Introduction To Multivariate Statistics Sociology At Western

Multilevel modelling is a data analysis method that is frequently used to investigate hierarchal data structures in educational, behavioural, health, and social sciences disciplines. Multilevel data analysis exploits data structures that cannot be adequately investigated using single-level analytic methods such as multiple regression, path analysis, and structural modelling. This text offers a comprehensive treatment of multilevel models for univariate and multivariate outcomes. It explores their similarities and differences and demonstrates why one model may be more appropriate than another, given the research objectives. New to this edition: An expanded focus on the nature of different types of multilevel data structures (e.g., cross-sectional, longitudinal, cross-classified, etc.) for addressing specific research goals; Varied modelling methods for examining longitudinal data including random-effect and fixed-effect approaches; Expanded coverage illustrating different model-building sequences and how to use results to identify possible model improvements; An expanded set of applied examples used throughout the text; Use of four different software packages (i.e., Mplus, R, SPSS, Stata), with selected examples of model-building input files included in the chapter appendices and a more complete set of files available online. This is an ideal text for graduate courses on multilevel, longitudinal, latent variable modelling, multivariate statistics, or advanced quantitative techniques taught in psychology, business, education, health, and sociology. Recommended prerequisites are introductory univariate and multivariate statistics.

Although nearly all major social science departments offer graduate students training in quantitative methods, the typical sequencing of topics generally delays training in regression analysis and other multivariate techniques until a student's second year. William Berry and Mitchell Sanders's Understanding Multivariate Research fills this gap with a concise introduction to regression analysis and other multivariate techniques. Their book is designed to give new graduate students a grasp of multivariate analysis sufficient to understand the basic elements of research relying on such analysis that they must read prior to their formal training in quantitative methods. Berry and Sanders effectively cover the techniques seen most commonly in social science journals--regression (including nonlinear and interactive models), logit, probit, and causal models/path analysis. The authors draw on illustrations from across the social sciences, including political science, sociology, marketing and higher education. All topics are developed without relying on the mathematical language of probability theory and statistical inference. Readers are assumed to have no background in descriptive or inferential statistics, and this makes the book highly accessible to students with no prior graduate course work.

*More comprehensive than other texts, this new book covers the classic and cutting edge multivariate techniques used in today's research. Ideal for courses on multivariate statistics/analysis/design, advanced statistics or quantitative techniques taught in psychology, education, sociology, and business, the book also appeals to researchers with no training in multivariate methods. Through clear writing and engaging pedagogy and examples using real data, Hahs-Vaughn walks students through the most used methods to learn why and how to apply each technique. A conceptual approach with a higher than usual text-to-formula ratio helps reader's master key concepts so they can implement and interpret results generated by today's sophisticated software. Annotated screenshots from SPSS and other packages are integrated throughout. Designed for course flexibility, after the first 4 chapters, instructors can use chapters in any sequence or combination to fit the needs of their students. Each chapter includes a 'mathematical snapshot' that highlights the technical components of each procedure, so only the most crucial equations are included. Highlights include: -Outlines, key concepts, and vignettes related to key concepts preview what's to come in each chapter -Examples using real data from education, psychology, and other social sciences illustrate key concepts -Extensive coverage of assumptions including tables, the effects of their violation, and how to test for each technique -Conceptual, computational, and interpretative problems mirror the real-world problems students encounter in their studies and careers -A focus on data screening and power analysis with attention on the special needs of each particular method -Instructions for using SPSS via screenshots and annotated output along with HLM, Mplus, LISREL, and G*Power where appropriate, to demonstrate how to interpret results -Templates for writing research questions and APA-style write-ups of results which serve as models -Propensity score analysis chapter that demonstrates the use of this increasingly popular technique -A review of matrix algebra for those who want an introduction (prerequisites include an introduction to factorial ANOVA, ANCOVA, and simple linear regression, but knowledge of matrix algebra is not assumed) -www.routledge.com/9780415842365 provides the text's datasets preformatted for use in SPSS and other statistical packages for readers, as well as answers to all chapter problems, Power Points, and test items for instructors*

Drawing on the authors' varied experiences working and teaching in the field, Analysis of Multivariate Social Science Data, Second Editionenables a basic understanding of how to use key multivariate methods in the social sciences. With updates in every chapter, this edition expands its topics to include regression analysis, con

Applied Multivariate Research

A Researcher's Guide

An Introduction to Applied Multivariate Analysis

Data Analysis Using IBM SPSS Statistics

A Primer For Beginning Social Scientists

What Has Sociology Achieved?

