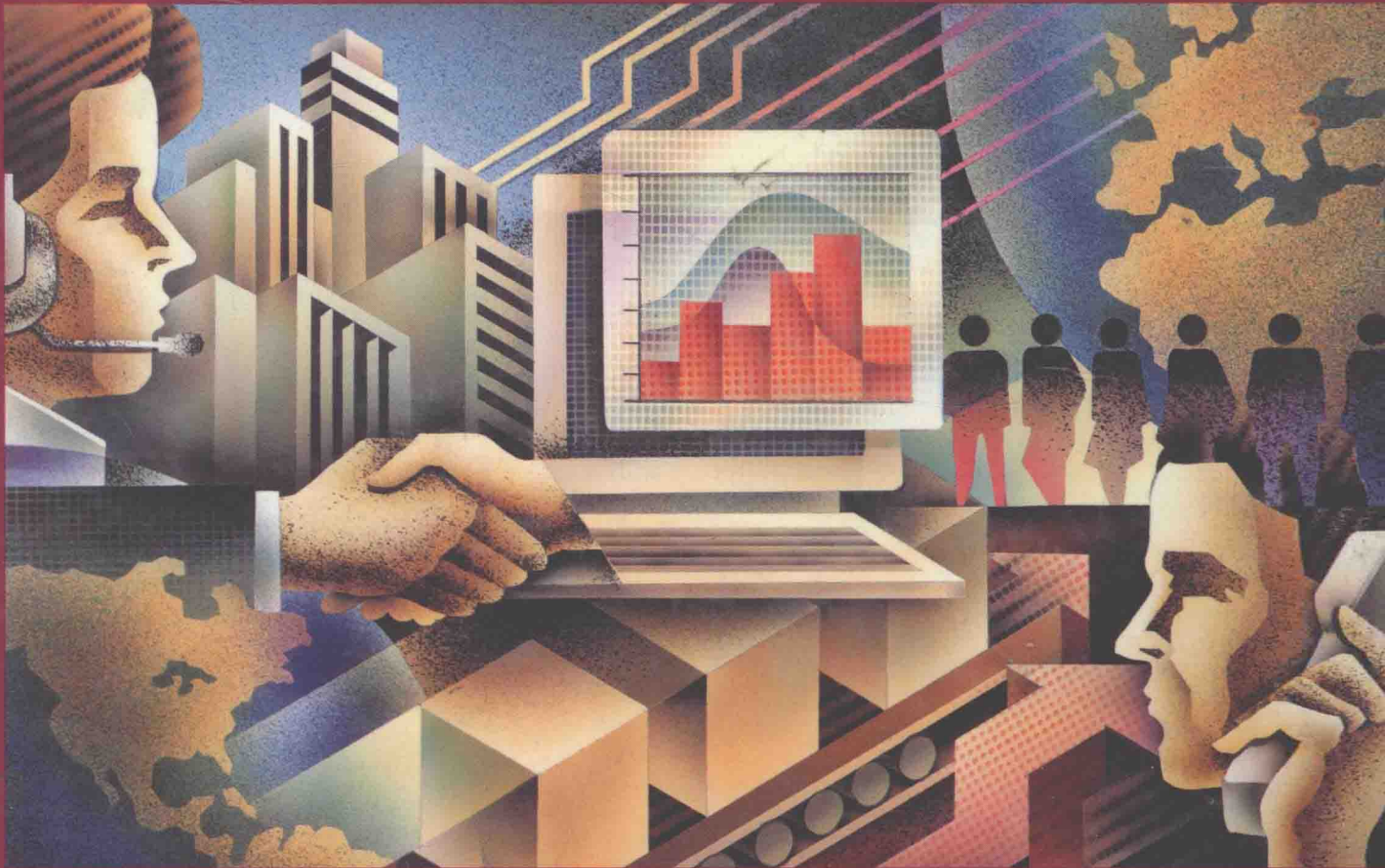


MARKETING RESEARCH

Alvin C. Burns

Ronald F. Bush



Preface

PURPOSE AND INTENDED AUDIENCE

The purpose of *Marketing Research* is to serve as an introduction to the field of marketing research. It is designed for professors whose major objectives are to educate students on the purposes, procedures, and applications of marketing research as well as to intro-

duce them to the various types of firms in the marketing research industry. The book places much emphasis on learning fundamental marketing research concepts. It is written at a basic level, and is not intended for professors who wish to emphasize advanced data analysis.

