

1. Record Nr.	UNINA9910139206203321
Autore	Retherford Robert D
Titolo	Statistical models for causal analysis [[electronic resource] /] / Robert D. Retherford, Minja Kim Choe
Pubbl/distr/stampa	New York, : Wiley, 1993
ISBN	1-282-25166-X 9786613813916 1-118-03313-2 1-118-03134-2
Descrizione fisica	1 online resource (274 p.)
Altri autori (Persone)	ChoeMinja Kim <1941->
Disciplina	519.5/35 519.535
Soggetti	Multivariate analysis Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"A Wiley-Interscience publication."
Nota di bibliografia	Includes bibliographical references (p. 251-253) and index.
Nota di contenuto	STATISTICAL MODELS FOR CAUSAL ANALYSIS; CONTENTS; 1 Bivariate Linear Regression; 1.1. Terminology; 1.2. Fitting a Least-Squares Line; 1.3. The Least-Squares Line as a Causal Model; 1.4. The Bivariate Linear Regression Model as a Statistical Model; 1.4.1. Simplifying Assumptions; 1.5. Statistical Inference: Generalizing from Sample to Underlying Population; 1.5.1. Hypothesis Testing; 1.5.2. Confidence Intervals; 1.5.3. t Values and Z Values; 1.5.4. p Value; 1.5.5. Importance of a Good Spread of Values of the Predictor Variable; 1.5.6. Beware of Outliers! 1.5.7. Beware of Selection on the Response Variable! 1.5.8. Presentation of Results; 1.6. Goodness of Fit; 1.6.1. Standard Error of the Estimate, s; 1.6.2. Coefficient of Determination, $r^2$ , and Correlation Coefficient, r; 1.7. Further Reading; 2 Multiple Regression; 2.1. The Problem of Bias in Bivariate Linear Regression; 2.2. Multiple Regression with Two Predictor Variables; 2.3. Multiple Regression with Three or More Predictor Variables; 2.4. Dummy Variables to Represent Categorical Variables; 2.4.1. Categorical Variables with Two Categories 2.4.2. Categorical Variables with More Than Two Categories 2.5.

Multicollinearity; 2.6. Interaction; 2.6.1. Model Specification; 2.6.2. More Complicated Interactions; 2.6.3. Correlation without Interaction; 2.6.4. Interaction without Correlation; 2.7. Nonlinearities; 2.7.1. Quadratic Specification; 2.7.2. Dummy Variable Specification; 2.8. Goodness of Fit; 2.8.1. Standard Error of the Estimate,  $s$ ; 2.8.2. Coefficient of Determination,  $R^2$ , and Multiple Correlation Coefficient,  $R$ ; 2.8.3. Corrected  $R^2$  and Corrected  $R$ ; 2.8.4. Partial Correlation Coefficient; 2.9. Statistical Inference  
 2.9.1. Hypothesis Testing, Confidence Intervals, and  $p$  Values for a Single Regression Coefficient  
 2.9.2. Testing the Difference Between Two Regression Coefficients,  $i$  and  $j$ ; 2.9.3. Testing Effects When There Is Interaction; 2.9.4. Testing Effects When There Is a Nonlinearity; 2.9.5. The ANOVA Table; 2.9.6. The Omnibus  $F$  Test of the Hypothesis  $\beta_1 = \beta_2 = \dots = \beta_k = 0$ ; 2.9.7. Test of the Hypothesis That Some of the  $\beta_j$  Are Zero; 2.10. Stepwise Regression; 2.11. Illustrative Examples; 2.11.1. Example 1; 2.11.2. Example 2; 2.12. Further Reading; 3 Multiple Classification Analysis  
 3.1. The Basic MCA Table  
 3.1.1. Unadjusted Values; 3.1.2. Adjusted Values; 3.1.3. Unadjusted and Adjusted,  $R$ ; 3.1.4. A Numerical Example; 3.2. The MCA Table in Deviation Form; 3.2.1. First Approach to Table Set-up; 3.2.2. Second Approach to Table Set-up; 3.2.3. A Numerical Example; 3.3. MCA with Interactions; 3.3.1. Table Set-up; 3.3.2. A Numerical Example; 3.4. MCA with Additional Quantitative Control Variables; 3.4.1. Table Set-up; 3.4.2. A Numerical Example; 3.5. Expressing Results from Ordinary Multiple Regression in an MCA Format (all Variables Quantitative); 3.5.1. Table Set-up  
 3.5.2. A Numerical Example

---

Sommario/riassunto

Simplifies the treatment of statistical inference focusing on how to specify and interpret models in the context of testing causal theories. Simple bivariate regression, multiple regression, multiple classification analysis, path analysis, logit regression, multinomial logit regression and survival models are among the subjects covered. Features an appendix of computer programs (for major statistical packages) that are used to generate illustrative examples contained in the chapters.

---