This book was written for those who will be using, rather than developing, advanced statistical methods. It focuses on a conceptual understanding of the material rather than proving results. It is a graduate level textbook with abundant examples.

In an age when continued financial and other support for teaching and research in sociology cannot be taken for granted, sociologists have been surprisingly slow to provide a clear statement of the achievements of sociology in the western world since 1950. What Has Sociology Achieved? does this by assembling twelve essays specially commissioned from distinguished authors, to which the editors add an introduction setting out the issues and a concluding chapter which draws together recurrent themes.

This book brings the power of multivariate statistics to graduate-level practitioners, making these analytical methods accessible without lengthy mathematical derivations. Using the open source, shareware program R, Professor Zelterman demonstrates the process and outcomes for a wide array of multivariate statistical applications. Chapters cover graphical displays, linear algebra, univariate, bivariate and multivariate normal distributions, factor methods, linear regression, discrimination and classification, clustering, time series models, and additional methods. Zelterman uses practical examples from diverse disciplines to welcome readers from a variety of academic specialties. Those with backgrounds in statistics will learn new methods while they review more familiar topics. Chapters include exercises, real data sets, and R implementations. The data are interesting, real-world topics, particularly from health and biology-related contexts. As an example of the approach, the text examines a sample from the Behavior Risk Factor Surveillance System, discussing both the shortcomings of the data as well as useful analyses. The text avoids theoretical derivations beyond those needed to fully appreciate the methods. Prior experience with R is not necessary.

Statistics and Data Analysis for Social Science helps students to build a strong foundational understanding of statistics by providing clarity around when and why statistics useful. Rather than focusing on the "how to" of statistics, author Eric J. Krieg simplifies the complexity of statistical calculations by introducing only what is necessary to understanding each concept. Every chapter is written around and applied to a different social problem or issues—enabling students to broaden their imagination about the statistical "tools" that can be used to make sense of our world and, maybe, to make the world a better place.

Multivariate Analysis for the Behavioral Sciences, Second Edition

Sociology as a Population Science

Decision Sciences

Introduction to Statistical Mediation Analysis

Design and Interpretation

Multivariate Statistics in the Social Sciences

This book provides an introduction to the analysis of multivariate data.It describes multivariate probability distributions, the preliminary analysisof a large -scale set of data, princ iple component and factor analysis, traditional normal theory material, as well as multidimensional scaling andcluster analysis.Introduction to Multivariate Analysis provides a reasonable blend oftheory and practice. Enough theory is given to introduce the concepts andto make the topics mathematically interesting. In addition the authors discussthe use (and misuse) of the techniques in pra ctice and present appropriatereal-life examples from a variety of areas includ ing agricultural research, soc iology and crim inology. The book should be suitable both for researchworkers and as a text for students taking a course on multivariate analysi

Click on the Supplements tab above for further details on the different versions of SPSS programs.

This classic book provides the much needed conceptual explanations of advanced computer-based multivariate data analysis techniques: correlation and regression analysis, factor analysis, discrimination analysis, cluster analysis, multi-dimensional scaling, perceptual mapping, and more. It closes the gap between spiraling technology and its intelligent application, fulfilling the potential of both.

This comprehensive text introduces readers to the most commonly used multivariate techniques at an introductory, non-technical level. By focusing on the fundamentals, readers are better prepared for more advanced applied pursuits, particularly on topics that are most critical to the behavioral, social, and educational sciences. Analogies betwe

