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Nota di contenuto	Analysis of Survey Data; Contents; Preface; List of Contributors; Chapter 1 Introduction; 1.1. The analysis of survey data; 1.2. Framework, terminology and specification of parameters; 1.3. Statistical inference; 1.4. Relation to Skinner, Holt and Smith (1989); 1.5. Outline of this book; PART A APPROACHES TO INFERENCE; Chapter 2 Introduction to Part A; 2.1. Introduction; 2.2. Full information likelihood; 2.3. Sample likelihood; 2.4. Pseudo-likelihood; 2.5. Pseudo-likelihood applied to analytic inference; 2.6. Bayesian inference for sample surveys 2.7. Application of the likelihood principle in descriptive inferenceChapter 3 Design-based and Model-based Methods for Estimating Model Parameters; 3.1. Choice of methods; 3.2. Design-based and model-based linear estimators; 3.2.1. Parameters of interest; 3.2.2. Linear estimators; 3.2.3. Properties of b and b; 3.3. Design-based and total variances of linear estimators; 3.3.1. Design-based and total variance of b; 3.3.2. Design-based mean squared error of b and its model expectation; 3.4. More complex estimators; 3.4.1.

Taylor linearisation of non-linear statistics; 3.4.2. Ratio estimation
3.4.3. Non-linear statistics - explicitly defined statistics3.4.4. Non-linear statistics - defined implicitly by score statistics; 3.4.5. Total variance matrix of b for non-negligible sampling fractions; 3.5. Conditional model-based properties; 3.5.1. Conditional model-based properties of b; 3.5.2. Conditional model-based expectations; 3.5.3. Conditional model-based variance for b and the use of estimating functions; 3.6. Properties of methods when the assumed model is invalid; 3.6.1. Critical model assumptions; 3.6.2. Model-based properties of b; 3.6.3. Model-based properties of b
3.6.4. Summary3.7. Conclusion; Chapter 4 The Bayesian Approach to Sample Survey Inference; 4.1. Introduction; 4.2. Modeling the selection mechanism; Chapter 5 Interpreting a Sample as Evidence about a Finite Population; 5.1. Introduction; 5.2. The evidence in a sample from a finite population; 5.2.1. Evidence about a probability; 5.2.2. Evidence about a population proportion; 5.2.3. The likelihood function for a population proportion or total; 5.2.4. The probability of misleading evidence; 5.2.5. Evidence about the average count in a finite population
5.2.6. Evidence about a population mean under a regression model5.3. Defining the likelihood function for a finite population; PART B CATEGORICAL RESPONSE DATA; Chapter 6 Introduction to Part B; 6.1. Introduction; 6.2. Analysis of tabular data; 6.2.1. One-way classification; 6.2.2. Multi-way classifications and log-linear models; 6.2.3. Logistic models for domain proportions; 6.3. Analysis of unit-level data; 6.3.1. Logistic regression; 6.3.2. Some issues in weighting; Chapter 7 Analysis of Categorical Response Data from Complex Surveys: an Appraisal and Update; 7.1. Introduction
7.2. Fitting and testing log-linear models

Sommario/riassunto

This book is concerned with statistical methods for the analysis of data collected from a survey. A survey could consist of data collected from a questionnaire or from measurements, such as those taken as part of a quality control process. Concerned with the statistical methods for the analysis of sample survey data, this book will update and extend the successful book edited by Skinner, Holt and Smith on 'Analysis of Complex Surveys'. The focus will be on methodological issues, which arise when applying statistical methods to sample survey data and will discuss in detail the impact of complex