

Measuring Circumstance Poverty in Portugal: Who are the Worst off?

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Introduction

Conventional methods of poverty measurement via income or consumption produce only a limited picture of poverty in societies. Firstly, poverty measures only assess whether individuals possess certain level of income, but not the hours they work. Second, these measures do not give any information on satisfaction individuals achieve with their income-leisure bundle. Most importantly, those cannot distinguish whether shortfalls in incomes are unfair, that is, due to differences in circumstances or not unfair, i.e., due to responsibility (Roemer, 1998; Fleurbaey and Maniquet, 2005, 2011).

The present work proposes a new poverty measure that assesses poverty as unfair shortfall from certain living standard by considering work hours, individual preferences, and constraints for work. Utilizing the concept of egalitarian equivalence that assesses individuals' wellbeing at reference skill level (Fleurbaey and Maniquet, 2005; Fleurbaey, 2008), the measure allows to construct and rank individual welfare using ordinal preferences. Moreover, the choice of reference skill parameters and work hours poverty threshold enable the incorporation of distinct ethical priors in terms of treating work hours as luck or responsibility characteristics and adjusting work hours of single parents in a way that social value of child rearing is incorporated. In this way, the current study adds to existing scant empirical literature in this field (Carpantier and Sapata, 2016; Ravallion, 2017; Decancq et al, 2019).

Methodology and Data

To construct welfare of individuals, study utilises the random utility model where individuals' utility is defined over the bundle of net income and leisure hours. Given that, individuals differ in skills and preferences, the comparison and ranking of them becomes a hard task. Hence, the concept of egalitarian equivalence is adopted to assess the welfare of individuals and construct the poverty measure, which is increasingly used in the empirical welfare economics literature. The egalitarian equivalence assesses individuals' welfare by fixing the skill parameter as some reference level, while fully incorporating the information on their ordinal preferences.

The methodology boils down to calculating money-metric utilities that present a convenient way of cardinalisation of individual preferences. Money-metric utility is defined as a monetary transfer that would make an individual indifferent between her actual bundle of net income and work hours and equivalent bundle measured at reference skill level (Fleurbaey and Maniquet, 2018). An individual is deemed poor if the money-metric utility assigned to her is smaller than that an individual would receive if had the threshold level of income and work hours. This measure

exclusively defines circumstance poverty; that is, we are able to define poverty due to factors beyond individual's control. Hence, this shortfall from poverty threshold is unfair. By calibrating reference skill parameter, we are able to specify low-skilled work-averse and work-loving poor, as well as the disadvantaged due to household structure and tax-benefit policies. Alongside the standard approach, work hours of lone parents are ethically adjusted following Maniquet and Neuman (2014) based on the number of their non-adult children.

The preferences of individuals are estimated with the structural labour supply model. This is a standard approach utilised within the framework of random utility models. The model estimation includes observed heterogeneity such as age, education and number of children of single parents that might affect their decision to supply labour.

The study focuses on singles of working age with and without children in Portugal for 2016-2017 income reference period. The EU-SILC dataset is used for this purpose.

Results

Results show that the share of work-averse poor is close to that of work-loving poor. There is also large overlap between those; work-averse poor work almost as much as work-loving and more than the sample average. The poor are mainly without tertiary education and females. Female lone parents are overrepresented among the poor. The ethical approach to work hours of lone parents also shows higher rates of deprivation among female lone parents. Female lone parents become worse-off at higher rate compared to men as they have higher number of children at each age category on average and thus, more constrained in work hours.

The overlap analysis with other poverty measures (income poverty and bi-dimensional poverty measures) shows fairly small overlap of the poor defined under the proposed poverty measure and other poverty measures. This once again shows the importance of incorporating individual preferences and ethical considerations to poverty measurement.

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