

**Abstract:**

HDI has been roundly faulted on many different accounts. Of very notable interest to us is the mathematical treatment of the variables used. The Average Lack Indicator (ALI) used to construct the HDI is a simple arithmetic mean which gives the same weight to all the variables used. In response to the many flaws detected, considerable effort has been directed at formulating alternatives to the HDI. To the best of our knowledge no alternative has adequately resolved the problem of arbitrary and a theoretical weighting of the variables used in HDI, as well as in the other multi-dimensional measures of wellbeing. This paper responds to this challenge. Using under-five child survivorship to proxy household welfare, we use a probit model to estimate parameters of an abbreviated social welfare function. IV probit is then used to estimate an underlying response variable which is also the probit index. The result is a subjective welfare index that a household attaches to child survival. The parameters are weights to each of the arguments of the welfare function that indicate the contribution of the various factors to household welfare. These weights are optimal since they maximize wellbeing of the household given its environment. They are also consistent and non-arbitrary because they reflect a household's preference orderings over the arguments of the welfare function.