seventh edition

# MARKETING RESEARCH

## an applied orientation

**NARESH MALHOTRA**

SEVENTH EDITION

# MARKETING RESEARCH

## An Applied Orientation

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*Georgia Institute of Technology*

Pearson

New York, NY

To the memory of my father,
Mr. H. N. Malhotra
and
To my mother, Mrs. Satya Malhotra

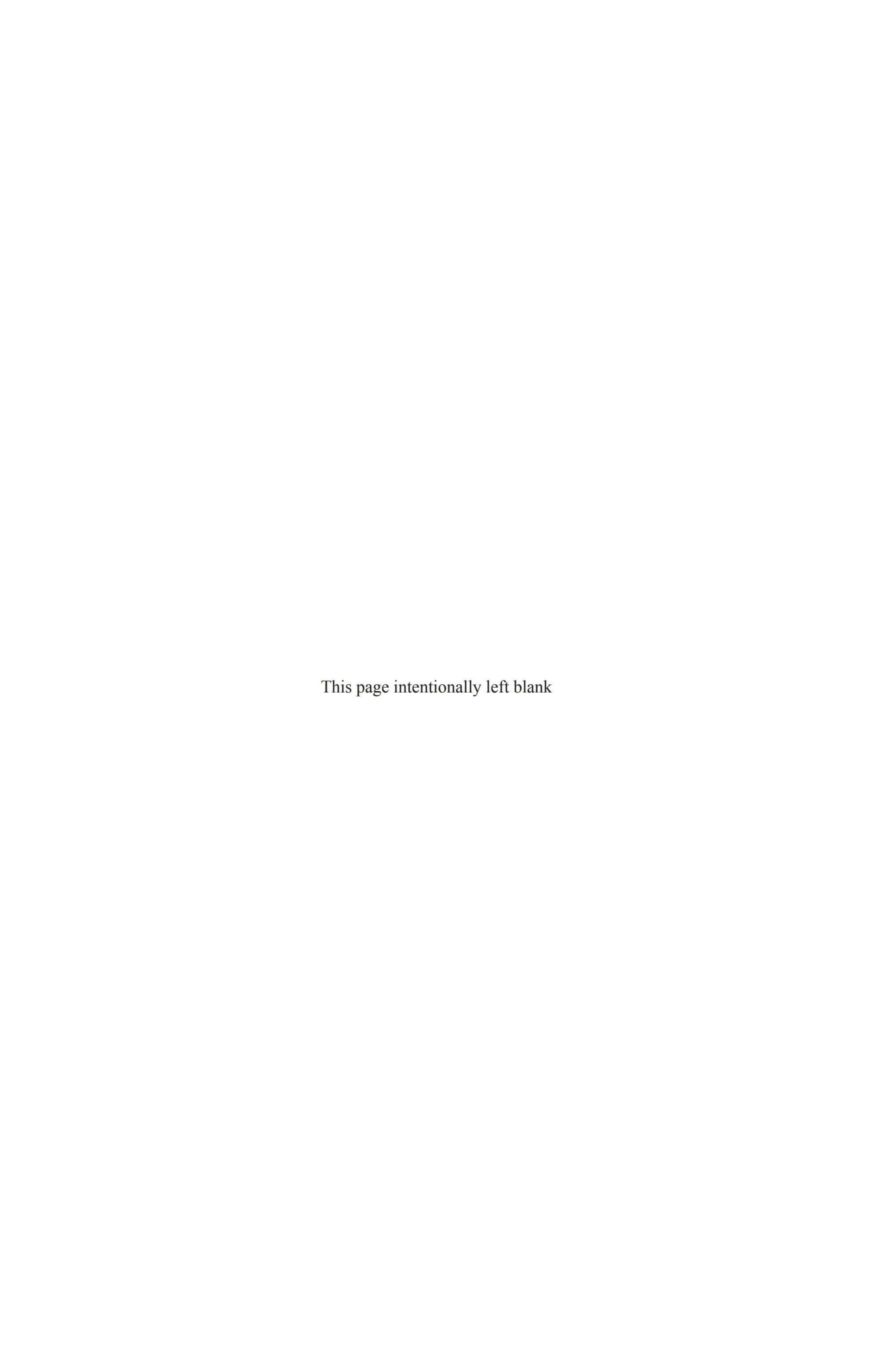and

To my wife Veena and children Ruth and Paul

The love, encouragement, and support of my parents, wife,
and children have been exemplary.

