business
research
methods

Zikmund

Babin

Carr

Griffin

ninth edition

BUSINESS RESEARCH METHODS

NINTH EDITION

BUSINESS RESEARCH METHODS

NINTH EDITION

William G. Zikmund

Barry J. Babin

Max P. Watson Professor of Business
Louisiana Tech University
Head, Department of Marketing & Analysis

Jon C. Carr

M.J. Neeley School of Business
Texas Christian University
Department of Management, Entrepreneurship, & Leadership

Mitch Griffin

Professor of Marketing
Bradley University

SOUTH-WESTERN
CENGAGE Learning™

Australia • Brazil • Japan • Korea • Mexico • Singapore • Spain • United Kingdom • United States

This is an electronic version of the print textbook. Due to electronic rights restrictions, some third party content may be suppressed. Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. The publisher reserves the right to remove content from this title at any time if subsequent rights restrictions require it. For valuable information on pricing, previous editions, changes to current editions, and alternate formats, please visit www.cengage.com/highered to search by ISBN#, author, title, or keyword for materials in your areas of interest.

To our families.

BRIEF CONTENTS

CONTENTS ⠿⠿⠿

CHAPTER 12
Experimental Research, 253

Measurement Concepts

CHAPTER 13
Measurement and Scaling Concepts, 288

PART SIX
Data Analysis and Presentation

CHAPTER 19
Editing and Coding: Transforming Raw Data into Information, 458

APPENDIX 22A
Manual Calculation of an
F-Statistic, 553

APPENDIX 22B
ANOVA for Complex
Experimental Designs, 556

CHAPTER 23
Bivariate Statistical Analysis:
Measures of Association, 560

APPENDIX 23A
Arithmetic Behind OLS, 580

CHAPTER 24
Multivariate Statistical
Analysis, 582

CHAPTER 25
Communicating Research
Results: Report Generation,
Oral Presentation, and
Follow-Up, 610

PREFACE

The business world has never been changing faster! Businesses can't assume that continuing to operate their functional areas by the same old processes, with the same old technology, managed in the same old way will continue to produce the same old good result. The need for intelligence supported by a connection with customers, employees, and other constituencies is more important than ever. Business researchers are challenged with the job of producing just this type of intelligence. The ninth edition of *Business Research Methods* addresses the dynamic nature of today's business world while conveying the essential elements of the business research process.

Most readers understand that managers want answers to business questions. What is not so obvious is the complexity involved in specifying the correct research questions and determining the appropriate process for collecting, analyzing, and presenting information. This is the role of a business researcher, who must develop the skills to clarify the research objectives and possess the ability to manage the search for information. With the technological capabilities we have today, that means searching through terabyte after terabyte of existing information to pick out those elements which best hold the possibility of turning into useful intelligence. This information must be complemented by original data gathered by the researcher. All the intelligence must then be communicated in a way that helps managers make decisions. When it works right, business research is a win–win proposition. The process enables a company to identify its customers, understand its employees, and design processes, products, and services that maximize value for all. In return, the company receives value as the customer spends their hard-earned money, employee engagement increases, and more effective business practices are implemented. As a result, everyone wins!

Trying to find just the right piece of business information via the Internet can be like searching for a needle in a haystack. This information may well be hidden beneath piles and piles of irrelevant stuff! Or, how about trying to find a key piece of business information that may be hidden in the mind of a consumer or employee? A customer may not even be consciously aware of all his or her reasons for some preference or behavior and, consequently, can't identify or talk about it. An employee may not even realize that he or she possesses information vital to the organization. How do you go about uncovering this information that could be so crucial to making a good business decision?

That's where this text comes in: *Business Research Methods* equips students with the knowledge and skills needed in their search for business intelligence. The process we describe includes six steps. Researchers must first work together with decision makers to decide what they are looking for—that metaphorical needle in the haystack. The next two stages plot out the way to go about finding the needle. Next are two stages that focus on the actual search for the needle. The process concludes when the business researcher communicates the benefits of finding "pointed"

information that can help mend problems or create something really new and special for the decision maker. Success in this process usually merits the researcher a reward that is a bit more valuable than that needle!

Enhancements in *Business Research Methods*

To ensure that students are able to conduct business research with an understanding of all the latest theories and techniques available to them, the ninth edition is revised and updated. In response to reader feedback and changes in the research environment, two key enhancements have been made: (1) the ninth edition provides greater examples, illustrations, and applications of the global nature of business and (2) focuses more heavily on the role of technology in research. Without a doubt these issues—globalization and technology—continue to revolutionize business research. The Internet has affected all phases of research by altering information systems, ways of gathering secondary data, survey processes, sampling, questionnaire design, primary data collection, qualitative analysis, and communication, among other things. In the ninth edition, practically every chapter includes significant coverage of technology-related topics, and most chapters also include review questions and activities that get students involved with the Internet or other applications of technology in a relevant way. The *Survey This!* feature gets students and instructors directly involved with one important way that the Internet has changed research. This particular feature provides first-hand experience with the process, and illustrates the advantages and disadvantages, of using online questionnaires.

Overall, here is a summary of some of the key improvements and features of the ninth edition of *Business Research Methods*.

■ Increased Coverage of International Business Issues—The text makes greater use of examples from companies and countries around the globe. Readers of this book from outside North America will appreciate more familiar examples that are relevant to their daily life. The international examples will also open up North American students to research issues beyond the domestic market. For all readers the examples illustrate global dynamics. This is a particularly important enhancement to the text since cultural and language barriers often present challenges for the business researcher.

