

## **A Model-Based Multidimensional Capability Deprivation Index**

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### **Abstract**

This paper derives a multidimensional poverty index in the “capability” domains of education and living conditions of Bolivia’s children. This measure, understood as a capability deprivation index, results from an economic model (structural equation mode - SEM) that explains the different dimensions of poverty and accounts for its multidimensionality and “unobservable” (latent) nature and at the same time avoids any arbitrariness in the selection of weights. Under a SEM framework, education and living conditions capabilities are represented by latent variables, partially observed through a group of indicators and explained by a collection of exogenous variables. The estimator of the latent variable vector (scores) provides a measure of the children’s well-being status. On the basis of these latent variable scores we derive the capability deprivation index of education and living conditions and compare our results with those obtained with “classical” (observed) measures. The proposed index fulfills a set of desirable properties (axioms) that represent value judgments and ethical principles that a capability deprivation measure should incorporate.

*Keywords:* Capability Approach, Structural Equation Model (SEM), Poverty, Education, Living Conditions, Bolivia.

*JEL classification codes:* C3, I21, I31, O54.

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