"The greatest of these is love."

I Corinthians 13:13

"But God showed how much He loved us by having Christ die for us,
even though we were sinful."

Romans 5:8

*The Holy Bible*

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# FOREWORD

The world of business is moving more rapidly than ever, meaning the intelligent and thoughtful use of research is critical to keeping pace. Undoubtedly, the most successful people will have a broad base of education, high levels of communication skills, and creative approaches to the opportunities racing toward us. It is a significant achievement when a textbook such as Dr. Malhotra's allows the classroom to become a source of these skills and greatly enhance the employability of the students.

This text has already proven its worth as one of the most successful in the field, with well over 140 universities using it in the United States and eight foreign-language and several different English-language editions in print. It is unsurpassed in presenting the fundamentals that allow your students to become researchers and intelligent users of research. The real-life examples, titled Real Research, bring students closer to the world businesspeople face daily. At every step, they can relate to the ongoing Department Store Project, the HP running case, and the practical vignettes that bring the educational material to a realistic and practical level. These materials are complemented by Active Research, Experiential Research, and exercises that offer additional hands-on experience. There is pervasive emphasis on social media, mobile marketing research, ethics, and international marketing research. The text's grasp of the leading edge of research is evident in its integration of modern tools of research such as the Internet, computer analytic software, and the latest management practices. The demonstration movies, screen captures, and step-by-step instructions for running SPSS and SAS programs provide the most extensive help available for learning these statistical packages.

We at Burke, Inc. are pleased to be asked to contribute again to a new edition. We have shared our experiences as well as our philosophies, technical skill, and thoughts about the future of research. This seventh edition of *Marketing Research: An Applied Orientation* provides the foundation we believe every student should have. We are confident you will find its combination of theory, practice, and sound advice to be of great value to both you and your students.

Jeff Miller, Ph.D.
*President and CEO, Burke, Inc.*

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# PREFACE

## Helping Teach Students Marketing Research

I wrote this book to provide an applied and practical marketing research text with comprehensive, balanced coverage of both qualitative and quantitative material. It takes the perspective of a marketing research user and reflects current trends in international marketing research, social media, mobile marketing research, ethics, and the integration of the Internet and computers. All chapters focus on the practice of marketing research by featuring a variety of marketing companies and marketing research organizations. Several features make the book distinctive.

It has a unique applied and managerial orientation, illustrating the interaction between marketing research decisions and marketing management decisions. It also emphasizes a hands-on, do-it-yourself approach, affording students several opportunities to experience these interactions through pedagogical tools such as Real Research, Active Research, Experiential Research, Project Research, Live Research, cases, video cases, and extensive review questions, Internet and computer exercises, role playing, field work, and group discussions. The data analysis chapters tightly integrate SPSS and SAS, illustrating each step in running these programs in detail and providing three distinct ways that students can learn the programs on their own: (1) step-by-step instructions in the book (2) screen captures with notes for each step, and (3) demonstration movies illustrating each step. This book provides marketing research students the most extensive help available to learn SPSS and SAS.

The response to the first six editions has been truly gratifying, with more than 144 universities adopting the book in the United States. The book has been translated into eight languages: Chinese, Russian, Spanish, Portuguese, French, Hungarian, Bahasa Indonesia, and Japanese. English-language editions include North American, International, European, Arab, and Indian, as well as texts for Australia and New Zealand. I want to express my sincere thanks and appreciation to all the professors and students who have contributed to the success of the book as adopters, users, reviewers, and providers of valuable feedback and encouragement. The seventh edition attempts to build on this success to make the book even more current, contemporary, illustrative, and sensitive to user needs.

