

Time and Income Poverty – An Interdependent Multidimensional Poverty Approach with German Time Use Diary Data

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Abstract

Income as the traditional one dimensional measure in well-being and poverty analyses is extended in recent studies by a multidimensional poverty concept. Though this is certainly a progress, however, two important aspects are missing: time as an important dimension and the interdependence of the often only separately counted multiple poverty dimensions.

Our paper will contribute to both aspects: First, we consider time – and income – both as striking and restricting resources of everyday activities and hence account for time and income as important multiple poverty dimensions. Second, the interdependence of the poverty dimensions will be evaluated by the German population to allow an advanced approach to understand possible substitution effects and the respective trade offs between the dimensions.

Referring to the time dimension, we follow Sen's capability approach with its freedom of the living conditions' choice and social exclusion and argue, that restricted time might exclude from social participation. In particular, restricted genuine, personal leisure time (not entire leisure time) in particular is associated with a restricted social participation. The crucial question then is how to measure the substitution between income and such genuine leisure time. In our analysis we consider the country population's valuation with data from the German Socio-Economic Panel and estimate the substitution by a CES-utility function of general utility/satisfaction. Given this quantification we disentangle time, income and interdependent multidimensional poverty regimes characterising the working poor with more detailed time use diary data from the German Time Use Study (GTUS) 2001/02. In addition, we quantify further socio-economic influences for each interdependent multidimensional poverty regime by a multinomial logit based on the GTUS time use diaries.

One striking result for Germany: the substitution between time and income is significant and we find an important fraction of time poor who are unable to substitute their time deficit by income. These poor people are ignored within the poverty and well-being as well as the time crunch and time famine discussion so far.

JEL: D31, D13, J22

Keywords: *Interdependent multidimensional time and income poverty, time and income substitution, extended economic well-being, satisfaction, CES utility function estimation, working poor, German Socio-Economic Panel, German Time Use Surveys 2001/02*

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