■ *Survey This!* Feature—First introduced in the eighth edition, *Survey This!* allows students to respond to an online questionnaire hosted with Qualtrics software. The questionnaire involves students' opinions, activities, and interests regarding matters related to studying business and careers in business fields. In the early chapters, this feature is useful for critiquing the way questionnaires are constructed and how research hypotheses are addressed in a questionnaire. New to the ninth edition is a populated data set for instructors based on the *Survey This!* questionnaire. This data can be used in later chapters as illustration of the statistical techniques discussed in the text. Students also get access to Qualtrics to design their own questionnaires.

■ Attention to Qualitative Research—Companies are increasingly realizing the benefits of qualitative research. In response to this important phenomenon, Chapter 7, *Qualitative Research Tools*, provides a comprehensive overview of qualitative research techniques. The chapter focuses on various approaches to qualitative research and the corresponding interpretative techniques that turn qualitative data into business intelligence. Phenomenology, grounded theory, ethnography, and case study approaches are all covered. Qualitative research is also integrated into several other chapters. For example, the Internet is not just a way of collecting quantitative data. Qualitative research is being dramatically changed by the Internet as consumers leave more and more artifactual data behind on social networking websites, company chat rooms, blogs, microblogs (such as tweets left on Twitter), and more. Thus, qualitative research tools and approaches are highlighted throughout the text.

■ Breadth of Business Coverage—The ninth edition further broadens the spectrum of business activities and touches on practically all areas of business including marketing, management, finance, business ethics, and accounting. The examples reflect the diversity of today's business world. Many of these examples are captured in the *Research Snapshot* features, which tie business research together with current events, ethics, technology, and topics of particular interest to the business research student.

■ Chapter Vignettes—The chapter vignettes were carefully examined and updated. Several are new to the ninth edition. Each vignette sets the stage for the chapter by introducing topics taken from both well-known and lesser-known companies, topical areas of interest in the current business literature, and slice-of-life business situations. The vignettes help frame the material included in each chapter and put core course concepts into a real-life and current context.

■ Comprehensive Cases—The ninth edition includes online access to comprehensive cases that allow the student to get real hands-on experience doing research. Selected cases also include data that can be downloaded from the Instructor's Resource CD or the companion website for the text. The data are ready to be analyzed using Excel, SPSS, or SAS, or any other software capable of reading data from a spreadsheet. Shorter and more-to-the-point cases are included at the end of each chapter. Several of these cases involve simple data analyses and are accompanied by data also available on the instructor resource disk or the book website.

■ A Simplified Approach and Style—The *Research Snapshots*, chapter *Learning Outcomes*, and end-of-chapter materials are presented in a form that allows greater focus on the truly important information. The *Learning Outcomes* ensure an important coherence and structure to the chapters that culminate with the end-of-chapter materials.

■ Tagged End-of-Chapter Exercises—The end-of-chapter materials contain a number of questions that pertain to either ethical issues in business research or exercises requiring students to get involved with research via the Internet. These items are each uniquely tagged with a visual symbol, making these particular exercises stand out with a clear, identifying mark.

Organization of the Book

The organization of the ninth edition of *Business Research Methods* follows the logic of the business research process itself. The book is organized into seven parts, with each part presenting the basic research concepts for one of the stages in the research process. Each part also discusses how these concepts relate to decisions about conducting specific business research projects.

Part One: Introduction emphasizes the interplay between research and business and how the importance and scope of research varies with different business situations. Included in this discussion is an overview of computerized data management and information systems, an outline of the entire business research process, and an explanation of how all of this is changing due to technology. Chapter 3 is devoted to theory development and explains why theory is important to effective research, and how research is a way that theory is tested.

Without high ethical standards, no business is a "good business." Thus, the introductory materials also include an emphasis on business ethics and the special ethical problems associated with business research. Chapter 5 focuses exclusively on business ethics and the interplay between organizational dynamics and research.

Part Two: Beginning Stages of the Research Process covers the essentials involved in starting to study business problems. This part emphasizes decision making, problem definition, and the process of how the business problem must be translated into research questions and/or research hypotheses. Research proposals are covered in some detail, and the reader is encouraged to see these as the written agreement that helps put the decision maker and the researcher on the same page.

Chapter 7 emphasizes qualitative research applications. One role played by qualitative research is helping to separate problem symptoms from true issues that can be attacked with business research. However, qualitative research extends far beyond problem definition; it allows greater potential for discovery as well as deeper and potentially more meaningful explanations in business research. Part Two concludes with Chapter 8, which provides detailed discussion of secondary data and emphasizes its increasing importance in a data-rich world.

Part Three: Research Methods for Collecting Primary Data examines the topics involved in collecting new data for the specific problem at hand. For example, the chapters describe issues related to planning, conducting, and administering surveys, which remain a mainstay for collecting consumer and employee opinions, attitudes, and behaviors.

Additionally, Chapter 12 focuses specifically on experimental research. Experiments allow the researcher to establish causal inferences. They can, however, be intricate to design and implement, and conducting experiments that provide valid results is no simple matter. When done correctly, experiments can provide extremely important business intelligence.

Part Four: Measurement Concepts describes key concepts of measurement that are fundamental to conducting valid business research. This part of the text discusses the foundation of measurement theory. Key topics include descriptions of the different levels of scale measurement and how this affects analysis and the interpretation of results. Basic ways to measure human attitudes and practical matters dealing with questionnaire design are also discussed. An increased emphasis is placed on the use of new technologies for conducting interviews. For instance, how does asking a question in an electronic format expand the options for respondents and the researcher? Topics such as these are highlighted in Part Four.

Part Five: Sampling and Fieldwork explains the difference between a population and a sample. The reasons why sampling is needed and how it can be used to confidently allow predictions about larger numbers of people are covered. The fieldwork process is also discussed, including the importance of supervision of fieldwork. This section shows how to avoid sloppy sampling and poor field supervision, which can lead to error in the business research process.

