

## $P_\alpha$ Poverty Measure: An Estimable Approach

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*The focus of this paper is on deriving a formula for estimating the  $P_\alpha$  measure of poverty, when the relevant consumer expenditure/income distribution data are available in grouped form. The formula is derived, assuming consumption/income distribution to follow the three parameter lognormal distribution, as a function of the moments of the income distribution. The moments are estimated using the method of Maximum Likelihood and hence, the estimated poverty measure is consistent and efficient under certain very general conditions. The proposed formula is illustrated with reference to the Indian National Sample Survey (NSS) data on consumption distribution for the period 1961-62 to 1990-91. The results show that the poor benefited (suffered) more during periods of general improvement (decline) in economic conditions and levels of living.*

### 1 Introduction

With the widespread concern about the likely adverse impact on the poor, of the ongoing economic reforms under 'Structural Adjustment' particularly those involving changes in relative prices in favour of agriculture, the question of poverty measurement assumes a lot of significance. This is all the more so given the conventional approach which characterises poverty in terms of numbers and their well-known limitations like insensitivity to distribution and depth of poverty and hence, misleading policy implications. Overcoming these limitations would mean examining poverty and changes therein in the right methodological perspective.

Basically, measuring poverty involves three important steps: (i) specifying a variable to measure the level of living; (ii) specifying the poverty line in terms of the chosen variable; and (iii) obtaining a summary measure of poverty.

Level of living is really a multi-dimensional concept covering various aspects like consumption, literacy, life expectancy, access to safe drinking water, shelter etc. Hence, obtaining a single index based on these, which will be all comprehensive, is difficult. However, the one variable most commonly used in studies on poverty is private consumption; public consumption is supposed to take care of other aspects like education and health. This is further corroborated by a study (Ministry of Planning, 1985) which found that it is not "possible to categorise a household as poor or otherwise on the basis of the information on any characteristic other than income/expenditure."

As regards the poverty line, it is estimated as that level of consumer expenditure which provides for a normatively determined calorie amount. This is generally done based on the National Sample Survey (NSS) data on consumer expenditure distribution (Dandekar and Rath, 1971; Perspective Planning Division, 1981).

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