
An empirical Bayes method to estimate resource shares of household members

Alexander Wolf^{*†1} and Denni Tommasi²

¹European Center for Advanced Research in Economics and Statistics (ECARES) – Belgium

²European Center for Advanced Research in Economics and Statistics (ECARES) – Belgium

Abstract

In a recent and insightful paper, Dunbar et al. (2013) develop a collective model of the household that allows to identify resource shares, that is, how total household resources are divided up among household members. We show why, especially when the data exhibit flat(ish) Engel curves, the model induces high variability and an implausible pattern in least squares estimates. We propose an estimation strategy nested in their framework that greatly reduces this practical impediment to recovery of individual resource shares. To achieve this, we follow an empirical Bayes method that incorporates additional (or out-of-sample) information of singles and rely on mild assumptions on preferences. Our welfare analysis of the PROGRESA program in Mexico is the first to include separate poverty rates for men and women in a CCT program.

Keywords: both

*Speaker

†Corresponding author: alexwolf@ulb.ac.be