PHILOSOPHY

Marketing Research represents a change from tradition but a change that is consistent with trends in the practice of marketing research. In the past, like many other teachers of marketing research, we prepared students to be “users” rather than “doers” of marketing research. This approach was justified by how marketing research was conducted at the time. That is, research required complicated and time-consuming interaction with other departments or other firms. Marketing research was conducted by specialists. For example, only a few short years ago, simple tabulation and the interaction required with a computer to conduct simple tabulation was beyond the abilities of most students of business as well as most managers. Also, information acquisition was a detailed and laborious process requiring professionals familiar with the various information sources. In short, marketing research was taught as a highly technical area with considerable mystique. But we realize that this approach is obsolete.

Let us expand on significant events that have greatly impacted the practice of marketing research. First, personal computer technology and literacy have been growing exponentially as have “user-friendly” computer software programs designed for marketing research applications.

Second, information acquisition has literally exploded with the advent of dialup electronic databases.

Third, the marketing research industry is adapting to this new environment. While firms offer full, custom services as they have for years, more and more “off-the-shelf” products are available to allow managers to put together the information they need to make decisions.

Fourth, the research industry has undergone radical change. Qualitative research has grown to rival quantitative methods, computer technology has been widely adopted, syndicated research is flourishing, single-source data is developing, global marketing is common, and ethical issues abound.

Fifth, and last, the marketing manager’s working environment has evolved to a level where information management is paramount. Computer technology, communications networks, and decision support systems have expanded the scope of business decisions far beyond what they were just a few years ago. Moreover, the trend is accelerating. Consequently, we see evidence of more and more midlevel managers doing their own marketing research. Hence, in addition to emphasizing how a “user” should evaluate a research project, we believe a research course in the mid-1990s should also help students become “doers” of research. Accordingly, we have written our book to meet what we perceive to be the needs of business students about to work in an environment where raw information is abundant and must be integrated into business decisions on a daily basis.

To validate our beliefs, we continually monitor sources of information regarding what our students should be learning in the undergraduate marketing research course. Over time, thinking has shifted, and there is agreement among academics and practitioners that the course should emphasize the process of marketing research as opposed to data analysis.¹ For this reason, we embody a process approach by introducing the student to our 11-step marketing research process

in Chapter 3 and by highlighting the appropriate step being covered in subsequent chapters in a figure at the beginning of each chapter. Granted, a single figure does not cause the text material to incorporate a process approach, but our use of it throughout the book is intended to remind students that the concepts in the chapter are connected to concepts in prior chapters, and they relate to concepts in subsequent chapters as well. At the same time, we have stressed the contemporary practice of marketing research. That is, we have highlighted technological change, methodological innovation, global implications, and ethical issues that are pervasive in everyday marketing research. Plus, we have stressed throughout that these areas are undergoing change as well, and astute managers should embrace these changes because they can only enhance decision making.

What else have we done to prepare students to become “doers”? First, we have devoted two chapters to information acquisition. Chapter Six is devoted to teaching students how to access and evaluate secondary information and Chapter 7 is devoted to syndicated information services.

Second, we have devoted a complete chapter to qualitative research with an emphasis on focus groups, particularly the practical aspects of this commonly used research method.

Third, we have included numerous marketing research insights emphasizing the practical application and everyday reliance of research in contemporary business. Many of these are integrated into the text discussion, while others are highlighted as “boxed” material.

Fourth, we have alerted students to ethical issues throughout our book. The industry’s reputation is tarnished in the eyes of some, and while we may argue over who is to blame for this situation, we cannot ignore the responsibility of educating future research doers of their ethical obligations.

Fifth, and most notable, we have provided each student with a personal tutorial of a statistical analysis

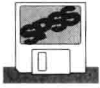
program. More important, we have integrated SPSS® for Windows™, Student Version, into the book so students will have a high comfort level with it when they encounter statistical analysis concepts. Admittedly, this approach was bold, but it is consistent with our vision of teaching students to be doers of marketing research.² SPSS® for Windows™ is extremely user-friendly, and we introduce students to graphical presentations, data files, and data handling very early on in order to foster learning. In our experience, a significant hinderance to learning of marketing research is the statistical program that is usually available only in the computer laboratory and must be programmed in a syntax that is more difficult to learn than ancient Greek. Our objective is to have students regard statistical analysis as a useful tool and not as a foreign language. Our choice of SPSS® was not haphazard. SPSS® is the most widely adopted statistical software package in the world. It is the standard in the marketing research industry. Over 40 of the top 50 marketing research firms in the U.S. use SPSS®, and the Windows™ version far surpasses any competing software in our opinion. We believe there is a high probability that when our students become managers they will have Windows™-based statistical analysis capabilities at their fingertips. Our approach prepares them for this working environment.