Studies in Econometrics, Time Series, and Multivariate Statistics

Basic Statistics in Multivariate Analysis

Introduction to Multivariate Statistical Analysis in Chemometrics

Introduction to Multivariate Analysis

Advanced and Multivariate Statistical Methods

Applied Multivariate Statistics with R

Using formal descriptions, graphical illustrations, practical examples, and R software tools, Introduction to Multivariate Statistical Analysis in Chemometrics presents simple yet thorough explanations of the most important multivariate statistical methods for analyzing chemical data. It includes discussions of various statistical methods, such as principal component analysis, regression analysis, classification methods, and clustering. Written by a chemometrician and a statistician, the book reflects the practical approach of chemometrics and the more formally oriented one of statistics. To enable a better understanding of the statistical methods, the authors apply them to real data examples from chemistry. They also examine results of the different methods, comparing traditional approaches with their robust counterparts. In addition, the authors use the freely available R package to implement methods, encouraging readers to go through the examples and adapt the procedures to their own problems. Focusing on the practicality of the methods and the validity of the results, this book offers concise mathematical descriptions of many multivariate methods and employs graphical schemes to visualize key concepts. It effectively imparts a basic understanding of how to apply statistical methods to multivariate scientific data. Ideal for non-math majors, Advanced and Multivariate Statistical Methods teaches students to interpret, present, and write up results for each statistical technique without overemphasizing advanced math. This highly applied approach covers the why, what, when and how of advanced and multivariate statistics in a way that is neither too technical nor too mathematical. Students also learn how to compute each technique using SPSS software. New to the Sixth Edition Instructor ancillaries are now available with the sixth edition. All SPSS directions and screenshots have been updated to Version 23 of the software. Student learning objectives have been added as a means for students to target their learning and for instructors to focus their instruction. Key words are reviewed and reinforced in the end of chapter material to ensure that students understand the vocabulary of advanced and multivariate statistics.

The updated edition of this classic text introduces a range of techniques for exploring quantitative data. Beginning with an emphasis on descriptive statistics and graphical approaches, it moves on in later chapters to simple strategies for examining the associations between variables using inferential statistics such as chi squared. The book has been substantially revised to include the most recent approaches to data analysis, and includes step–by–step instructions on using SPSS. All these techniques are illustrated with intriguing real examples, drawn from important social research over the past three decades, designed to illuminate significant sociological and political debates. The book shows how students can use quantitative data to answer various questions: Is it true that the rich are getting richer and the poor are getting poorer? Are crime rates really going down, and how can we tell? How much alcohol do men and women really drink in an average week? Which country in Europe has the highest average working hours? Readers are encouraged to explore data for themselves, and are carefully guided through the opportunities and pitfalls of using statistical packages, as well as the numerous data sources readily available online. Suitable for those with no previous experience of quantitative data analysis, the second edition of Exploring Data will be invaluable to students across the social sciences. Visit the accompanying website at www.politybooks.com/exploringdata for more materials.

In recent years economics has been the subject of increasingly severe criticism. It has failed both to predict and to counteract the economic crisis now afflicting nearly the whole Western world. Economic life is more disrupted than ever: - the rate of inflation has risen alarmingly - unemployment has not been as high since the 1930s - economic growth is stagnating - there is increasing opposition to the inequality in the distribution of income and wealth, on anational scale as well as in the world at large - the process of economic integration (EEC, GATT, UNCTAD) is being thwarted - programmes of economic development in the third world have not produced the desired effects - etcetera. Obviously, it would not be fair to put the blame for the crisis on economic science. But the present predicament does call for serious consideration of the limitations of economic explanation. Among the social sciences, economics is unquestionably the most advanced discipline. Its very sophistication, however, leads it to abstract from social phenomena such as norms, institutions, power, conflict and social change. Thus the manifest influence of sociological variables on the course of economic processes remains hidden. Dominating this book as a drumbeat is the conviction held by the several authors that a clearer grasp of the current problems may be obtained if economists and sociologists are prepared to co-operate more closely. An interdisciplinary approach is warranted; the distinction between the social sciences should be less sharply drawn.

MLM and SEM Approaches

Economics and Sociology: Towards an Integration

In Practice : an Introduction to Multivariate Data Analysis and Experimental Design

From Problem to Analysis

An Introduction to Applied Multivariate Analysis with R

Using R With Multivariate Statistics

Relationships in crosstabulations. The log-linear model. Testing for fit. Applications to substantive problems. Special techniques with log-linear models.

