

1. Record Nr.	UNINA9910463951403321
Autore	Chatterjee Samprit
Titolo	Regression analysis by example / / Samprit Chatterjee, Ali S. Hadi
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , 2012 ©2012
ISBN	1-119-12273-2 1-118-45624-6
Edizione	[Fifth edition.]
Descrizione fisica	1 online resource (734 p.)
Collana	Wiley Series in Probability and Statistics
Disciplina	519.5/36
Soggetti	Regression analysis Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Half Title page; Title page; Copyright page; Dedication; Preface; Chapter 1: Introduction; 1.1 What Is Regression Analysis?; 1.2 Publicly Available Data Sets; 1.3 Selected Applications of Regression Analysis; 1.4 Steps in Regression Analysis; 1.5 Scope And Organization of the Book; Exercises; Chapter 2: Simple Linear Regression; 2.1 Introduction; 2.2 Covariance and Correlation Coefficient; 2.3 Example: Computer Repair Data; 2.4 The Simple Linear Regression Model; 2.5 Parameter Estimation; 2.6 Tests of Hypotheses; 2.7 Confidence Intervals; 2.8 Predictions 2.9 Measuring the Quality of Fit 2.10 Regression Line Through the Origin; 2.11 Trivial Regression Models; 2.12 Bibliographic Notes; Exercises; Chapter 3: Multiple Linear Regression; 3.1 Introduction; 3.2 Description of the Data and Model; 3.3 Example: Supervisor Performance Data; 3.4 Parameter Estimation; 3.5 Interpretations of Regression Coefficients; 3.6 Centering and Scaling; 3.7 Properties of the Least Squares Estimators; 3.8 Multiple Correlation Coefficient; 3.9 Inference for Individual Regression Coefficients; 3.10 Tests of Hypotheses in a Linear Model; 3.11 Predictions; 3.12 Summary Exercises Appendix: Multiple Regression in Matrix Notation; Chapter 4: Regression Diagnostics: Detection of Model Violations; 4.1 Introduction; 4.2 The Standard Regression Assumptions; 4.3 Various

Types of Residuals; 4.4 Graphical Methods; 4.5 Graphs Before Fitting a Model; 4.6 Graphs After Fitting a Model; 4.7 Checking Linearity and Normality Assumptions; 4.8 Leverage, Influence, and Outliers; 4.9 Measures of Influence; 4.10 The Potential-Residual Plot; 4.11 What to Do with the Outliers?; 4.12 Role of Variables in a Regression Equation; 4.13 Effects of an Additional Predictor
4.14 Robust RegressionExercises; Chapter 5: Qualitative Variables as Predictors; 5.1 Introduction; 5.2 Salary Survey Data; 5.3 Interaction Variables; 5.4 Systems of Regression Equations: Comparing Two Groups; 5.5 Other Applications of Indicator Variables; 5.6 Seasonality; 5.7 Stability of Regression Parameters Over Time; Exercises; Chapter 6: Transformation of Variables; 6.1 Introduction; 6.2 Transformations to Achieve Linearity; 6.3 Bacteria Deaths Due to X-Ray Radiation; 6.4 Transformations to Stabilize Variance; 6.5 Detection of Heteroscedastic Errors; 6.6 Removal of Heteroscedasticity
6.7 Weighted Least Squares6.8 Logarithmic Transformation of Data; 6.9 Power Transformation; 6.10 Summary; Exercises; Chapter 7: Weighted Least Squares; 7.1 Introduction; 7.2 Heteroscedastic Models; 7.3 Two-Stage Estimation; 7.4 Education Expenditure Data; 7.5 Fitting a Dose-Response Relationship Curve; Exercises; Chapter 8: the Problem of Correlated Errors; 8.1 Introduction: Autocorrelation; 8.2 Consumer Expenditure and Money Stock; 8.3 Durbin-Watson Statistic; 8.4 Removal of Autocorrelation by Transformation; 8.5 Iterative Estimation with Autocorrelated Errors
8.6 Autocorrelation and Missing Variables

Sommario/riassunto

Praise for the Fourth Edition: ""This book is . . . an excellent source of examples for regression analysis. It has been and still is readily readable and understandable." -Journal of the American Statistical Association Regression analysis is a conceptually simple method for investigating relationships among variables. Carrying out a successful application of regression analysis, however, requires a balance of theoretical results, empirical rules, and subjective judgment.
Regression Analysis by Example, Fifth Edition has been expanded
