

LIKELIHOOD-BASED IMPUTATION INFERENCE FOR MEAN FUNCTIONALS IN THE PRESENCE OF MISSING RESPONSES*

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Abstract. This paper considers a semiparametric model which parameterizes only the conditional density of a response given covariates and allows the marginal distribution of the covariates to be completely arbitrary when responses are missing. Different estimators with asymptotic normality for the mean of the response variable are derived, respectively, in the two cases where auxiliary information is available or not. The resulting asymptotic behaviors show that the use of auxiliary information improves inference via empirical likelihood approach.

Key words and phrases: Asymptotic efficiency, missing response, resampling imputation.

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