Studies in Econometrics, Time Series, and Multivariate Statistics covers the theoretical and practical aspects of econometrics, social sciences, time series, and multivariate statistics. This book is organized into three parts encompassing 28 chapters. Part I contains studies on logit model, normal discriminant analysis, maximum likelihood estimation, abnormal selection bias, and regression analysis with a categorized explanatory variable. This part also deals with prediction-based tests for misspecification in nonlinear simultaneous systems and the identification in models with autoregressive errors. Part II highlights studies in time series, including time series analysis of error-correction models, time series model identification, linear random fields, segmentation of time series, and some basic asymptotic theory for linear processes in time series analysis. Part III contains papers on optimality properties in discrete multivariate analysis, Anderson's probability inequality, and asymptotic distributions of test statistics. This part also presents the comparison of measures, multivariate majorization, and of experiments for some multivariate normal situations. Studies on Bayes procedures for combining independent F tests and the limit theorems on high dimensional spheres and Stiefel manifolds are included. This book will prove useful to statisticians, mathematicians, and advance mathematics students.

Bray's monograph considers the multivariate form of analysis of variance (MANOVA). It is a technique which can be used in such different academic disciplines as psychology, sociology, biology, and education.

Now in its 6th edition, the authoritative textbook Applied Multivariate Statistics for the Social Sciences, continues to provide advanced students with a practical and conceptual understanding of statistical procedures through examples and data-sets from actual research studies. With the added expertise of co-author Keenan Pituch (University of Texas-Austin), this 6th edition retains many key features of the previous editions, including its breadth and depth of coverage, a review chapter on matrix algebra, applied coverage of MANOVA, and emphasis on statistical power. In this new edition, the authors continue to provide practical guidelines for checking the data, assessing assumptions, interpreting, and reporting the results to help students analyze data from their own research confidently and professionally. Features new to this edition include: NEW chapter on Logistic Regression (Ch. 11) that helps readers understand and use this very flexible and widely used procedure NEW chapter on Multivariate Multilevel Modeling (Ch. 14) that helps readers understand the benefits of this "newer" procedure and how it can be used in conventional and multilevel settings NEW Example Results Section write-ups that illustrate how results should be presented in research papers and journal articles NEW coverage of missing data (Ch. 1) to help students understand and address problems associated with incomplete data Completely re-written chapters on Exploratory Factor Analysis (Ch. 9), Hierarchical Linear Modeling (Ch. 13), and Structural Equation Modeling (Ch. 16) with increased focus on understanding models and interpreting results NEW analysis summaries, inclusion of more syntax explanations, and reduction in the number of SPSS/SAS dialogue boxes to guide students through data analysis in a more streamlined and direct approach Updated syntax to reflect newest versions of IBM SPSS (21) /SAS (9.3) A free online resources site at www.routledge.com/9780415836661 with data sets and syntax from the text, additional data sets, and instructor's resources (including PowerPoint lecture slides for select chapters, a conversion guide for 5th edition adopters, and answers to exercises). Ideal for advanced graduate-level courses in education, psychology, and other social sciences in which multivariate statistics, advanced statistics, or quantitative techniques courses are taught, this book also appeals to practicing researchers as a valuable reference. Pre-requisites include a course on factorial ANOVA and covariance; however, a working knowledge of matrix algebra is not assumed.

Making Sense of Multivariate Data Analysis

Sources and Methods of Historical Demography

Statistics and Data Analysis for Social Science

Multivariate Analysis Techniques in Social Science Research

Multivariate Statistical Analysis

An Introduction to Statistical Models

Multivariate Analysis for the Behavioral Sciences, Second Edition is designed to show how a variety of statistical methods can be used to analyse data collected by psychologists and other behavioral scientists. Assuming some familiarity with introductory statistics, the book begins by briefly describing a variety of study designs used in the behavioral sciences, and the concept of models for data analysis. The contentious issues of p-values and confidence intervals are also discussed in the introductory chapter. After describing graphical methods, the book covers regression methods, including simple linear regression, multiple regression, locally weighted regression, generalized linear models, logistic regression, and survival analysis. There are further chapters covering longitudinal data and missing values, before the last seven chapters deal with multivariate analysis, including principal components analysis, factor analysis, multidimensional scaling, correspondence analysis, and cluster analysis. Features: Presents an accessible introduction to multivariate analysis for behavioral scientists Contains a large number of real data sets, including cognitive behavioral therapy, crime rates, and drug usage Includes nearly 100 exercises for course use or self-study Supplemented by a GitHub repository with all datasets and R code for the examples and exercises Theoretical details are separated from the main body of the text Suitable for anyone working in the behavioral sciences with a basic grasp of statistics

This pocket guide introduces readers to linear regression analysis, analysis of variance and covariance, and path analysis with an emphasis on the basic statistics. It prepares doctoral students and early career social work researchers with limited statistics exposure in the use of multivariate methods by providing an easy-to-understand presentation.

