

Fitting the Linear Mixed Models From Survey Data

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Abstract

Fitting the Linear Mixed Models from Survey Data Milorad Kovacevic and Rong Huang Statistics Canada Several methods for fitting the linear mixed models from survey data suggested in literature are examined and compared. We concentrate on recent proposals of non-iterative methods for estimation of both regression coefficients and the variance components. These methods include the pseudo-empirical best linear unbiased estimation of You and Rao (2002), pseudo maximum likelihood of Kovacevic and Rai (2003), method of moments of Korn and Graubard (2003) and the modified Henderson08's method III of Huang and Hidiroglou (2003). The finite population properties of the methods are studied in a small simulation study designed according to the Canadian Work Place and Employee Survey.

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