With pleasure and great pride, we present our new text, *Business and Economic Statistics using Microsoft® Excel*. The text, geared for both introductory undergraduate and MBA-level statistics courses, contains 15 chapters of material focusing on the essentials of applied business statistics. Virtually all key business statistics topics are included in this well-targeted and fast-moving text. We believe that *Business and Economic Statistics using Microsoft® Excel*, a perfect blend of practical business statistics and Microsoft Excel, is the text that instructors have sought for themselves and their students.

The text is targeted at the large number of business and economics students who will become decision-makers rather than statisticians. Concepts are illustrated through the use of real business and economic data and examples. Along with the major objective of providing a clear, concise presentation of applied statistical techniques, a second objective of this text is to demonstrate and explain how Microsoft?s Excel can be used to analyze business and economic data. Thus, users will find a balance between statistical concept/technique presentation and understanding the statistical computer output contained in Excel. We assume that the student has a background in college algebra, but calculus is neither used nor needed.

One of the major assets of this text is the synergy gained by the joint efforts of its authors, Ken Black and David Eldredge. Ken Black ?s experience includes two successful business statistics texts well regarded for their excellent examples and problems. David L. Eldredge is an Excel expert who is well known for his popular "*Microsoft® Excel Companion to Business Statistics*" that explains and demonstrates how to use Excel to analyze data with statistics.

Excel is seamlessly woven into the presentation of business statistics techniques in this text. After setting the stage in Chapter One by giving an overview of Excel?s statistical and graphical capabilities, each Excel statistical technique appears within the relevant section in the text. In other words, Excel techniques are presented *at the point of impact* rather than at the end of the chapter or in an appendix. The explanation of each Excel technique includes its input dialog box along with an example of output so that the student knows exactly how to input data, and how to recognize and interpret the output. Virtually all problems include raw data so that the student will analyze the data using Excel. All data used in problems is included on the CD-ROM that accompanies this text.
There are several statistical topics for which no Microsoft Excel techniques exist. To meet this need, we created FASTx STAT, a package of add-ins, which look and act like Excel and can be used for statistical analyses where Excel does not have a technique. Between Excel and FASTx STAT, most of the statistics presented in this text can be computerized.

**FASTx STAT**

The FASTx STAT add-ins feature written by David L. Eldredge includes 15 macro procedures that augment and extend the capabilities of the main four Excel statistical features. FASTx STAT is easy to install and is available along with documentation and installation information on the CD-ROM that accompanies this text.

FASTx STAT is seamless with Excel and, when installed, becomes another selection on your Excel menu bar. It has a pull-down menu that makes it easy to select the macro you want to use. The macros are written such that both the input dialog boxes and the output very closely resemble Excel. However, while data analysis in Excel is static, FASTx STAT’s macro output is dynamic. What this means is that if the user of the macro goes back to the original data that was entered and changes any of the input numbers, FASTx STAT will recompute and update the output for the new data.

The 15 FASTx STAT macros include: Box and Whiskers Plot (chapter 3), Probabilities (chapter 4), Uniform Distribution (chapter 6), One Mean Using the Z Distribution (chapters 8 & 9), One Mean Using the t Distribution (chapters 8 & 9), Sample Size for One Mean (chapter 8), One Proportion C.I. and H.T. (chapters 8 & 9), Sample Size One Proportion (chapter 8), Two Proportions Hyp. Test (chapter 10), Chi-Square Indep. Test (chapter 11), Regression C.I. and P.I. (chapter 12), Durban Watson Test (chapter 14), X bar and R charts (chapter 15), P Chart (chapter 15), and c Chart (chapter 15).

**FEATURES OF THE TEXTBOOK**

*Exclusively Microsoft Excel*

Today’s students have access to Excel at home, school, or work, and they want to
use it. Excel is the software featured exclusively in this text. Excel explanations are included in most sections of all chapters of the book. The authors have gone to great lengths to make the Excel discussion seamless with the statistical presentation so that Excel is easy and convenient to use and interpret, but does not distract from the statistical material. There are sixty computer input dialog boxes displayed in the text and well over two hundred statistical computer outputs. As discussed earlier, to augment Excel for situations where Excel does not have a statistical feature, the authors created FASTx STAT.

