

**Vulnerability and poverty : a few distinctions**

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## I. Vulnerability and poverty

The World Development Report (2000) (WDR) defines poverty as "unacceptable deprivation in well-being". Deprivation in well-being can be understood to arise from the inability to fulfil basic functionings, namely, deprivation in the space of basic capabilities. It has been argued in recent years that wider capabilities should be added to the basic material and physical capabilities typically retained by the traditional poverty assessments. These include in particular the capability of feeling secure and "empowered". Deprivation of these capabilities stems, respectively, from risk and vulnerability, and from voicelessness and powerlessness. In particular, vulnerability is the result of not being able to fulfil the basic functioning of security and of feeling at peace when pondering the future.

Vulnerability and insecurity are dynamic in nature. They are concerned with the anticipation of possible changes between now and the future. Insecurity is exposure to the risk of future events, some of them damageable to the person's well-being. Vulnerability is the possibility of suffering a decline in well-being, in particular a fall underneath some minimum benchmark or poverty threshold. This decline is brought about by shocks against which protection is either costly or not possible. The shocks can affect individuals, *e.g.*, through loss of employment, accident or death. They can also strike whole communities, such as villages, regions or particular socio-economic groups. Examples of this include natural disasters, changes in export prices, and climactic and environmental changes.

Alwang and Siegel (2000) describes vulnerability as starting with the notion of *risk*, which is characterised by a probability distribution over events. Risk is compounded with the *exposure* of households -- which is determined by such things as their geographical location, their assets, and their consumption and production choices -- to provide the *hazard* which the household faces, and to which the household responds *ex ante* and *ex post*. *Ex ante* responses take the form of individual and social risk-reduction activities. *Ex post* responses are coping responses that decrease the harshness of the *outcome* of the hazard, which is a stochastic process. Vulnerability, then

is defined with respect to events that may occur in the future. It is forward looking. While we can measure damage *ex post* (...) these are only the static outcomes of a continuous process of risk, exposure and response. Vulnerability is the continuous forward-looking state. (Alwang and Siegel (2000), p.5)

The measurement of vulnerability is particularly important for monitoring the well-being of the poor. Because of the poor's already difficult circumstances, the outcomes of vulnerability are typically harsher on the poor. The poor are also often more vulnerable because of their location and their characteristics (namely, their exposure), including a lower level of assets to protect them, a lower access to insurance and to input and to output markets (to insulate them against idiosyncratic shocks), a lower access to public protection, and a lower level of empowerment. There are circumstances, however, in

which the poor are less exposed to risk. This can be the case of near-subsistence households living in remote areas who are little (if at all) affected by market and prices shocks (for a discussion and a test of this, see for instance Glewwe and Hall (1998)).

Measuring vulnerability is also relevant for the design of poverty alleviation policies. A fundamental ethical and public policy issue is whether help should be targeted to the short-term poor, the long-term poor, or the most vulnerable among the poor and the non poor. Presumably, if short-term poverty is such that it threatens physical subsistence, then observed, actual, poverty should be the main target of public policy. A proper investigation of this issue must also assess the dynamic links between poverty and vulnerability, and how detrimental risk and variability of living standards are at the individual and social levels.

At the individual level, whether transitory poverty deserves as much policy attention as chronic poverty depends on the ability of individuals to buffer the harshness of temporary poverty. It is sometimes reported that transitory poverty and the efforts to cushion its effects affect both the short-term and the long-term prospects of individuals. The poor's limited resources hinder them from seeking adequate protection from short-term shocks. These limitations can take the form of a limited access to insurance markets (Jalan and Ravallion (1997)) and to difficulties of putting aside resources for the future. There is also often on the part of the poor a trade-off between short-term protection against vulnerability and long-term exit from poverty. For instance, short-term protection against short-term poverty leads to use of physical and natural resources, whose depletion can be injurious to protection against long-term deprivation. This trade-off is particularly serious when the outcome of vulnerability brings the poor into abject deprivation. Besides, even if vulnerability were not instrumental in understanding the short-term and long-term prospects of the poor, it could still be of importance in as much as it affects one of the constitutive elements of individual well-being (fulfilling the basic functioning of security).

At the social level, risk and variability clearly generate a sense of social insecurity. However, they can allow some of the chronically poor to escape poverty temporarily, and some of the usually non-poor to experience poverty temporarily. This process can be argued to be a socially efficient outcome since it spreads the risk of being poor across individuals -- the experience of deprivation is made more equal, and presumably more equitable. Such a sharing of deprivation across time is then conceptually close to the experience of social mobility, which is routinely deemed to be socially desirable. Assume, for instance, that there is a 50% chance of anyone to be poor in a population at a given point in time. In the absence of social mobility and variability in poverty status across individuals, it will always be the same 50% of the population who will be poor. If, however, the risk of being poor at any point in time is spread equally across all, poverty will be shared across time equally among all individuals. This would in turn generate more vulnerability, but it would still appear to be a socially more desirable distribution of poverty.

## II. Measuring vulnerability

As discussed above, not only is vulnerability a determinant and foreteller of future poverty, but it can also be argued to be an important element of actual well-being and deprivation, since it prevents the attainment of the functioning of security.

Vulnerability -- which is forward looking -- has commonly been estimated either through indirect or past indicators of variability in well-being (defined alternatively as variability in utility, income or consumption, functionings, and capabilities). The indirect indicators are usually socio-economic proxies for risk exposure, such as living in a cyclone-prone areas, being exposed to diseases, living in remote areas and thus far from health-care facilities, not owning land and capital (and therefore relying on potentially uncertain wage income for subsistence), etc... Indicators of past vulnerability commonly focus on the past variability of money-metric indicators such as consumption or income.

An interesting avenue in measuring past vulnerability is to consider movements of individuals in and out of poverty over a period of time, in comparison to the effect on these individuals of "chronic" or long term poverty. Permanent or chronic poverty can be measured by poverty under a constant standard of living given by some average long-term trend in living standards. This can be alternatively interpreted as expected poverty, if we think of individuals as using their past trend in living standard to predict their future poverty status. Intertemporal poverty can be carried out by summing out over a period of time the effects of periodic stances into poverty. When both intertemporal and long-term poverty are measured using a poverty index that is averse to variability of well-being, such as any of the distribution sensitive poverty indices (for instance, the average squared poverty gap, the Watts or the "Gini" indices of poverty), the difference between intertemporal and chronic poverty gives an indicator of the effect of the "transiency" and variability of poverty status, and thus indirectly of the effect of vulnerability and insecurity on well-being. Intertemporal poverty is then the sum of chronic and transient poverty.

The temporal pattern of vulnerability and variability in well-being is also important. For instance, whether the temporal shocks are auto-correlated across time clearly matters for well-being. There may be no time to recuperate if shocks follow each other too quickly; this may lead to physiological and environmental fragility and to an inability to protect oneself against subsequent shocks, leading for instance to famines as opposed to transient short-term deprivation. Another important element is the correlation of the shocks across individuals and households. Are whole communities typically affected (in the case of epidemics for instance), or are the shocks concentrated on just a few households or small socio-economic groups? The answers to these questions are important ingredients to the design of public policy, safety nets, and targeting schemes.

## III. References

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