Missing Data Analysis in Semiparametric Models

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Abstract: We investigated partially linear models with missing covariates. A Horvitz-Thompson weighting estimator was developed for estimating the parameter of interest. Our methods were shown to outperform asymptotically methods based only on the complete data. Asymptotic efficiency was discussed. The proposed estimators were extended to a working independence analysis of longitudinal/clustered data. We illustrated the numerical performance of the proposed methods via simulation and examples.