"Multivariate Data Analysis - in practice adopts a practical, non-mathematical approach to multivariate data analysis. The book's principal objective is to provide a conceptual framework for multivariate data analysis techniques, enabling the reader to apply these in his or her own field. Features: Focuses on the practical application of multivariate techniques such as PCA, PCR and PLS and experimental design. Non-mathematical approach - ideal for analysts with little or no background in statistics. Step by step introduction of new concepts and techniques promotes ease of learning. Theory supported by hands-on exercises based on real-world data. A full training copy of The Unscrambler (for Windows 95, Windows NT 3.51 or later versions) including data sets for the exercises is available. Tutorial exercises based on data from real-world applications are used throughout the book to illustrate the use of the techniques introduced, providing the reader with a working knowledge of modern multivariate data analysis and experimental design. All exercises use The Unscrambler, a de facto industry standard for multivariate data analysis software packages.

Multivariate Data Analysis in Practice is an excellent self-study text for scientists, chemists and engineers from all disciplines (non-statisticians) wishing to exploit the power of practical multivariate methods. It is very suitable for teaching purposes at the introductory level, and it can always be supplemented with higher level theoretical literature."Résumé de l'éditeur.

Using a conceptual, non-mathematical approach, the updated Third Edition provides full coverage of the wide range of multivariate topics that graduate students across the social and behavioral sciences encounter. Authors Lawrence S. Meyers, Glenn Gamst, and A. J. Guarino integrate innovative multicultural topics in examples throughout the book, which include both conceptual and practical coverage of: statistical techniques of data screening; multiple regression; multilevel modeling; exploratory factor analysis; discriminant analysis; structural equation modeling; structural equation modeling invariance; survival analysis; multidimensional scaling; and cluster analysis.

Understanding Multivariate Research

Theory and Practice

An Introduction to Multivariate Statistical Analysis

Linear Regression

Studies in Social Discontinuity

Multivariate Analysis of Variance

Sources and Methods of Historical Demography covers the fundamental sources, methods, and approaches to explanatory modeling for describing, analyzing, and understanding demographic features of past societies. The book discusses the intellectual ancestry of historical demographic research, beginning in the 17th century; as well as the logic of basic techniques for reconstructing and analyzing information from fundamental source materials. The text also describes the full range of disciplines that have made major contributions to historical demography, and examples of empirical research. The book concludes by arguing the case for conducting historical demographic research with a broad, interdisciplinary ideal in mind. Historians and sociologists will find the book invaluable.

1. Introduction; 2. The multivariate normal distribution; 3. Estimation of the mean vector and the covariance matrix; 4. Distributions and uses of sample correlation coefficients; 5. The generalized T2-Statistic; 6. Classification of observations; 7. The distribution of the sample covariance matrix and the sample generalized variance; 8. Testing the general linear hypothesis; Multivariate analysis of variance; 9. Testing independence of sets of variates; 10. Testing hypothesis of equality of coariance matrices and equality of mean vectors and covariance matrices; 11. Principal components; 12. Canonical correlations and canonical variables; 13. The distributions of characteristic roots and vectors; 14. Factor analysis.

This handbook is an endeavour to cover many current, relevant, and essential topics related to decision sciences in a scientific manner. Using this handbook, graduate students, researchers, as well as practitioners from engineering, statistics, sociology, economics, etc. will find a new and refreshing paradigm shift as to how these topics can be put to use beneficially. Starting from the basics to advanced concepts, authors hope to make the readers well aware of the different theoretical and practical ideas, which are the focus of study in decision sciences nowadays. It includes an excellent bibliography/reference/journal list, information about a variety of datasets, illustrated pseudo-codes, and discussion of future trends in research. Covering topics ranging from optimization, networks and games, multi-objective optimization, inventory theory, statistical methods, artificial neural networks, times series analysis, simulation modeling, decision support system, data envelopment analysis, queueing theory, etc., this reference book is an attempt to make this area more meaningful for varied readers. Noteworthy features of this handbook are in-depth coverage of different topics, solved practical examples, unique datasets for a variety of examples in the areas of decision sciences, in-depth analysis of problems through colored charts, 3D diagrams, and discussions about software.