Part Six: Data Analysis and Presentation covers important processes necessary in translating raw data into business intelligence. Included among these topics are the editing and coding of the data. The coded data are then ready for analysis, and this section presents the most commonly used methods for analyzing data.

Basic descriptive statistics are discussed as ways of portraying key results including central tendency and dispersion. Inferential statistics are discussed, including often-used univariate and bivariate approaches such as *t*-tests. Multivariate statistical approaches are also introduced so that the reader has an awareness of techniques that can analyze many variables simultaneously. Hands-on experience with basic multivariate procedures is also provided. The final chapter brings everything together by including a discussion of how to effectively communicate research results via a report and/or presentation.

Part Seven: Comprehensive Cases with Computerized Databases make up the last section of the book. These cases provide materials that challenge students to apply and integrate the concepts they have learned throughout the course. Instructors will find that these cases provide flexibility to either expand or simplify the assignment to suit the demands of varying course assignments.

The cases provide greater variety than earlier editions, including some that involve analysis of internal organizational problems as well as an opportunity to use qualitative research. When quantitative data are included, they can be easily analyzed with basic statistical tools like SPSS. Excel files are also included with the same data. These files can be read directly by statistical programs like SAS or other programs. A new comprehensive case has been added to the ninth edition.

Superior Pedagogy

More than other research textbooks, the ninth edition of *Business Research Methods* addresses students' need to comprehend all aspects of the business research process. The following features facilitate learning throughout the book:

- **Learning Outcomes.** Each chapter begins with a concise list of learning outcomes that emphasize the major areas of competency that students should achieve before proceeding to the next chapter. The key is to avoid labeling everything a major learning outcome and to provide instructors with flexibility for emphasizing additional material as they see fit.
- **Headings Keyed to Learning Outcomes.** First-level headings, with the exception of those labeled "Introduction," are keyed to learning outcomes. This should be an aid in developing assessment rubrics and makes the book more user friendly in terms of identifying key material.
- **Research Snapshots.** All of the box materials share a common title, Research Snapshots. Each chapter contains multiple Research Snapshots. The boxes explore business research

processes in a variety of modern businesses situations, ranging from international consider-
ations to research ethics. Some boxes also illustrate research techniques and applications in a
step-by-step fashion. Every attempt is made to make the box material lively and relevant to
the subject matter of the chapters.

- **Writing Style.** An accessible, interesting writing style continues to be a hallmark of this book. With a careful balance between theory and practice and a sprinkling of interesting examples and anecdotes, the writing style clarifies and simplifies the business research process. In addition, the text offers a comprehensive treatment of important and current topics.
- **Statistical Approach.** A review of statistical theory provides students with an overview of the basic aspects of statistics. However, since this text stresses managerial applications more than statistical theory, students are given tools to perform the most common business research data analysis. More sophisticated data analysis approaches are left for further reference. Thus, the readers can learn how to test simple hypotheses involving differences between means or relationships among variables. Cross-tabulation, *t*-tests, ANOVA, and regression are covered in sufficient depth to allow students to use these techniques. In addition, easy-to-follow, click-through sequences can walk students through most basic approaches to producing statistical results.
- **Key Terms.** Learning the vocabulary of business research is essential to understanding the topic, and *Business Research Methods* facilitates this with key terms. First, key concepts are boldfaced and completely defined when they first appear in the textbook. Second, all key terms and concepts are listed at the end of each chapter, and many terms are highlighted in a marginal glossary. Third, a glossary summarizing all key terms and definitions appears at the end of the book for handy reference. A glossary of frequently used symbols is also included.
- **Ethics Questions.** Identified by a special icon, ETHICS, ethics questions are included in most chapters. Among the compelling issues students are asked to explore is redefining the right to privacy in light of new technology. The ethical issues also provide a great opportunity for building critical thinking skills.
- **Internet Questions.** Internet questions also are identified by a special icon, 'NET. Nearly all chapters include multiple questions and research activities that illustrate advances in Internet applications common to business research.
- **Research Activities.** The end-of-chapter materials include real-world research activities intended to provide actual research experience for the student. Most provide an opportunity for the student to gain experience in multiple content areas. Some involve ethical aspects of research, and some involve Internet usage.
- **Cases.** Cases, often taken from real-life situations, illustrate business research concepts and build knowledge and research skills. These cases offer students the opportunity to participate actively in the decision-making process, one of the most effective forms of learning.

Comprehensive Instructor Resources

We believe it is important for any text to develop comprehensive supplemental materials to sup-
port instructors in their vital teaching function. Because of this pedagogical philosophy, there is an
extensive learning package provided with *Business Research Methods*.

- The Instructor's Resource CD-ROM (ISBN: 9781133190967) contains valuable instructor resources on one easy-to-use CD-ROM: the test bank, ExamView testing software, the instructor's manual (includes comprehensive lecture outlines, solutions to all assignments, and case solutions), PowerPoint presentation slides, video instructor's manual, and data sets for cases. The IRCD files were prepared by Laurie Babin of The University of Louisiana–Monroe.
- Data sets are provided that match several end-of-chapter exercises and different case analyses. The data are provided both in Excel files, allowing great flexibility for use of the data with many programs, and in SPSS files, which are ready to use with either the student or full version of SPSS. Students may download the data sets at **http://login.cengage.com** by clicking on the textbook and then on "Data Sets." Data sets are also available on the Instructor's Resource CD-ROM.