## About the Seventh Edition

The book is organized into three parts, based on a six-step framework for conducting marketing research. Part I provides an introduction and discusses problem definition, the first and most important step. The second step in the marketing research process is understanding the nature and scope of research to develop an approach to the problem. Part II covers research design, the third step, and describes exploratory, descriptive, and causal research designs in detail. It identifies the types of information marketing research provides and the appropriate scales for obtaining it. We present several guidelines for designing questionnaires and explain the procedures, techniques, and statistical considerations in sampling.

Part III presents a practical and managerially oriented discussion of fieldwork, the fourth step in the marketing research process. It also covers data preparation and analysis, the fifth step. We discuss the basic and advanced statistical techniques in detail, with emphasis on procedures, interpretation of results, and managerial implications rather than on statistical elegance. We feature four statistical packages—SPSS, SAS, MINITAB, and Excel—but our focus is on SPSS and SAS.

Specifically, the seventh edition contains the following:

1. **Integration of Social Media.** The seventh edition features an innovative and pervasive integration of social media. There is a separate section entitled "Marketing Research and Social Media" in each chapter, except the data analysis chapters. In addition, the use of social media is discussed in several other sections of the chapter, including end of chapter questions, HP running case, cases, and video cases. We focus on social media both as an application of marketing research and as a domain in which to conduct marketing research. While we do not expect social media research to replace traditional marketing research, we

predict that social media will become an increasingly important domain that complements traditional marketing research.

2. **Integration of Mobile Marketing Research.** The seventh edition features a pioneering and pervasive integration of mobile marketing research (MMR). There is a separate section entitled "Mobile Marketing Research" in each chapter, except the data analysis chapters. In addition, MMR is discussed in several other sections of the chapter, including end of chapter questions.

3. **Added Emphasis on SPSS and SAS.** Relevant chapters contain a special section on SPSS Windows along with another on SAS Enterprise Guide, that illustrate the relevant programs and the steps required to run them. We have provided SPSS and SAS files for all input data sets featured in the data analysis chapters (Chapters 14 through 22), input data sets that appear in Internet and Computer Exercises, input data sets for cases (Cases 1.1, 3.1, 3.2, 3.3, 4.1, and 4.2), and the Wal-Mart project. The SAS steps that are illustrated apply to the SAS Enterprise Guide, the user interface for SAS OnDemand for Academics.

4. **Video Cases.** Each chapter of the book, except the data analysis chapters, is accompanied by a video and video case written from a marketing research perspective with marketing research questions. Videos are available in the Instructor Resource Center and solutions appear in the *Instructor's Manual.*

## Instructor Teaching Resources

*Marketing Research* comes with the following teaching resouces:

| Supplements available to instructors at www.pearsonhighered.com | Features of the Supplement |
|---|---|
| Instructor's Manual | • Chapter-by-chapter summaries<br>• Examples and activities not in the main book<br>• Teaching outlines<br>• Teaching tips<br>• Solutions to all questions and problems in the book |
| Test Bank | 2,200 multiple-choice, true/false, short-answer, and graphing questions with these annotations:<br><br>• Difficulty level (1 for straight recall, 2 for some analysis, 3 for complex analysis)<br>• Type (Multiple-choice, true/false, short-answer, essay)<br>• Topic (The term or concept the question supports)<br>• Learning outcome<br>• AACSB learning standard (Written and Oral Communication; Ethical Understanding and Reasoning; Analytical Thinking; Information Technology; Interpersonal Relations and Teamwork; Diverse and Multicultural Work; Reflective Thinking; Application of Knowledge)<br>• Page number in the text |
| Computerized TestGen | TestGen allows instructors to:<br><br>• Customize, save, and generate classroom tests<br>• Edit, add, or delete questions from the Test Item Files<br>• Analyze test results<br>• Organize a database of tests and student results |
| PowerPoints | PowerPoints meet accessibility standards for students with disabilities. Features include, but not limited to:<br><br>• Keyboard and Screen Reader access<br>• Alternative text for images<br>• High color contrast between background and foreground colors |

| Supplements available to instructors at www.pearsonhighered.com | Features of the Supplement |
|---|---|
| Data Set and Files | • Data for Case 1.1 HP; Case 3.1 AT&T; Case 3.2 IBM; Case 3.3 Kimberly-Clark; Case 4.1 JPMorgan Chase and Case 4.2 Wendy's given in the book (SPSS and SAS). The output files containing the answers to the data analysis questions are also provided.<br>• Data files for Wal-Mart running project and output files containing the answers to data analysis in the associated project activities.<br>• Data files for all the Internet and Computer Exercises (SPSS and SAS). The output files containing the answers to the data analysis questions are also provided.<br>• Data file for the data set(s) used in each data analysis chapter (SPSS and SAS). The output files containing the analysis are also provided.<br>• SPSS and SAS computerized demonstration movies<br>• SPSS and SAS screen captures with notes |

