

1. Record Nr.	UNINA9910816095903321
Autore	Freund Rudolf J (Rudolf Jakob), <1927-2014.>
Titolo	Regression analysis : statistical modeling of a response variable
Pubbl/distr/stampa	Burlington, MA, : Elsevier Academic Press, c2006
ISBN	1-282-54017-3 9786612540172 0-08-052297-1
Edizione	[2nd ed. /]
Descrizione fisica	1 online resource (481 p.)
Altri autori (Persone)	WilsonWilliam J. <1940-> SaPing
Disciplina	519.5/36 519.536
Soggetti	Regression analysis Linear models (Statistics)
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 (p. 445-447) and index.
Nota di contenuto	Front Cover; Regression Analysis: Statistical Modeling of a Response Variable; Copyright Page; Contents; Preface; An Overview; Part I: The Basics; Chapter 1. The Analysis of Means: A Review of Basics and an Introduction to Linear Models; 1.1 Introduction; 1.2 Sampling Distributions; 1.3 Inferences on a Single Population Mean; 1.4 Inferences on Two Means Using Independent Samples; 1.5 Inferences on Several Means; 1.6 Summary; 1.7 Chapter Exercises; Chapter 2. Simple Linear Regression: Linear Regression with one Independent Variable; 2.1 Introduction; 2.2 The Linear Regression Model 2.3 Inferences on the Parameters β_0 and β_1 2.4 Inferences on the Response Variable; 2.5 Correlation and the Coefficient of Determination; 2.6 Regression through the Origin; 2.7 Assumptions on the Simple Linear Regression Model; 2.8 Uses and Misuses of Regression; 2.9 Inverse Predictions; 2.10 Summary; 2.11 Chapter Exercises; Chapter 3. Multiple Linear Regression; 3.1 Introduction; 3.2 The Multiple Linear Regression Model; 3.3 Estimation of Coefficients; 3.4 Interpreting the Partial Regression Coefficients; 3.5 Inferences on the Parameters 3.6 Testing a General Linear Hypothesis (Optional Topic)3.7 Inferences

on the Response Variable in Multiple Regression; 3.8 Correlation and the Coefficient of Determination; 3.9 Getting Results; 3.10 Summary and a Look Ahead; 3.11 Chapter Exercises; Part II: Problems and Remedies; Chapter 4. Problems with Observations; 4.1 Introduction; 4.2 Outliers and Influential Observations; 4.3 Unequal Variances; 4.4 Robust Estimation; 4.5 Correlated Errors; 4.6 Summary; 4.7 Chapter Exercises; Chapter 5. Multicollinearity; 5.1 Introduction; 5.2 The Effects of Multicollinearity
5.3 Diagnosing Multicollinearity 5.4 Remedial Methods; 5.5 Summary; 5.6 Chapter Exercises; Chapter 6. Problems with the Model; 6.1 Introduction; 6.2 Specification Error; 6.3 Lack of Fit Test; 6.4 Overspecification: Too Many Variables; 6.5 Variable Selection Procedures; 6.6 Reliability of Variable Selection; 6.7 Usefulness of Variable Selection; 6.8 Variable Selection and Influential Observations; 6.9 Summary; 6.10 Chapter Exercises; Part III: Additional Uses of Regression; Chapter 7. Curve Fitting; 7.1 Introduction; 7.2 Polynomial Models with One Independent Variable
7.3 Segmented Polynomials with Known Knots 7.4 Polynomial Regression in Several Variables; Response Surfaces; 7.5 Curve Fitting without a Model; 7.6 Summary; 7.7 Chapter Exercises; Chapter 8. Introduction to Nonlinear Models; 8.1 Introduction; 8.2 Intrinsically Linear Models; 8.3 Intrinsically Nonlinear Models; 8.4 Summary; 8.5 Chapter Exercises; Chapter 9. Indicator Variables; 9.1 Introduction; 9.2 The Dummy Variable Model; 9.3 Unequal Cell Frequencies; 9.4 Empty Cells; 9.5 Models with Dummy and Continuous Variables; 9.6 A Special Application: The Analysis of Covariance
9.7 Heterogeneous Slopes in the Analysis of Covariance

Sommario/riassunto

The book provides complete coverage of the classical methods of statistical analysis. It is designed to give students an understanding of the purpose of statistical analyses, to allow the student to determine, at least to some degree, the correct type of statistical analyses to be performed in a given situation, and have some appreciation of what constitutes good experimental design.* Examples and exercises contain real data and graphical illustration for ease of interpretation* Outputs from SAS 7, SPSS 7, Excel, and Minitab are used for illustration, but any major