- Web resources at **http://login.cengage.com** provide the latest information about what's new and what's cool in business research. The instructor's manual, test bank, PowerPoint slides, and video cases can also be found here. The site also features links to other research-related sites.
- The Qualtrics Research Suite was built for researchers by researchers. Enclosed with each new copy of *Business Research Methods* is an access code that provides access to an extremely elegant tool that makes survey creation easy enough for an intern while at the same time sophisticated enough for the most demanding academic or corporate researcher. Qualtrics allows students to create and deploy surveys, and provides data for analysis. A survey included in the book can be taken by students and they can access the data collected from adopters of *Business Research Methods* from around the globe. Qualtrics is also a perfect solution for instructors who have students conduct a survey project as part of a term project.
- Preloaded with content and available free via PIN code when packaged with new texts, WebTutor ToolBox pairs all the content of the text's rich companion website with all the sophisticated course management functionality of a Blackboard or WebCT product. Instructors can assign materials (including online quizzes) and have the results flow automatically to their gradebooks.

Resources for Students

To promote learning and competency, it is also important to provide students with well-crafted resources. In addition to covering the latest information technology (described above), the ninth edition includes the following student resources:

- The student companion site is located at **www.cengagebrain.com**. At the CengageBrain.com home page, search for the ISBN of your textbook (from the back cover of your book) using the search box at the top of the page. This will take you to the product page where you will find chapter quizzes, flash cards of key terms, the very best online business research resources available, and much more.
- The Qualtrics Research Suite is also available for students. Qualtrics allows students to create and deploy surveys, and provides data for analysis.

Acknowledgments

Certainly, no list of acknowledgments will be complete. So many people have assisted in this project. Chief among these would be the late Bill Zikmund, who carried the weight of this project for the first seven editions of *Business Research Methods*. We are privileged to be able to carry the project along into what we hope will be many more editions as the premier business research text. Also, thanks go to members of our team—including graduate assistants Kevin James, David Shows, Melanie Gardner, and Christina Chung—who have helped with research for this text and helped share some of the workload on other endeavors, freeing up time to spend on this project. We would be remiss not to mention the support and patience of our families. All have contributed to the project and our kids are particularly helpful in judging relevance of vignettes and examples, as well as contributing photographs. Also, thanks go to the great faculty who mentored us during our days in the PhD program. Most notable among these are Joseph F. Hair, Jr. and the late William R. Darden.

Thanks also go to all the good people at Cengage Learning who helped make this project possible. A special thanks to our publisher Mike Roche, and to Emily Nesheim and Elizabeth Lowry. Also thanks to Charles Emmanuel and Karthik Kannan at diacriTech. They provided tremendous support and guidance through the writing and production process, including assistance with proofing, permissions, photos, and exhibits.

Many colleagues contributed ideas for this book. While they made suggestions that greatly enhanced this book, any shortcomings are ours alone. For their insightful reviews of the manuscript for the ninth or previous editions of *Business Research Methods*, we would like to thank the following:

Joe Adamo
Cazenovia College

David W. Ahrend
St. Joseph's College

Gerald Albaum
University of Oregon

Jill Attaway
Illinois State University

Stephen Batory
Bloomsburg University

William Bearden
University of South Carolina

Joseph A. Bellizzi
Arizona State University–West

Carol Bienstock
Radford University

James A. Brunner
University of Toledo

F. Anthony Bushman
San Francisco State University

Thomas Buzas
Eastern Michigan University

Roy F. Cabaniss
Huston-Tillotson College

Steven V. Cates
Averett University

Kathy Chudoba
Utah State

Dr. Edward D. Conrad
Henderson State University

Michael d'Amico
University of Akron

Ron Eggers
Barton College

H. Harry Friedman
City University of New York–Brooklyn

Ron Goldsmith
Florida State University

Larry Goldstein
Iona College

Karen Goncalves
Nichols College

David Gourley
Arizona State University

Jim Grimm
Illinois State University

Christopher Groening
University of Pittsburgh

Al Gross
Robert Morris College

Don Heinz
University of Wisconsin

Nathan Heller
Tarleton State University

Craig Hollingshead
Texas A&M University–Kingsville

Victor Howe
University of Kentucky

Roy Howell
Texas Tech University

Michael R. Hyman
New Mexico State University

Rhea Ingram
Columbus State University–Georgia

Robert Jaross
Florida International University

P. K. Kannan
University of Maryland

Susan Kleine
Arizona State University

David B. Klenosky
Purdue University

C. S. Kohli
California State University–Fullerton

Jerome L. Langer
Assumption College

Bob Lauman
Webster University

James H. Leigh
Texas A&M University

Larry Lowe
Bryant College

Karl Mann
Tennessee Technological University

Charles R. Martin
Wichita State University

Marlys Mason
Oklahoma State University

Tom K. Massey
University of Missouri–Kansas City

Sanjay Mishra
University of Kansas

Mark Moore
East Carolina University

G. M. Naidu
University of Wisconsin–Whitewater

Stephanie Noble
The University of Mississippi

Mike Parent
Utah State University

Terry Paul
The Ohio State University

Charles Prohaska
Central Connecticut State University

Rick Saucier
St. John's University

Alan Sawyer
University of Florida

Robert Schaffer
California State University–Pomona

Leon G. Schiffman
City University of New York–Baruch

David Shows
Louisiana Tech University

K. Sivakumar
Lehigh University

Mark Speece
Central Washington University

Harlan Spotts
Western New England College

Wilbur W. Stanton
Old Dominion University

Bruce L. Stern
Portland State University

James L. Taylor
University of Alabama

Gail Tom
California State University–Sacramento

Deborah Utter
Boston College

Haibo Wang
Texas A&M International University

David Wheeler
Suffolk University

Richard Wilcox
Carthage College

Natalie Wood
St. Joseph's University

Margaret Wright
University of Colorado

Clifford E. Young
University of Colorado–Denver

Jim Zemanek
East Carolina University

Xin Zhao
University of Utah

William Lee Ziegler
Bethune-Cookman College

Thanks to all of the students who have inspired us and reinforced the fact that we made a great career decision about two decades ago. Thanks also to our close colleagues Rob Baer, Jim Boles, Ed Bond, Tara' Lopez, and Dave Ortinau for their continued support and insight.