The majority of data sets collected by researchers in all disciplines are multivariate, meaning that several measurements, observations, or recordings are taken on each of the units in the data set. These units might be human subjects, archaeological artifacts, countries, or a vast variety of other things. In a few cases, it may be sensible to isolate each variable and study it separately, but in most instances all the variables need to be examined simultaneously in order to fully grasp the structure and key features of the data. For this purpose, one or another method of multivariate analysis might be helpful, and it is with such methods that this book is largely concerned. Multivariate analysis includes methods both for describing and exploring such data and for making formal inferences about them. The aim of all the techniques is, in general sense, to display or extract the signal in the data in the presence of noise and to find out what the data show us in the midst of their apparent chaos. An Introduction to Applied Multivariate Analysis with R explores the correct application of these methods so as to extract as much information as possible from the data at hand, particularly as some type of graphical representation, via the R software. Throughout the book, the authors give many examples of R code used to apply the multivariate techniques to multivariate data.

An Intuitive Approach

An Introduction to Causal Analysis in Sociology

Adventures in Social Research

Analysis of Multivariate Social Science Data

Applied Multivariate Statistics for the Social Sciences

Exploring Data

Tacq demonstrates how a researcher comes to the appropriate choice of a technique for multivariate analysis. He examines a wide selection of topics from a range of disciplines including sociology, psychology, economics, and political science.

"This is an ideal text for advanced undergraduate and graduate courses across the social sciences. Practitioners who need to refresh their knowledge of MDA will also find this an invaluable resource."--BOOK JACKET.

This volume introduces the statistical, methodological, and conceptual aspects of mediation analysis. Applications from health, social, and developmental psychology, sociology, communication, exercise science, and epidemiology are emphasized throughout. Single-mediator, multilevel, and longitudinal models are reviewed. The author's goal is to help the reader apply mediation analysis to their own data and understand its limitations. Each chapter features an overview, numerous worked examples, a summary, and exercises (with answers to the odd numbered questions). The accompanying CD contains outputs described in the book from SAS, SPSS, LISREL, EQS, MPLUS, and CALIS, and a program to simulate the model. The notation used is consistent with existing literature on mediation in psychology. The book opens with a review of the types of research questions the mediation model addresses. Part II describes the estimation of mediation effects including assumptions, statistical tests, and the construction of confidence limits. Advanced models including mediation in path analysis, longitudinal models, multilevel data, categorical variables, and mediation in the context of moderation are then described. The book closes with a discussion of the limits of mediation analysis, additional approaches to identifying mediating variables, and future directions. Introduction to Statistical Mediation Analysis is intended for researchers and advanced students in health, social, clinical, and developmental psychology as well as communication, public health, nursing, epidemiology, and sociology. Some exposure to a graduate level research methods or statistics course is assumed. The overview of mediation analysis and the guidelines for conducting a mediation analysis will be appreciated by all readers.

Making Sense of Multivariate Data AnalysisAn Intuitive ApproachSAGE

Practical Application and Interpretation

Multivariate Data Analysis

Log-Linear Models

Applied Univariate, Bivariate, and Multivariate Statistics

Analyses with SAS and IBM's SPSS, Sixth Edition

A Conceptual Introduction

Using R with Multivariate Statistics by Randall E. Schumacker is a quick guide to using R, free-access software available for Windows and Mac operating systems that allows users to customize statistical analysis. Designed to serve as a companion to a more comprehensive text on multivariate statistics, this book helps students and researchers in the social and behavioral sciences get up to speed with using R. It provides data analysis examples, R code, computer output, and explanation of results for every multivariate statistical application included. In addition, R code for some of the data set examples used in more comp included, so students can run examples in R and compare results to those obtained using SAS, SPSS, or STATA. A unique feature of the book is the photographs and biographies of famous persons in the field of multivariate statistics.