A final way we have sought to make students research doers is by presenting concepts in an understandable and intuitive fashion. Again, while marketing research can be taught from a technical standpoint, we do not believe that approach is consistent with undergraduate students’ needs. Throughout the book, we have described concepts simply and logically. We have written directly to the student at his or her level. Many of our examples are geared to student experiences, and we emphasize that the concepts are easily applied and practical. In our experience, students learn what they can do and forget what they do not do. Our definition of learning embraces comprehension and application by doing, not memorizing.

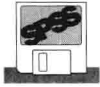
KEY FEATURES OF THE TEXT

Managerial Orientation. This book is written for those who will use marketing research information to make managerial decisions. For instance, a complete chapter has been devoted to problem definition, a significant managerial task during the research process. Consistent with our philosophy, decision-making is integrated throughout the text and many of the real-world examples illustrate how marketing research was used to make a decision.

Real World Input. Every chapter in this book is prefaced by an executive in the marketing research industry. There is also an introductory case description that emphasizes key concepts in the chapter. Marketing research is a dynamic industry facing many challenges and opportunities. We wanted the input of leaders of the industry included in this text as well as examples of marketing research in action.



SPSS® for Windows™. A unique feature of this book is that, *should the Instructor desire*, every student will receive his or her own copy of SPSS® for Windows™, Student Version with the purchase of the book. Beginning with Chapter 2, we describe how to use SPSS® for Windows™, Student Version, and we have simple SPSS® for Windows™ exercises in each of these chapters. The SPSS® icon identifies SPSS® descriptions and exercises in each chapter.



SPSS® Student Assistant. A separate Windows™ program has been provided. It is a stand-alone tutorial on SPSS® for Windows™, Student Version, and it illustrates functions and operations that are described in Chapters 2 through 18. Students are prompted to use it in each of these chapters, and they are instructed as to which SPSS® Student Assistant menu item pertains to the topic(s) described in the chapter. *The SPSS® Student Assistant is compatible with the master version of SPSS® for Windows™ and will fit the needs of the Instructors whose students have access to the master version.*



Global Applications. As the “business world” has turned into the “world’s business,” so too has marketing research. Our globe icon is used throughout the text to denote specific attention to the international aspects of marketing research. The majority of our international examples were supplied by marketing researchers working in the field of international marketing research. Consequently, they have not previously appeared in print.



Ethical Issues. This book points out where ethical issues occur in the conduct of marketing research. Our ethics icon is used throughout the text to call the student’s attention to an ethical issue. Additionally, several cases are devoted to ethical issues.

Marginal Comments. We have included many comments in the margins. These repeat important points mentioned in the text, and they are useful as study guides.

Bold Key Terms. Important terms are set in bold, and their definitions are provided at that point in the text. The key terms are repeated at the end of each chapter to act as review and study guides.

Cases, Review Questions, Applications and Exercises. Each chapter contains a section devoted to short cases (many of which are real-life), review questions, and applications. These materials are provided to enrich the student’s learning of marketing research. Some of the questions require answers that may be taken directly from the text material. Such questions serve the purpose of organizing and reinforcing what the student has just read. Other questions or applications require the students to synthesize the chapter material with other typi-

cal business course material. Finally, there are applications that require fairly extensive work outside of class, for instance, talking with local business firms, looking up additional library material, or working with SPSS® for Windows™, Student Version. Professors can assign different questions/applications to suit their particular course objectives. For example, if a project is not used in the course, there is adequate supplementary material at the end of the chapters.

Data Sets. Four separate data sets are supplied with exercises in the text requiring students to perform various types of analyses on them. One data set is provided by National Family Opinion Research.

Suggested Readings. We have provided suggested readings for the material covered in each chapter. These readings include books and recent articles that students may read to expand their knowledge on selected topics.

INSTRUCTIONAL SUPPORT

Adopters of the textbook will receive the following ancillary materials to help them prepare their course and teach it effectively.

