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Nota di contenuto	Tables and Figures. Glossary. 1. Introduction. 1.1 Overview. 1.2 Examples of Surveys with Nonresponse. 1.3 Properly Handling Nonresponse. 1.4 Single Imputation. 1.5 Multiple Imputation. 1.6 Numerical Example Using Multiple Imputation. 1.7 Guidance for the Reader. 2. Statistical Background. 2.1 Introduction. 2.2 Variables in the Finite Population. 2.3 Probability Distributions and Related Calculations. 2.4 Probability Specifications for Indicator Variables. 2.5 Probability Specifications for (X,Y). 2.6 Bayesian Inference for a Population Quality. 2.7 Interval Estimation. 2.8 Bayesian Procedures for

Constructing Interval Estimates, Including Significance Levels and Point Estimates. 2.9 Evaluating the Performance of Procedures. 2.10 Similarity of Bayesian and Randomization-Based Inferences in Many Practical Cases. 3. Underlying Bayesian Theory. 3.1 Introduction and Summary of Repeated-Imputation Inferences. 3.2 Key Results for Analysis When the Multiple Imputations are Repeated Draws from the Posterior Distribution of the Missing Values. 3.3 Inference for Scalar Estimands from a Modest Number of Repeated Completed-Data Means and Variances. 3.4 Significance Levels for Multicomponent Estimands from a Modest Number of Repeated Completed-Data Means and Variance-Covariance Matrices. 3.5 Significance Levels from Repeated Completed-Data Significance Levels. 3.6 Relating the Completed-Data and Completed-Data Posterior Distributions When the Sampling Mechanism is Ignorable. 4. Randomization-Based Evaluations. 4.1 Introduction. 4.2 General Conditions for the Randomization-Validity of Infinite- m Repeated-Imputation Inferences. 4.3 Examples of Proper and Improper Imputation Methods in a Simple Case with Ignorable Nonresponse. 4.4 Further Discussion of Proper Imputation Methods. 4.5 The Asymptotic Distribution of $(\hat{Q}_m, \hat{U}_m, \hat{B}_m)$ for Proper Imputation Methods. 4.6 Evaluations of Finite- m Inferences with Scalar Estimands. 4.7 Evaluation of Significance Levels from the Moment-Based Statistics D_m and \tilde{D}_m with Multicomponent Estimands. 4.8 Evaluation of Significance Levels Based on Repeated Significance Levels. 5. Procedures with Ignorable Nonresponse. 5.1 Introduction. 5.2 Creating Imputed Values under an Explicit Model. 5.3 Some Explicit Imputation Models with Univariate Y_I and Covariates. 5.4 Monotone Patterns of Missingness in Multivariate Y_I . 5.5 Missing Social Security Benefits in the Current Population Survey. 5.6 Beyond Monotone Missingness. 6. Procedures with Nonignorable Nonresponse. 6.1 Introduction. 6.2 Nonignorable Nonresponse with Univariate Y_I and No X_I . 6.3 Formal Tasks with Nonignorable Nonresponse. 6.4 Illustrating Mixture Modeling Using Educational Testing Service Data. 6.5 Illustrating Selection Modeling Using CPS Data. 6.6 Extensions to Surveys with Follow-Ups. 6.7 Follow-Up Response in a Survey of Drinking Behavior Among Men of Retirement Age. References. Author Index. Subject Index. Appendix I. Report Written for the Social Security Administration in 1977. Appendix II. Report Written for the Census Bureau in 1983.

Sommario/riassunto

This title demonstrates how nonresponse in sample surveys and censuses can be handled by replacing each missing value with two or more multiple imputations. It clearly illustrates the advantages of modern computing to handle such key surveys, and demonstrates the benefit of this statistical technique.