This text introduces the fundamental linear regression models used in quantitative research. It covers both the theory and application of these statistical models, and illustrates them with illuminating graphs. The author offers guidence on: Deciding the most appropriate model to use for your research Conducting simple and multiple linear regression Checking model assumptions and the dangers of overfitting Part of The SAGE Quantitative Research Kit, this book will help you make the crucial steps towards mastering multivariate analysis of social science data.

Many different people, from social scientists to government agencies to business professionals, depend on the results of multivariate models to inform their decisions. Researchers use these advanced statistical techniques to analyze relationships among multiple variables, such as how exercise and weight relate to the risk of heart disease, or how unemployment and interest rates affect economic growth. Yet, despite the widespread need to plainly and effectively explain the results of multivariate analyses to varied audiences, few are properly taught this critical skill. The Chicago Guide to Writing about Multivariate Analysis researchers turn to when looking for guidance on how to clearly present statistical results and break through the jargon that often clouds writing about applications of statistical analysis. This new edition features even more topics and real-world examples, making it the must-have resource for anyone who needs to communicate complex research results. For this second edition, Jane E. Miller includes four new chapters that cover writing about interactions, writing about event history analysis, writing about multilevel models, and the "Goldilocks principle" for choosing the right size contrast for interpreting results for different va In addition, she has updated or added numerous examples, while retaining her clear voice and focus on writers thinking critically about their intended audience and objective. Online podcasts, templates, and an updated study guide will help readers apply skills from the book to their own projects and courses. This continues to be the only book that brings together all of the steps involved in communicating findings based on multivariate analysis—finding data, creating variables, estimating statistical models, calculating overall effects, organizing ideas, designing tables and charts, and writing prose—in a single volume. When a Miller's twelve fundamental principles for quantitative writing, this approach will empower readers—whether students or experienced researchers—to communicate their findings clearly and effectively.

For over 30 years, this text has provided students with the information they need to understand and apply multivariate data analysis. The eighth edition of Multivariate Data Analysis provides an updated perspective on the analysis of all types of data as well as introducing some new perspectives and techniques that are foundational in today's world of analytics. Multivariate Data Analysis serves as the perfect companion for graduate and postgraduate students undertaking statistical analysis for business degrees, providing an application-oriented introduction to multivariate analysis for the non-statistician. By reducing heavy research into fundamental concepts, the text explains to students how to understand and make use of the results of specific statistical techniques.

Applied Multivariate Statistical Concepts

The Chicago Guide to Writing about Multivariate Analysis, Second Edition

An Introduction to Data Analysis for Social Scientists

An Introduction to Multilevel Modeling Techniques

A clear and efficient balance between theory and application of statistical modeling techniques in the social and behavioral sciences Written as a general and accessible introduction, Applied Univariate, Bivariate, and Multivariate Statistics provides an overview of statistical modeling techniques used in fields in the social and behavioral sciences. Blending statistical theory and methodology, the book surveys both the technical and theoretical aspects of good data analysis. Featuring applied resources at various levels, the book includes statistical techniques such as t-tests and correlation as well as more advanced procedures such as MANOVA, factor analysis, and structural equation modeling. To promote a more in-depth interpretation of statistical techniques across the sciences, the book surveys some of the technical arguments underlying formulas and equations. Applied Univariate,

Bivariate, and Multivariate Statistics also features Demonstrations of statistical techniques using software packages such as R and SPSS® Examples of hypothetical and real data with subsequent statistical analyses Historical and philosophical insights into many of the techniques used in modern social science A companion website that includes further instructional details, additional data sets, solutions to selected exercises, and multiple programming options An ideal textbook for courses in statistics and methodology at the upper- undergraduate and graduate-levels in psychology, political science, biology, sociology, education, economics, communications, law, and survey research, Applied Univariate, Bivariate, and Multivariate Statistics is also a useful reference for practitioners and researchers in their field of application. DANIEL J. DENIS, PhD, is Associate Professor of Quantitative Psychology at the University of Montana where he teaches courses in univariate and multivariate statistics. He has published a number of articles in peer-reviewed journals and has served as consultant to researchers and practitioners in a variety of fields.