Instructor’s Manual. A comprehensive *Instructor’s Manual* accompanies the textbook. The manual includes sample syllabi; chapter summaries; chapter outlines;

answers to end-of-chapter questions; hints on material coverage; SPSS® for Windows™, Student Version information; and transparency masters.

Test Bank. A test bank has been prepared, containing 60 or more objective questions, on average, for each chapter. Both print and electronic versions are available.

SPSS® for Windows™, Student Version. Instructors may order this software for *each* student's personal use. Prentice Hall is the exclusive distributor of SPSS® for Windows™ products, and it has provided for a special discount price on SPSS® for Windows™, Student Version, available to adopters of *Marketing Research* who order the software with the textbook. *We urge Instructors to order SPSS® for Windows™, Student*

Version, along with the textbook as we believe personal software greatly facilitates students' learning of the materials in the text. We are, however, sensitive to the unique circumstances of each Instructor, so the option to order *Marketing Research* without SPSS® for Windows™, Student Version, software is available to Instructors whose students have ready access to SPSS® for Windows™.

ACKNOWLEDGMENTS

This book project was both expensive and daring. It was expensive in terms of our time and in terms of the investment of our publisher, Prentice Hall. It was daring in that we ventured away from the generic approach of competing marketing research textbooks and coupled our text with SPSS® for Windows™, Student Version. Many people must be thanked for their significant roles in converting our vision to reality.

We want to thank Sandra Steiner, our original Editor at Prentice Hall, for believing in this project. Sandra, with many successes to her credit, armed with insight of the market and imbued with the spirit to innovate, has been very encouraging and supportive of this project from the outset. Thank you, Sandra, as well as the entire team at Prentice Hall including David Borkowsky, Aviva Rosenberg, Cathi Profitko, Wendy Goldner, and Melissa Steffens, and Kathy Ringrose. A special "thank you" goes to a very professional (and hard working!) Developmental Editor, Zanae Rodrigo. We are also indebted to Edie Riker and Joanne Riker for their excellent production work.

Many other people have been very helpful to us in writing this book. We both wish to thank some of our professors who have influenced us: David Cravens formerly at Tennessee, now at TCU; Donald Granbois, Indiana University; Robert Gwinner and Louis Grossman, Arizona State University; and Barry Mason and Morris Mayer, University of Alabama. Our Deans, James Henry of LSU and Parks B. Dimsdale, Jr. at the University of West Florida have been supportive as has Joe Hair, Chairman, LSU. We thank them for providing us with the environment necessary to undertake a textbook writing project. We also wish to thank our colleagues, both in academe and in the marketing research industry. We have learned much from our friends as we undertook various research projects over the years. Specifically, we wish to thank Richard A. Spitzer, Executive Vice President, NFO Research; Sandy Rebitzer, Director of Marketing Communications, Nielsen Marketing Research; William H. Neal, Senior Executive Officer, SDR, Inc.; Donald D.

DeMarzio, The Ehrhart-Babic Group; Robert J. Bregenzer, Senior Vice-president, Information Resources, Inc.; and many others in the industry who have worked with us on this project. We wish to thank all of the industry executives who, in each case, took the time to read our book chapter and write a comment at the beginning of each chapter. A separate thanks goes to Suzy Spivey and Jean Foltz, two professionals in the textbook publishing industry, whose assistance was vital to the early stages of writing this textbook.

Perhaps we learn the most from our own students. We have both taught marketing and marketing research for many years now. The experiences we have gained through working with our students have been invaluable. We also wish to thank our Graduate Assistants who also helped us with the preparation of this book: Michelle Steward, Everett Brooks, Kristine Bonner, Elizabeth Reed, Robert McClaren, and Michael Weber. Special thanks goes to our staff support: Marianne Baker, Linda Davis-Manze, Donna Lohr, Deborah Tripp, Carol Cecil, Rickie Yates, Barbara Dinsmore, Stacy Kosmas, Marja Smith and Tammy Edwards. A special thanks goes to Peggy Toifel for her help with the preparation of our chapter on secondary data, and to Marcia Howard for her help with the report preparation chapter.

