Analysis of Measurement Error Models Using Parametric Fractional Imputation

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Estimation of the parameters of a measurement error model is considered. By treating the true covariate as a latent variable, parametric fractional imputation of Kim (2011) can be used without relying on computationally heavy procedures such as Markov Chain Monte Carlo. The proposed method can be applied to situations where the calibration data are either external or internal. The proposed method is illustrated in the context of a measurement error model with non-constant measurement error variances.

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