*Marketing Research*, 7th Edition, is available as an eBook and can be purchased at most eBook retailers.

# ACKNOWLEDGMENTS

Many people have been extremely helpful in the writing of this textbook. I would like to acknowledge the late Professor Arun K. Jain (State University of New York at Buffalo), who taught me marketing research in a way I will never forget. My students, particularly former doctoral students James Agarwal, Imad Baalbaki, Ashutosh Dixit, Dan McCort, Rick McFarland, Charla Mathwick, Gina Miller, Mark Peterson, Jamie Pleasant, Cassandra Wells, and Ashutosh Patil, as well as other doctoral students Mark Leach and Tyra Mitchell, have been very helpful in many ways.

I particularly want to acknowledge the assistance of Mark Leach and Gina Miller in writing the ethics sections and chapter, Mark Peterson in writing the computer applications, and James Agarwal with the international marketing research examples in the earlier editions. MBA students David Ball, Joshua Pitts, and Madhavi Akella provided helpful research assistance. The students in my marketing research courses have provided useful feedback as the material was class-tested for several years.

My colleagues at Georgia Tech, especially Fred Allvine, have been very supportive. I also want to thank Ronald L. Tatham, former chairman of Burke, Inc., for his encouragement and support, as well as Jeff Miller, the current president and CEO of Burke. William D. Neal, founder and senior executive officer of SDR, Inc., has been very helpful and supportive over the years. The Insights Association, formed January 1, 2017 as a result of merging MRA and CASRO has been very helpful and I especially want to recognize Diane Bowers for her help with the practitioner quotes. Many practitioners have also contributed to this book. Pamela Prentice of SAS was very helpful with the SAS additions incorporated in the seventh edition.

The team at Pearson provided outstanding support. Special thanks are due to Stephanie Wall, Editor-in-chief; Michelle Zeng, Content Producer; Susan McNally, Project Manager; Maya Lane, Right & Permissions Manager; Ashley Santora, Managing Producer; Becky Rowland, Product Marketing, and Nicole Price, Field Marketing. Special recognition is due to the field representatives and salespeople who have done an outstanding job.

I acknowledge with great respect my mother, Mrs. Satya Malhotra, and my late father, Mr. H. N. Malhotra. Their love, encouragement, support, and the sacrificial giving of themselves have been exemplary. My heartfelt love and gratitude go to my wife, Veena, and my children, Ruth and Paul, for their faith, hope, and love.

Above all, I want to acknowledge and thank my Savior and Lord, Jesus Christ, for the many miracles He has performed in my life. This book is, truly, the result of His grace—"This is the Lord's doing; it is marvelous in our eyes" (Psalm 118:23). It is also an answer to prayers—"And whatsoever ye shall ask in my name, that will I do, that the Father may be glorified in the Son. If ye shall ask any thing in my name, I will do *it*" (John 14:13–14).

<div align="right">Naresh K. Malhotra</div>

**Dr. Naresh K. Malhotra** is Senior Fellow, Georgia Tech CIBER and Regents' Professor Emeritus, Scheller College of Business, Georgia Institute of Technology. In 2010, he was selected as a Marketing Legend and his refereed journal articles were published in nine volumes by Sage with tributes by other leading scholars in the field. He is listed in Marquis *Who's Who in America* continuously since 51st Edition 1997, and in *Who's Who in the World* since 2000. In 2017, he received the Albert Nelson Marquis Lifetime Achievement Award from Marquis Who's Who. In 2015, he received the Lifetime Achievement Award from the Prestige Institute of Management, Gwalior, India. He received the prestigious Academy of Marketing Science CUTCO/Vector Distinguished Marketing Educator Award in 2005. In 2011, he received the Best Professor in Marketing Management, Asia Best B-School Award.

