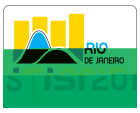

An Empirical Likelihood Based Estimator for Respondent Driven Sampled Data

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We discuss an empirical likelihood based estimator of population means applicable to data obtained from a respondent driven sampling procedure. Our estimator directly uses the second order weights of selection and constructs a composite empirical likelihood to estimate the parameter of interest. This estimate is asymptotically unbiased and normally distributed. Analytic expression of the asymptotic standard errors can be obtained. We show how these standard errors can be estimated from the data. Using real life social network data, we show that, upon correcting for the nite sample e ects, our estimator produces con dence intervals with better coverages than the existing estimators. Several extensions of the proposed estimator will also be discussed.

Keywords: Empirical likelihood; second order selection probabilities; composite likelihood; responded driven sampling.