Reviewers perform an important function during preparation of any text. We wish to thank the following colleagues who provided insightful suggestions throughout the project: Linda Anglin, Mankato State University; Ron Beall, San Francisco State University; Jacqueline J. Brown, University of Nevada, Las Vegas; Joseph D. Brown, Ball State University; Corbett Gaulden, Jr., University of Texas of the Permian Basin; Diane Parente, State University of New York, Fredonia; Bruce L. Stern, Portland State University; John H. Summey, Southern Illinois University; Nicolaos E. Synodinos, University of Hawaii; Peter K. Tat, The University of Memphis; Jeff W. Totten, University of Wisconsin, Oshkosh; Gary McCain, Boise State University; and V. Padmanabhan, Stanford University.

Last, but surely most important we are grateful to our wives. Our life partners, Jeanne and Libbo, have endured this project without complaint. They have shared our joys and successes, provided sympathy and comfort during our frustrations and setbacks, and have patiently spent countless evening and weekend hours alone while we pounded away on our keyboards over these past several months.

AL BURNS, Louisiana State University
RON BUSH, University of West Florida

NOTES

1. See Michael Russell, "The Relative Importance of Selected Marketing Concepts for Business Graduates of Colleges and Universities," *1991 AMA Educators' Proceedings*, 1991, 771-76; R. Dale Wilson, "New Trends and Issues in Marketing Research," *Marketing Educator*, (Fall, 1989), 1 and 3; Thomas J. Page, Jr. "Tailor Required Course to Future Research Users," *Marketing Educator*, (Fall, 1989), 1 and 4.
2. Nancy D. Marlow, "Improving Students' Attitudes toward the Marketing Research Project," in Robert L. Kind, ed., "Marketing: Toward the Twenty-First Century," *Proceedings of the Southern Marketing Association*, 1991, 137-40.

Contents

Preface xv

1 The Nature of Marketing Research 2

OVERVIEW OF MARKETING 2

The Marketing Concept, 5

Marketing Strategy, 5

MARKETING RESEARCH DEFINED 6

THE ROLE OF MARKETING RESEARCH:

INFORMATION TO AID IN DECISION MAKING 7

CHARACTERISTICS OF MARKETING RESEARCH 9

Applied or Basic Research? 9

Sometimes Inaccurate, 9

Shaped by Budget and Time Constraints, 10

TYPES OF MARKETING RESEARCH STUDIES 12

THE MARKETING INFORMATION SYSTEM 13

Components of MIS, 13

MIS AND MARKETING RESEARCH:

WHAT DOES THE FUTURE HOLD? 15

2 The Marketing Research Industry 20

THE HISTORY OF MARKETING RESEARCH 21

The Pre-Marketing Research Era: Colonial Period to the Industrial Revolution, 21

The Early Development Era: Industrial Revolution to 1920, 22

The Questionnaire Era: 1920 to 1940, 22

The Quantitative Era: 1940 to 1960, 23

The Organizational Acceptance Era: 1960 to 1980, 23

The Technological Era: 1980 to the Present, 24

THE STRUCTURE OF THE MARKETING RESEARCH INDUSTRY 25

Marketing Research Suppliers, 25

Marketing Research Buyers, 30

Marketing Research Suppliers/Buyers, 31

ORGANIZATION FOR MARKETING RESEARCH 31

HOW HAS THE MARKETING RESEARCH INDUSTRY PERFORMED? 32

Suggested Remedy for the Future: Certification, 32



OVERVIEW OF THE MARKETING RESEARCH INDUSTRY 40

APPENDIX 2A: A CAREER IN THE MARKETING RESEARCH INDUSTRY 45

3 The Marketing Research Process 48

STEPS IN THE MARKETING RESEARCH PROCESS 49

- Step 1: Establish the Need for Marketing Research, 51
- Step 2: Define the Problem, 54
- Step 3: Establish Research Objectives, 55
- Step 4: Determine Research Design, 56
- Step 5: Identify Information Types and Sources, 59
- Step 6: Determine Methods of Accessing Data, 59
- Step 7: Design Data Collection Forms, 60
- Step 8: Determine Sample Plan and Size, 61
- Step 9: Collect Data, 62
- Step 10: Analyze Data, 63
- Step 11: Prepare and Present the Final Research Report, 63

MARKETING RESEARCH IN ACTION:

DESICCANT AIR COOLING 64

- Establish the Need for Marketing Research, 64
- Define the Problem, 64
- Establish Research Objectives, 65
- Determine Research Design, 65
- Identify Information Types and Sources, 65
- Determine Methods of Accessing Data, 66
- Design Data Collection Forms, 66
- Determine Sample Plan and Size, 66
- Collect Data, 67
- Analyze the Data and Prepare the Final Research Report, 67