In an article by Wheatley and Wilson (1987 AMA Educators' Proceedings), Professor Malhotra was ranked number one in the country based on articles published in the *Journal of Marketing Research* (*JMR*) during 1980–1985. He holds the all-time record for the maximum number of publications in the *Journal of Health Care Marketing*. He is ranked number one based on publications in the *Journal of the Academy of Marketing Science* (*JAMS*) since its inception through volume 23 (1995). He is number one based on publications in *JAMS* during the ten-year period 1986–1995 (See Tables 6 and 7 of *JAMS*, 24(4) (Fall 1996):297). In an editorial by Schlegelmilch (*JIM*, 11(1), 2003), Malhotra was ranked number one based on publications in the *International Marketing Review* (*IMR*) from 1992 to 2002. He is ranked number one based on publications in the *International Marketing Review* since its inception (1983) to 2003 [Table V, *IMR*, 22(4) (2005); 396], and from 1983 to 2011 [Table VI, *IMR*, 30(1) (2013):14]. He is also ranked number one based on publications in the *International Marketing Review* from 1996 to 2006 based on a study by Xu et al. published in the *Asia Pacific Journal of Management* (2008) 25: 189–207. In a landmark study by Ford et al. (2010) examining publications in the top four marketing journals [*Journal of Marketing, Journal of Marketing Research* (*JMR*), *Journal of Consumer Research*, and the *Journal of the Academy of Marketing Science* (*JAMS*)] over a 25-year period from 1977 to 2002, Professor Malhotra has three top-three rankings: ranked number three based on publications in all the four journals combined, ranked number three based on publications in *JMR*, and ranked number one based on publications in *JAMS*. He has published ten papers in *Journal of Marketing Research*.

He has published more than 140 papers in major refereed journals, including the *Journal of Marketing Research, Journal of Consumer Research, Marketing Science, Management Science, Journal of Marketing, Journal of Academy of Marketing Science, Organizational Research Methods, Journal of Retailing, Journal of Advertising, Journal of Health Care Marketing*, and leading journals in statistics, management science, information systems, and psychology. In addition, he has published numerous refereed articles in the proceedings of major national and international conferences. Several articles have received best paper research awards.

He is Chairman of the Emerging Markets Conference Board, and the Lead Program co-chair of the annual conferences organized by the Board. He was chairman, Academy of Marketing Science Foundation, 1996–1998, and was president, Academy of Marketing Science, 1994–1996, and Chairman, Board of Governors, 1990–1992. He is a Distinguished Fellow of the Academy and Fellow, Decision Sciences Institute. He is the founding editor-in-chief of *Review of Marketing Research,* served as an associate editor of *Decision Sciences* for 18 years and has served as section editor, Health Care Marketing Abstracts, *Journal of Health Care Marketing*. He serves on the editorial board of eight (8) journals.

Dr. Malhotra has consulted for business, non-profit and government organizations in the United States and abroad and has served as an expert witness in legal and regulatory proceedings. He has special expertise in survey design, data analysis and statistical methods. He is the winner of numerous awards and honors for research, teaching, and service to the profession, including the Academy of Marketing Science, Outstanding Marketing Teaching Excellence Award, 2003.

Dr. Malhotra is an ordained minister of the Gospel, a member and Deacon, First Baptist Church, Atlanta, and President of Global Evangelistic Ministries, Inc. (www.globalevangelisticministries .net). This ministry has documented in independent reports more than 1.7 million people praying to receive Jesus Christ as personal Savior and Lord. He has been married to Veena for more than 37 years and they have two grown children Ruth and Paul.

# COMMENDATION

In a world awash with cheap behavioral data, it is tempting to believe that answers to questions concerning consumer behavior can all be answered through the application of analytics. Additionally, the advent of inexpensive, automated survey research platforms beckons not just researchers, but everyone, to put surveys up online at the drop of a hat without really understanding the science behind them. Combine these with a belief in "good enough" and you have a recipe for disastrous and expensive mistakes. It is this, above all, that makes *Marketing Research: An Applied Orientation, Seventh Edition* such an important and essential companion to the researcher and marketer alike. Marketing Research is both science and art and this edition provides a secure grounding in the application of both in the pursuit of accurate and impactful insights that can drive business decisions.