Barry J. Babin
Louisiana Tech University

Mitch Griffin
Bradley University

Jon C. Carr
Texas Christian University
December 2011

Introduction

© Songquan Deng/Shutterstock

The Role of Business Research

Chapter Vignette:

ESPN Hits a Home Run by Leveraging the Power of its Business Research

To many people, the abbreviation ESPN says it all when you are thinking about sports programming. The Entertainment and Sports Programming Network was launched in 1979, with its famous SportsCenter broadcast followed by a presentation of a slow pitch softball game. Over time, ESPN has become a media juggernaut, expanding its sports content and programming globally, and is a media presence in every possible outlet, including television, video, and the Internet. In fact, ESPN.com has long been one of the most visited sites on the World Wide Web.

It is the passionate sports fan that makes ESPN's success possible. Over the years, information about the people who watch and interact with ESPN content had been slowly accumulating across their different media outlets. This information included not just web clicks and television viewership, but also purchases from ESPN and its affiliated advertising partners. Since this information was located in separate databases and across different operating units, it had become difficult to know just who the fan was, and what they were truly interested in. What could be done with this considerable business information? Could ESPN become more knowledgeable (and more profitable) by learning more about the sports fans who use their content?

The answer was a resounding "Yes!" ESPN partnered with Quaero, a business research company that specializes in customer intelligence, to integrate their numerous databases and begin to learn more about how fans use their media, and what specifically they were looking for. They learned that enhancing the fan's experience, regardless of the media, had bottom-line implications for their own revenue, and the revenue of their advertisers. ESPN realized that based upon their customer research, cross-network promotions and individualized

© Matthew Jacques/Shutterstock

advertising content could be built for their sports fans, and that seeing the sports fan as a core asset of the company was critical to success. In fact, the activities associated with the business research they conducted on their customers were not viewed as a cost, but in fact served as a revenue driver to their firm's profitability.

It was business research that made this possible. Gaining intelligence on a critical business function, a function that had global implications, helped create a profitable solution for ESPN. The value of this research for ESPN and its millions of sports fans created a "win-win" for all. ESPN had, in fact, hit a "home run" through the use of business research.[1]

Introduction

The recent history of ESPN demonstrates the need for information in making informed decisions addressing key issues faced by all competitive businesses. Research can provide that information. Without it, business decisions involving both tactics and strategies are made in the dark.

We open with two examples illustrating how business decisions require intelligence and how research can provide that intelligence. The following examples focus specifically on how research can lead to innovation in the form of new products, improvements in existing goods and services, or enhancements in employee relationships. Imagine yourself in the role of business manager as you read these examples and think about the information needs you may have in trying to build success for your company.

The coffee industry, after years of the "daily grind," has proved quite dynamic over the past decade. After years of steady decline, research on consumers' beverage purchases show that coffee sales began rebounding around 1995. Telephone interviews with American consumers estimated that there were 80 million occasional coffee drinkers and 7 million daily upscale coffee drinkers in 1995. By 2001, estimates suggested there were 161 million daily or occasional U.S. coffee drinkers and 27 million daily upscale coffee drinkers.[2]

Coffee drinking habits have also changed. In 1991 there were fewer than 450 coffeehouses in the United States. Today, it seems like places such as Starbucks, Second Cup, The Coffee Bean & Tea Leaf, and Gloria Jean's are virtually everywhere in the United States and Canada. There are more than 17,000 Starbucks locations around the world with the majority of these being wholly owned stores.[3] While locating these outlets requires significant formal research, Starbucks also is researching new concepts aimed at other ways a coffee shop can provide value to consumers. One concept that has survived testing thus far is the addition of free, in-store high-speed wireless Internet access. Thus, you can have hot coffee in a hotspot! After Starbucks baristas began reporting that customers were asking clerks what music was playing in the stores, Starbucks began testing the sales of CDs containing their in-store music. In 2009, Starbucks began a bundled pricing promotion offering a breakfast sandwich or pastry and a tall coffee drink for $3.95 in response to the declining economy. The research that underlies the introduction of these value-added concepts could first include simply asking a consumer or a small group of consumers for their reaction to the concept. Survey research and then actual in-store tests may follow. So, the research underlying such decisions can be multilayered.

Often, business research is directed toward an element of an organization's internal operations. For example, DuPont utilizes research techniques to better understand their employees' needs. DuPont has 94,000 employees worldwide and 54,000 in the United States.[4] The company has conducted four comprehensive work/life needs assessment surveys of its employees since 1985. This business research provides the company with considerable insight into employee work/life behavior and allows DuPont to identify trends regarding employee needs.

The most recent survey found that, as the company's work force is aging, employees' child care needs are diminishing, but elder care needs are emerging. The survey found that 88 percent of respondents identified themselves as baby boomers. About 50 percent of the employees say that they have—or expect to have—elder care responsibilities in the next three to four years, up from 40 percent in 1995.

The surveys have shown that DuPont employees want to balance work and family responsibilities, feeling deeply committed to both aspects of their lives. The latest research shows that company efforts to satisfy these desires have been successful. Employee perception of support from management for work/life issues improved from the 1995 study and the results indicate employees feel

less stress. Support from colleagues is rated high, and women indicated they now have more role models. The study also reported that the feeling of management support is directly connected to employees' efforts to make the company successful. Employees who use the work/life programs are willing to "go the extra mile."

These examples illustrate the need for information in making informed business decisions. The statistics about coffee demonstrate how research can track trends that may lead to new business opportunities. Starbucks's research also illustrates how research can be used to examine new concepts in progressively more complex stages, setting the stage for a more successful product introduction. DuPont's ability to track employee attitudes allows them to adjust employee benefit packages to maximize satisfaction and reduce employee turnover. These are only the tip of the iceberg when it comes to the types of business research that are conducted every day. This chapter introduces basic concepts of business research and describes how research can play a crucial role in creating and managing a successful business.

