar patterns when seen in the context of states' general economic conditions. States with higher income tend to have lower poverty and vulnerability. Also, an increase in state income over time has successfully reduced poverty and vulnerability across Indian states.

Table1: Changes in the state rankings in poverty and vulnerability from 2004 to 2011

(I) Both rankings improved	(II) Both rankings declined	(III) Vulnerability ranking remined unchanged but poverty ranking improved	(IV) vulnerability ranking declined but Poverty ranking remined unchanged	(V) Poverty ranking improved but vulnerability ranking declined	(VI) Vulnerability ranking improved poverty ranking declined
Maharashtra	Jharkhand	Bihar	West Bengal	Tripura	Nagaland
Madhya Pradesh	Jammu & Kashmir	Punjab	Gujarat	Sikkim	Assam
Kerala	Meghalaya		Haryana	Goa	Karnataka
Tamil Nadu	Arunachal Pradesh			Uttarakhand	Manipur
Andhra Pradesh				Orissa	Chhattisgarh
				Rajasthan	Mizoram
				Himachal Pradesh	
				Uttar Pradesh	

Despite these macro-level similarities when the two estimates are analysed at the individual state level, substantial divergence is observed between the two. The analysis shows that not all the poorer states are vulnerable and not all vulnerable states are among the poorer states. Even non-poor states could be more vulnerable if the ability to deal with economic uncertainties is low.

Thus, focusing just on the consumption based poverty states would only provide a partial view of the economic condition of the states.

Interventions

An important policy direction that emerges from the divergence between poverty and vulnerability is that the need to look at vulnerabilities separately from poverty is not only a concern for the poorer states but also of the well-off states, where vulnerabilities may well be present despite states' efficient handling of its poverty headcounts.

It is thus necessary to consider at least two policy interventions.

Asset based indicator of vulnerability: While the consumption-based estimates of poverty capture poverty at a point in time, an index based on assets shows longer-term vulnerability to sudden shocks and events. Both estimates together capture poverty in its totality. Therefore, along with a consumption based indicator of poverty, there is a need to develop an asset based indicator of vulnerability. This policy brief suggests a specific indicator, but other indicators could also be developed. These indicators would need to be sensitive to conditions among the most vulnerable, as even a small increase in vulnerability could have serious human consequences.

Vulnerability dimension of welfare programmes: The current practice in designing welfare schemes is to identify the poor entirely in terms of the poverty line. This approach is not sensitive to those who face greater uncertainty and are vulnerable to devastating economic shocks. There is thus a case to include an asset based vulnerability index when choosing beneficiaries for welfare schemes. This would be particularly necessary in the case of schemes for long-term welfare, such as housing.

Reference

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