

# Preface

Exceptional managers know that they can create competitive advantages by basing decisions on performance response under alternative scenarios. To create these advantages, managers need to understand how to use statistics to provide information on performance response under alternative scenarios. Statistics are created to make better decisions. Statistics are essential and relevant. Statistics must be easily and quickly produced using widely available software, e.g., Excel. Then results must be translated into general business language and illustrated with compelling graphics to make them understandable and usable by decision makers. This book helps students master this process of using statistics to create competitive advantages as decision makers.

Statistics are essential, relevant, easy to produce, easy to understand, valuable, and a powerful source of competitive advantage.

## The Examples, Assignments, and Cases Used to Illustrate Statistics for Decision Making Come from Business Problems

McIntire Corporate Sponsors and partners, such as Rolls-Royce, Procter & Gamble, and Dell, and the industries that they do business in, provide many realistic examples. The book also features a number of examples of global business problems, including those from important emerging markets in China, India, and Chile. Students are excited when statistics are used to study real and important business problems. This makes it easy to see how they will use statistics to create competitive advantages in their internships and careers.

## Learning Is Hands On With Excel and Shortcuts

Each type of analysis is introduced with one or more examples. Following this is an example of how to create the statistics in Excel, and what the numbers mean in English.

Included in Excel sections are screenshots which allow students to easily master Excel. Featured are a number of popular Excel shortcuts, which are, themselves, a competitive advantage.

Powerful PivotTables and PivotCharts are introduced early and used throughout the book. Results are illustrated with graphics from Excel.

In each chapter, assignments or cases are included to allow students to practice using statistics for decision making and competitive advantage. Beginning in Chap. 11, Harvard Business School cases are suggested which provide additional opportunities to use statistics to advantage.

## Focus Is On What Statistics Mean to Decision Makers and How to Communicate Results

From the beginning, results are translated into English. In Chap. 7, results are condensed and summarized in PowerPoint presentations and memos, the standards of communication in

businesses. Later chapters include example memos for students to use as templates, making communication of statistics for decision making an easy skill to master.

Instructors, give your students the powerful skills that they can use to create competitive advantages as decision makers. Students, be prepared to discover that statistics are a powerful competitive advantage. Your mastery of the essential skills of creating and communicating statistics for improved decision making will enhance your career and make numbers fun.

## New in the Third Edition

The third edition includes more explanations of Monte Carlo simulation. Chapter 4 introduces simulation as a tool for inference and forecasting based on decision makers' assumptions. Chapter 6 demonstrates the use of Monte Carlo simulation to integrate naïve forecasts of performance components. Chapter 13 illustrates use of simulation to integrate nonlinear regression forecasts of performance components for forecasting amidst uncertainties.

The use of naïve models to fit trends for longer range forecasts is introduced in Chap. 6 and extended in Chap. 13, where nonlinear trends and indicators are combined for forecasting. In some situations, a longer-term forecast is desired without the immediate need to explain variation, and naïve forecasts offer a relatively quick solution.

The financial and economic events of 2008–2010 changed business dramatically. Examples have been updated to illustrate how the impacts of recent changes can be acknowledged to build powerful, valid models.

Global examples now include analysis of several emerging markets multinationals in Chile. Such markets create unique opportunities for global business, and the third edition moves beyond the BRICs to explore these.

## Acknowledgements

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