Modelling attrition in the European Community Household Panel:

the effectiveness of weighting **(preliminary version)**

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Abstract

The European Community Household Panel is an extremely rich source of information about living standards and living circumstances in the European Union, but just like other panel studies, it suffers from substantial attrition among participants. This attrition can lead to seriously biased results if it does not happen at random. Weighting can overcome these problems, on condition that data are missing at random within the categories of the variables used for weighting. This paper tries to assess the effectiveness of weighting in the ECHP, by testing the effect of poverty on dropout propensity, under control of the variables used for weighting. The analyses are conducted with data of the first seven waves for eleven countries in the ECHP.

After describing initial nonresponse, different patterns of participation and indvidual versus household nonresponse, we focus on the effect of poverty on attrition. Therefore, the effect of poverty on dropout is investigated by means of a logistic regression model as well as a time-discrete logistic hazard model. In line with previous research, we find poor people dropping out significantly more than nonpoor people in the northern countries, while this effect is reversed (though not always significant) in the southern countries and in Ireland. Next, this paper tests whether dropout is random within the categories of the variables used in the ECHP-weighting procedure. This is accomplished by examining if the effect of poverty on dropout continues to exist under the control of relevant weighting covariates, using both ordinary logistic regressions and discrete-time logistic hazard models. The effect of poverty on dropout disappears in some countries, but remains highly significant in others. Hence we conclude that the correction for non-random attrition, obtained by weighting, tends to work out completely differently between countries.