SPSS® FOR WINDOWS™ QUICK TOUR, PART 1 71

4 Defining the Problem and Determining Research Objectives 74

DEFINE THE MARKETING MANAGER'S PROBLEM 75


- Differences between Managers and Researchers, 76
- Guidelines to Resolve Differences between Managers and Researchers, 76

DECIDE WHEN MARKETING RESEARCH IS WARRANTED 78


DEFINE THE MARKETING MANAGEMENT AND RESEARCH PROBLEMS 78

- Assess the Background of the Company, Product, and Market, 80
- Understand the Decision-Maker's Circumstances, Objectives, and Resources, 80
- Clarify the Symptoms of the Problem, 81
- Pinpoint Suspected Causes of the Problem, 82
- Specify Actions that May Alleviate the Problem, 83
- Speculate on Anticipated Consequences of these Actions, 84
- Identify the Manager's Assumptions about the Consequences, 84
- Assess the Adequacy of Information on Hand, 85

PUT IT TOGETHER: WHAT THE RESEARCHER NEEDS FROM THE MARKETING MANAGER 85


FORMULATE THE MARKETING RESEARCH PROBLEM	86
Specify Constructs and Operational Definitions,	87
Identify Relationships,	88
Decide on a Model,	89
THE FORMAL RESEARCH PROPOSAL	90
States the Marketing Management Problem,	90
Specifies the Research Objectives,	91
Details the Proposed Research Method,	91
SELECT A MARKETING RESEARCH COMPANY	92
 SPSS® FOR WINDOWS™ QUICK TOUR, PART 2,	94
APPENDIX 4 A: A MARKETING RESEARCH PROPOSAL FOR SURGI-CENTER OF NEW HAVEN	97

5 Research Design 100


RESEARCH DESIGN	102
The Significance of Research Design,	102
THREE TYPES OF RESEARCH DESIGNS	102
Research Design: A Caution,	102
Exploratory Research,	103
Descriptive Research,	106
Causal Research,	111
EXPERIMENTS	111
Experimental Design,	112
After-Only Design,	113
One Group, Before-After Design,	113
Before-After with Control Group,	115
How Valid Are Experiments?	116
Types of Experiments,	118
TEST MARKETING	120
Types of Test Markets,	120
Consumer versus Industrial Test Markets,	122
“Lead Country” Test Marketing,	122
Selecting Test Market Cities,	123
Pros and Cons of Test Marketing,	124
 MILK BONE: ENTERING, NAMING, AND SAVING DATA	126

6 Accessing and Using Secondary Data 132


SOURCES OF SECONDARY DATA	133
ADVANTAGES/DISADVANTAGES OF SECONDARY DATA	136
EVALUATE SECONDARY DATA	137
What Was the Purpose of the Study?	138
Who Collected the Information?	138
What Information Was Collected?	142
How Was the Information Obtained?	142
How Consistent Is the Information with Other Information?	143

LOCATE SECONDARY DATA SOURCES	144
GOVERNMENT SOURCES OF SECONDARY DATA	149
Census of the Population,	149
Standard Industrial Classification (SIC),	151
Private Sources of Secondary Data,	153
WORLDWIDE AVAILABILITY OF SECONDARY DATA,	154
 MILK BONE: LABELING VARIABLES AND LABELING VALUES	154

7 Syndicated Data Sources 158

SYNDICATED DATA DEFINED	160
ADVANTAGES/DISADVANTAGES OF SYNDICATED DATA	160
TYPES OF SYNDICATED DATA SERVICES	161
APPLICATIONS AREAS OF SYNDICATED DATA SERVICES	163
Measuring Consumer Attitudes and Opinion Polls,	163
Defining Market Segments,	163
Conducting Market Tracking,	166
Monitoring Media Usage and Promotion Effectiveness,	173
SINGLE SOURCE DATA	177
THE FUTURE OF SYNDICATED SERVICES	180
 INFO SYNDICATED DATA: BASIC GRAPHS WITH SPSS® FOR WINDOWS™, STUDENT VERSION	181