Simon Chadwick, Managing Partner, Cambiar Consulting
Chairman, Insights Association
Editor-in-Chief, *Research World*

# INTRODUCTION AND EARLY PHASES OF MARKETING RESEARCH

➡ In this part, we define and classify marketing research and set out a six-step marketing research process. We discuss the nature and scope of marketing research and explain its role in marketing decision making. We describe the marketing research industry and the many exciting career opportunities in this field. We discuss problem definition, the first and the most important step, in detail. Finally, we describe the development of an approach to the problem, the second step in the marketing research process, and discuss in detail the various components of the approach. The perspective given in these chapters should be useful to both marketing decision makers and researchers.

# 1 Introduction to Marketing Research

> ❝ The role of a marketing researcher must include consulting skills, technical proficiency, and business sense. The focus of the role is to provide information and insights to identify marketing problems and solutions in such a way that action can be taken. ❞

*Jeff Miller, President and CEO, Burke, Inc.*

Courtesy of Jeff Miller

## Objectives

After reading this chapter, the student should be able to:

1.1  Define marketing research and distinguish between problem-identification research and problem-solving research.

1.2  Describe a framework for conducting marketing research as well as the six steps of the marketing research process.

1.3  Understand the nature and scope of marketing research and its role in designing and implementing successful marketing programs.

1.4  Explain how the decision to conduct marketing research is made.

1.5  Discuss the marketing research industry and the types of research suppliers, including internal, external, full-service, and limited-service suppliers.

1.6  Describe careers available in marketing research and the backgrounds and skills needed to succeed in them.

1.7  Acquire an appreciation of the international dimension and the complexity involved in international marketing research.

1.8  Describe the use of social media as a domain in which to conduct marketing research.

1.9  Discuss the developing field of mobile marketing research and its advantages and disadvantages.

1.10 Gain an understanding of the ethical aspects of marketing research and the responsibilities each of the marketing research stakeholders have to themselves, one another, and the research project.

Marketing research comprises one of the most important and fascinating facets of marketing. In this chapter, we give a formal definition of marketing research and classify marketing research into two areas: problem-identification and problem-solving research. We provide several real-life examples to illustrate the basic concepts of marketing research. We describe the marketing research process and the six steps that are involved in conducting research and discuss the nature of marketing research, emphasizing its role of providing information for marketing decision making. Next, we provide an overview of marketing research suppliers who collectively constitute the marketing research industry, along with guidelines for selecting a supplier. The demand for well-executed marketing research leads to many exciting career opportunities, which we describe.

Several real-life examples, entitled "Real Research," are given in each chapter to illustrate the various concepts. We examine a department store patronage project, which was an actual marketing research project conducted by the author, and use it as a running example throughout the book. The scope of this project has been expanded in the seventh edition to include questions, and we make available the relevant data for analysis. These "Project Research" sections appear in each chapter. Throughout this book, we also discuss applications to contemporary issues of importance in the current marketing and marketing research environment: international marketing research, social media, mobile marketing research, and ethics. The extensive and pervasive emphasis on social media as a domain to conduct marketing research and the use of mobile marketing research are new to the seventh edition. Each chapter includes several Internet and hands-on applications of marketing research in the form of "Active Research" and "Experiential Research" illustrations with exercises, other emphases that pervade the entire book. For instructors wishing to implement a real-life marketing research project, we include a section titled "Live Research: Conducting a Marketing Research Project." Perhaps there is no better way to present an overview than to give a few examples that provide a flavor of the varied nature of marketing research.

## Real Research  Boeing: Taking Flight

The Boeing Company (www.boeing.com) is the premier manufacturer of commercial jetliners and provides products and services to customers in 150 countries. Boeing Commercial Airplanes (BCA) is the division of Boeing that develops and sells airplanes in the commercial segment. The division understands that it is important to continuously monitor the dynamic marketplace and understand the needs and priorities of BCA customers (airlines) and



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