**Topical Coverage**

Topical coverage, while traditional, parallels the types of analyses contained in Excel. The text includes the usual treatment of graphical depiction, descriptive statistics, probability, discrete and continuous distributions, sampling distributions, hypothesis testing, and estimation. There is a chapter on one-way ANOVA, randomized block designs, and two-way ANOVA. Included are the chi-square test of goodness-of-fit and the chi-square test of independence. Because business decision-makers often use regression and forecasting tools, separate chapters are dedicated to multiple regression analysis and time-series forecasting. Finally, a chapter on statistical quality control is included.

**Demonstration Problems**

Virtually every section of every chapter contains demonstration problems. A demonstration problem is an additional example problem that contains a full solution and is used to augment the statistical analysis being discussed. This pedagogical tool supplements explanations and reinforces the material to the student.

**Databases**

This text contains seven databases, all of which are available in Excel format on the CD-Rom. A manufacturing database, a financial database, a stock market database, an international employment database, an energy database, a healthcare database, and an agri-business database provide over 8,350 observations and 56 variables. Data are from reliable and recognizable sources including the U.S. Bureau of Labor Statistics, the New York Stock Exchange, the U.S. Department of Agriculture, Moody's Handbook of Common Stocks, the American Hospital Association, and
the U.S. Bureau of Census. Four of the seven databases have time-series data; one contains 168 months of time-series data ideal for demonstrating and analyzing forecasting techniques.

Problems

Over 600 problems are presented in this book. Many of the problems are taken from actual business and economic situations with real companies. All of the problems contain raw data so that they may be analyzed using Excel or FASTx STAT.

Analyzing the Databases

This feature, located at the end of each chapter, contains several questions/problems that require the application of the techniques from the chapter to data in the variables of the databases. Solving these questions/problems will provide solid computer experience.

Cases

Each chapter ends with a case that is based on a real company. These cases give the student an opportunity to use statistical concepts and techniques presented in the chapter to solve a business dilemma. Some cases feature very large companies like Shell Oil, Coca-Cola, or Colgate-Palmolive. Others pertain to small businesses such as Thermatrix, Robotron, or Fletcher-Terry which have overcome obstacles to survive and thrive. Most cases include raw data for analysis and questions that encourage the student to use several of the techniques presented in the chapter. In most instances, the student must analyze software output in order to reach conclusions or make decisions.

CD-ROM

Each copy of this text comes with a CD-ROM that contains valuable resources to assist both the student and the instructor. The CD-ROM contains:
- **FASTx STAT**
- Data files in Excel for all the problems and cases in the text
- All seven databases in Excel format
- An introduction to statistics with Excel including a brief overview of Microsoft® WINDOWS®, some initial instruction on how to use Excel and its wizards, and a number of worksheet practices to make statistical worksheets more effective.
- An introduction to Excel’s DATA ANALYSIS TOOLS.
- An introduction to Excel’s STATISTICAL FUNCTIONS including how they differ from DATA ANALYSIS TOOLS.
- Additional information and data, and some specialized Excel templates for time series forecasting (Chapter 14)

### Ancillary Teaching and Learning Materials

Two ancillaries are available to students either through their bookstore or for direct purchase through the online catalog at [http://www.swcollege.com](http://www.swcollege.com).

- Prepared by the textbook authors Ken Black and David L. Eldredge, **WebTutor** is a brand new electronic ancillary. There are two main formats for this product:

  WebTutor is used by an entire class under the directions of the instructor. It provides web-based learning resources (including review materials, study questions with answers, and solutions to the odd-numbered text problems) to students as well as powerful communication and other course management tools including course calendar, chat, and e-mail for instructors. WebTutor is available on WebCT and Blackboard. See [http://webtutor.thomsonlearning.com](http://webtutor.thomsonlearning.com) for more information.

  Personal WebTutor provides the learning resources for individual students to purchase and use for study and review. See [http://pwt.swcollege.com](http://pwt.swcollege.com) for more information about this product.

In addition, the Instructor's Resource CD (ISBN: 0-324-01729-4) provides all instructor ancillaries. Included in this convenient format are:

- **Instructor's Manual**? The Instructor's Manual, prepared by the text authors, contains chapter outlines, teaching strategies, and full solutions to all problems and cases presented in the text.
- **PowerPoint? Presentation Slides**? The presentation slides contain graphics to help instructors create stimulating lectures. The slides may be adapted using PowerPoint software to facilitate classroom use.
- **Test Bank and ExamView?**? The Test Bank includes multiple choice questions for each chapter. The Test Bank is provided in Microsoft® Word format on the IRCD. The ExamView computerized testing software allows instructors to create print and on-line exams.

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- Ken Black and David L. Eldredge