The Nature of Business Research

Business research covers a wide range of phenomena. For managers, the purpose of research is to provide knowledge regarding the organization, the market, the economy, or another area of uncertainty. A financial manager may ask, "Will the environment for long-term financing be better two years from now?" A personnel manager may ask, "What kind of training is necessary for production employees?" or "What is the reason for the company's high employee turnover?" A marketing manager may ask, "How can I monitor my retail sales and retail trade activities?" Each of these questions requires information about how the environment, employees, customers, or the economy will respond to executives' decisions. Research is one of the principal tools for answering these practical questions.

Within an organization, a business researcher may be referred to as a marketing researcher, an organizational researcher, a director of financial and economic research, or one of many other titles. Although business researchers are often specialized, the term business research encompasses all of these functional specialties. While researchers in different functional areas may investigate different phenomena, they are similar to one another because they share similar research methods.

It's been said that "every business issue ultimately boils down to an information problem."[5] Can the right information be delivered? The ultimate goal of research is to supply accurate information that reduces the uncertainty in managerial decision making. Very often, decisions are made with

little information for various reasons, including cost considerations, insufficient time to conduct research, or management's belief that enough is already known. Relying on seat-of-the-pants decision making—decision making without research—is like betting on a long shot at the racetrack because the horse's name is appealing. Occasionally there are successes, but in the long run, intuition without research leads to losses. Business research helps decision makers shift from intuitive information gathering to systematic and objective investigation.

Business Research Defined

Business research is the application of the scientific method in searching for the truth about business phenomena. These activities include defining business opportunities and problems, generating and evaluating alternative courses of action, and monitoring employee and organizational performance. Business research is more than conducting surveys.[6] This process includes idea and theory development, problem definition, searching for and collecting information, analyzing data, and communicating the findings and their implications.

This definition suggests that business research information is not intuitive or haphazardly gathered. Literally, research (re-search) means "to search again." The term connotes patient study and scientific investigation wherein the researcher takes another, more careful look at the data to discover all that is known about the subject. Ultimately, all findings are tied back to the underlying theory.

The definition also emphasizes, through reference to the scientific method, that any information generated should be accurate and objective. The nineteenth-century American humorist Artemus Ward claimed, "It ain't the things we don't know that gets us in trouble. It's the things we know that ain't so." In other words, research isn't performed to support preconceived ideas but to test them. The researcher must be personally detached and free of bias in attempting to find truth. If bias enters into the research process, the value of the research is considerably reduced. We will discuss this further Chapter 12.

Our definition makes it clear that business research is designed to facilitate the managerial decision-making process for all aspects of the business: finance, marketing, human resources, and so on. Business research is an essential tool for management in virtually all problem-solving and decision-making activities. By providing the necessary information on which to base business decisions, research can decrease the risk of making a wrong decision in each area. However, it is important to note that research is an aid to managerial decision making, never a substitute for it.

Finally, this definition of business research is limited by one's definition of business. Certainly, research regarding production, finance, marketing, and management in for-profit corporations like DuPont is business research. However, business research also includes efforts that assist nonprofit organizations such as the American Heart Association, the San Diego Zoo, the Boston Pops Orchestra, or a parochial school. Further, governmental agencies such as the Federal Emergency Management Agency (FEMA) and the Department of Homeland Security (DHS) perform many functions that are similar, if not identical, to those of for-profit business organizations. For instance, the Food and Drug Administration (FDA) is an important user of research, employing it to address the way people view and use various food and drugs. One such study commissioned and funded research to address the question of how consumers used the risk summaries that are included with all drugs sold in the United States.[7] Therefore, not-for-profits and governmental agencies can use research in much the same way as managers at Starbucks or DuPont. While the focus is on for-profit organizations, this book explores business research as it applies to all institutions.

Applied and Basic Business Research

One useful way to describe research is based on the specificity of its purpose. **Applied business research** is conducted to address a specific business decision for a specific firm or organization. The opening vignette describes a situation in which ESPN used applied research to decide how to best create knowledge of its sports fans and their preferences.

Basic business research (sometimes referred to as pure research) is conducted without a specific decision in mind, and it usually does not address the needs of a specific organization. It attempts to expand the limits of knowledge in general, and as such it is not aimed at solving a particular pragmatic

business research
The application of the scientific method in searching for the truth about business phenomena. These activities include defining business opportunities and problems, generating and evaluating ideas, monitoring performance, and understanding the business process.

applied business research
Research conducted to address a specific business decision for a specific firm or organization.

basic business research
Research conducted without a specific decision in mind that usually does not address the needs of a specific organization. It attempts to expand the limits of knowledge in general and is not aimed at solving a particular pragmatic problem.

problem. Basic research can be used to test the validity of a general business theory (one that applies to all businesses) or to learn more about a particular business phenomenon. For instance, a great deal of basic research addresses employee motivation. How can managers best encourage workers to dedicate themselves toward the organization's goals? From such research, we can learn the factors that are most important to workers and how to create an environment where employees are most highly motivated. This basic research does not examine the problem from any single organization's perspective. However, Starbucks' or DuPont's management may become aware of such research and use it to design applied research studies examining questions about their own employees. Thus, the two types of research are not completely independent, as basic research often provides the foundation for later applied research.

While the distinction between basic and applied is useful in describing research, there are very few aspects of research that apply only to basic or only to applied research. We will use the term business research more generally to refer to either type of research. The focus of this text is more on applied research—studies that are undertaken to answer questions about specific problems or to make decisions about particular courses of action or policies. Applied research is emphasized in this text because most students will be oriented toward the day-to-day practice of management, and most students and researchers will be exposed to short-term, problem-solving research conducted for businesses or nonprofit organizations.

The Scientific Method

the scientific method

The way researchers go about using knowledge and evidence to reach objective conclusions about the real world.

All research, whether basic or applied, involves the scientific method. **The scientific method** is the way researchers go about using knowledge and evidence to reach objective conclusions about the real world. The scientific method is the same in social sciences, such as business, as in physical sciences, such as physics. In this case, it is the way we come to understand business phenomena.

Exhibit 1.1 briefly illustrates the scientific method. In the scientific method, there are multiple routes to developing ideas. When the ideas can be stated in researchable terms, we reach the hypothesis stage. The next step involves testing the hypothesis against empirical evidence (facts from observation or experimentation). The results either support a hypothesis or do not support a hypothesis. From these results, new knowledge is generated.

EXHIBIT **1.1**

A Summary of the Scientific Method

© Cengage Learning 2013
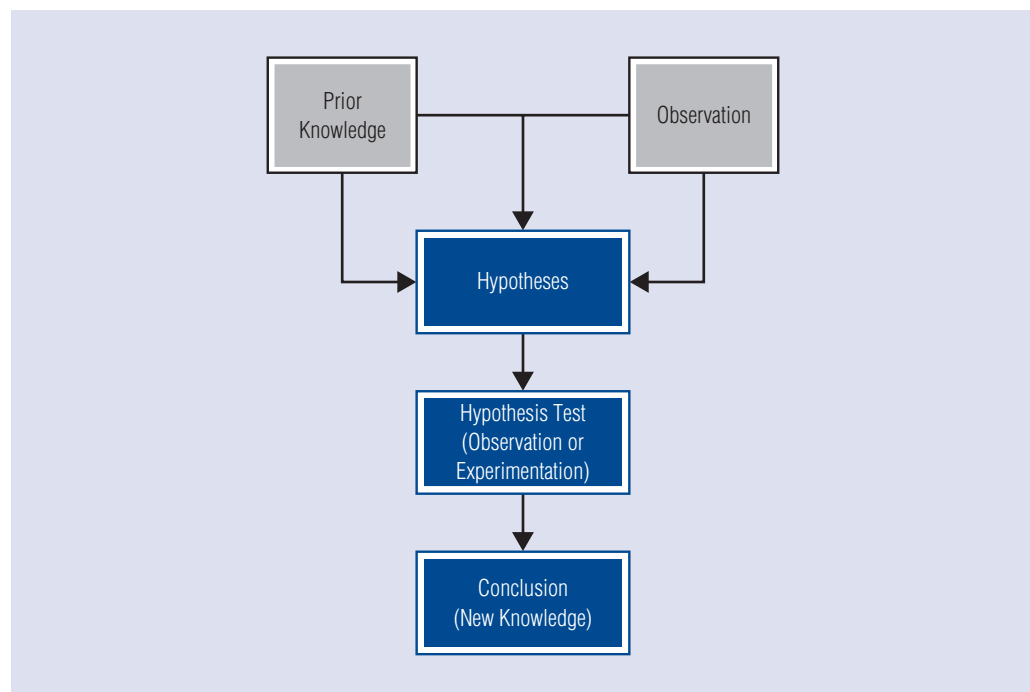
In basic research, testing these prior conceptions or hypotheses and then making inferences and conclusions about the phenomena leads to the establishment of general laws about the phenomena. Use of the scientific method in applied research ensures objectivity in gathering facts and testing creative ideas for alternative business strategies. The essence of research, whether basic or applied, lies in the scientific method. Much of this book deals with scientific methodology. Thus, the techniques of basic and applied research differ largely in degree rather than in substance.

Managerial Value of Business Research

In all of business strategy, there are only a few business orientations (see Exhibit 1.2). A firm can be **product-oriented**. A product-oriented firm prioritizes decision making in a way that emphasizes technical superiority in the product. Thus, research that gathers information from technicians and experts in the field is very important in making critical decisions. A firm can be **production-oriented**. A production-oriented firm prioritizes the efficiency and effectiveness of production processes in making decisions. Here, research providing input from workers, engineers, finance, and accounting becomes important as the firm seeks to drive costs down. Production-oriented firms are usually very large firms manufacturing products in very large quantities. The third orientation is **marketing-oriented**, which focuses more on how the firm provides value to customers than on the physical product or production process. With a marketing-oriented organization the majority of research focuses on the customer. Research addressing consumer desires, beliefs, and attitudes becomes essential.

We have argued that research facilitates effective management. For example, Yoplait Go-Gurt illustrates the benefit of business research. The company's consumer research about eating regular yogurt at school showed that moms and kids in their "tweens" wanted convenience and portability. Some brands, like Colombo Spoon in a Snap, offered the convenience of having a utensil as part of the packaging/delivery system. However, from what Yoplait learned about consumers, they thought kids would eat more yogurt if they could "lose the spoon" and eat yogurt anywhere, anytime. Moms and kids participating in a taste test were invited to sample different types of on-the-go packaging shapes—long tubes, thin tubes, fat tubes, and other shapes—without being told how to handle the packaging. One of the company's researchers said, "It was funny to see the moms fidget around, then daintily pour the product onto a spoon, then into their mouths. The kids instantly

product-oriented

Describes a firm that prioritizes decision making in a way that emphasizes technical superiority in the product.

production-oriented

Describes a firm that prioritizes efficiency and effectiveness of the production processes in making decisions.

marketing-oriented

Describes a firm in which all decisions are made with a conscious awareness of their effect on the customer.

Product-Oriented Firm	Example
Prioritizes decision making that emphasizes physical product design, trendiness, or technical superiority	The fashion industry makes clothes in styles and sizes that few can adopt.

Research focuses on technicians and experts in the field.

Production-Oriented Firm	Example
Prioritizes efficiency and effectiveness of production processes in making decisions	The U.S. auto industry's assembly-line process is intent on reducing costs of production as low as possible.

Research focuses on line employees, engineers, accountants, and other efficiency experts.

Marketing-Oriented Firm	Example
Focuses on how the firm provides value to customers	Well-known hotel chains are designed to address the needs of travelers, particularly business travelers.

Research focuses on customers.

© Cengage Learning 2013

jumped on it. They knew what to do."[8] Squeezing Go-Gurt from the tube was a big plus. The kids loved the fact that the packaging gave them permission to play with their food, something parents always tell them not to do. Based on their research, Yoplait introduced Go-Gurt in a three-sided tube designed to fit in kids' lunchboxes. The results were spectacular, with more than $100 million in sales its first year on the market. Yoplait realized that knowledge of consumers' needs, coupled with product research and development, leads to successful business strategies.

As the Yoplait example shows, the prime managerial value of business research is that it provides information that improves the decision-making process. The decision-making process associated with the development and implementation of a business strategy involves four interrelated stages:

1. Identifying problems or opportunities
2. Diagnosing and assessing problems or opportunities
3. Selecting and implementing a course of action
4. Evaluating the course of action

Business research, by supplying managers with pertinent information, may play an important role by reducing managerial uncertainty in each of these stages.

Identifying Problems or Opportunities

Before any strategy can be developed, an organization must determine where it wants to go and how it will get there. Business research can help managers plan strategies by determining the nature of situations or by identifying the existence of problems or opportunities present in the organization. Business research may be used as a scanning activity to provide information about what is occurring within an organization or in its environment. The mere description of some social or economic activity may familiarize managers with organizational and environmental occurrences and help them understand a situation. Consider these two examples:

- The description of the dividend history of stocks in an industry may point to an attractive investment opportunity. Information supplied by business research may also indicate problems.
- Employee interviews undertaken to characterize the dimensions of an airline reservation clerk's job may reveal that reservation clerks emphasize competence in issuing tickets over courtesy and friendliness in customer contact.

Once business research indicates a problem or opportunity, managers may feel that the alternatives are clear enough to make a decision based on their experience or intuition. However, often they decide that more business research is needed to generate additional information for a better understanding of the situation.

Diagnosing and Assessing Problems or Opportunities

After an organization recognizes a problem or identifies a potential opportunity, business research can help clarify the situation. Managers need to gain insight about the underlying factors causing the situation. If there is a problem, they need to specify what happened and why. If an opportunity exists, they may need to explore, refine, and quantify the opportunity. If multiple opportunities exist, research may be conducted to set priorities.

Selecting and Implementing a Course of Action

After the alternative courses of action have been clearly identified, business research is often conducted to obtain specific information that will aid in evaluating the alternatives and in selecting the best course of action. For example, suppose Harley-Davidson is considering establishing a dealer network in either China or India. In this case, business research can be designed to gather

the relevant information necessary to determine which, if either, course of action is best for the organization.

Opportunities may be evaluated through the use of various performance criteria. For example, estimates of market potential allow managers to evaluate the revenue that will be generated by each of the possible opportunities. A good forecast supplied by business researchers is among the most useful pieces of planning information a manager can have. Of course, complete accuracy in forecasting the future is not possible, because change is constantly occurring in the business environment. Nevertheless, objective information generated by business research to forecast environmental occurrences may be the foundation for selecting a particular course of action.

Even the best plan is likely to fail if it is not properly implemented. Business research may be conducted to indicate the specific tactics required to implement a course of action.

Evaluating the Course of Action

After a course of action has been implemented, business research may serve as a tool to tell managers whether or not planned activities were properly executed and if they accomplished what they were expected to accomplish. In other words, managers may use evaluation research to provide feedback for evaluation and control of strategies and tactics.

Evaluation research is the formal, objective measurement and appraisal of the extent to which a given activity, project, or program has achieved its objectives or whether continuing programs are presently performing as projected. Evaluation research may also provide information about the major factors influencing the observed performance levels.

In addition to business organizations, nonprofit organizations and governmental agencies frequently conduct evaluation research. Every year thousands of federal evaluation studies are undertaken to systematically assess the effects of public programs. For example, the U.S. General Accounting Office has been responsible for measuring outcomes of the Employment Opportunity Act, the Job Corps program, and Occupational and Safety and Health Administration (OSHA) programs.

Performance-monitoring research is a specific type of evaluation research that regularly, perhaps routinely, provides feedback for the evaluation and control of recurring business activity. For example, most firms continuously monitor wholesale and retail activity to ensure early detection of sales declines and other anomalies. In the grocery and retail drug industries, sales research may use the Universal Product Code (UPC) for packages, together with computerized cash registers and electronic scanners at checkout counters, to provide valuable market-share information to store and brand managers interested in the retail sales volume of specific products.

United Airlines' Omnibus in-flight survey provides a good example of performance-monitoring research for quality management. United routinely selects sample flights and administers a questionnaire about in-flight service, food, and other aspects of air travel. The Omnibus survey is conducted quarterly to determine who is flying and for what reasons. It enables United to track demographic changes and to monitor customer ratings of its services on a continuing basis, allowing the airline to gather vast amounts of information at low cost. The information relating to customer reaction to services can be compared over time. For example, suppose United decided to change its menu for in-flight meals. The results of the Omnibus survey might indicate that,

evaluation research
The formal, objective measurement and appraisal of the extent a given activity, project, or program has achieved its objectives or whether continuing programs are presently performing as projected.

performance-monitoring research
Refers to research that regularly, sometimes routinely, provides feedback for evaluation and control of business activity.

● ● ● ● ● ● ●

Fun in the snow depends on weather trends, economic outlook, equipment, and clothing—all subjects for a business researcher.

© Agefotostock/SuperStock