8 Observation, Focus Groups, and Other Qualitative Methods 186

QUALITATIVE VERSUS QUANTITATIVE RESEARCH	187
OBSERVATION TECHNIQUES	188
Types of Observation,	189
Appropriate Conditions for the Use of Observation,	192
Advantages of Observational Data,	192
Limitations of Observational Data,	193
FOCUS GROUPS	193
Some Objectives of Focus Groups,	194
Operational Questions about Focus Groups,	196
The Focus Group Moderator's Role and Responsibilities,	199
Reporting and Use of Focus Group Results,	200
Advantages of Focus Groups,	202
Disadvantages of Focus Groups,	203
The Future of Focus Groups,	204
OTHER QUALITATIVE RESEARCH TECHNIQUES	206
Depth Interviews,	206
Protocol Analysis,	207
Projective Techniques,	207
Physiological Measurement,	210
 INFO: MODIFYING GRAPHS FOR EFFECTIVE PRESENTATION	211

9 Survey Data Collection Methods 216

ADVANTAGES OF SURVEYS 217

- Standardization, 217
- Ease of Administration, 218
- Ability to Tap the “Unseen”, 218
- Suitability to Tabulation and Statistical Analysis, 219
- Sensitivity to Subgroup Differences, 219

THREE ALTERNATIVE DATA COLLECTION MODES 219

- Person-Administered Surveys, 219
- Computer-Administered Surveys, 220
- Self-Administered Surveys, 222

DESCRIPTIONS OF REPRESENTATIVE DATA COLLECTION MODES 224

- Person-Administered Interviews, 224
- Computer-Administered Interviews, 232
- Self-Administered Surveys, 234

FACTORS DETERMINING THE CHOICE OF A PARTICULAR SURVEY METHOD 237

- Researcher’s Resources and Objectives, 238
- Respondent Characteristics, 240
- Characteristics of Questions Asked by Researcher, 242

SELECTING A SURVEY MODE 244



PICCADILLY CAFETERIA: WORKING WITH TEMPLATES 245

10 Measurement in Marketing Research 252

BASIC CONCEPTS IN MEASUREMENT 253

SCALE CHARACTERISTICS 255

- Description, 255
- Order, 255
- Distance, 255
- Origin, 255

LEVELS OF MEASUREMENT OF SCALES 256

- Nominal Scales, 256
- Ordinal Scales, 256
- Interval Scales, 256
- Ratio Scales, 256


WHY THE MEASUREMENT LEVEL OF A SCALE IS IMPORTANT 259

SCALED-RESPONSE QUESTION FORMS 260


- The Modified Likert Scale, 260
- The Life Style Inventory, 262
- The Semantic Differential Scale, 265
- Issues in the Use of Sensitivity Scales, 267
- Other Scaled-Response Question Formats, 269

RELIABILITY OF MEASUREMENTS 269

- Test-Retest Reliability, 271
- Equivalent Forms Reliability, 272

	Split-Half Reliability, 272
VALIDITY OF MEASUREMENTS	273
Face Validity,	274
Predictive Validity,	274
Convergent Validity,	274
Discriminant Validity,	275
 RED LOBSTER RESTAURANT: SPECIFYING AND WORKING WITH MISSING VALUES	277

11 Questionnaire and Observation Form Design Considerations 284

THE FUNCTIONS OF A QUESTIONNAIRE	286
THE QUESTIONNAIRE DEVELOPMENT PROCESS	286
BASIC QUESTION RESPONSE FORMATS	288
Open-Ended Questions,	288
Close-Ended Questions,	288
Scaled-Response Questions,	289
CONSIDERATIONS IN CHOOSING A QUESTION RESPONSE FORMAT	289
Nature of the Property Being Measured,	291
Previous Research Studies,	291
Data Collection Mode,	291
Scale Level Desired,	291
Ability of the Respondent,	292
DEVELOPING QUESTIONS	293
The Five “Shoulds” of Question Wording,	294
The Eleven “Should Nots” of Question Wording,	297
QUESTIONNAIRE ORGANIZATION	302
Typical Question Sequence,	302
The Funnel Approach,	304
The Work Approach,	304
The Sections Approach,	305
PRECODING THE QUESTIONNAIRE	305
COMPUTER-ASSISTED QUESTIONNAIRE DESIGN	308
Features of Computer-Assisted Questionnaire Design Systems,	308
PERFORMING THE PRETEST OF THE QUESTIONNAIRE	309
COVER LETTERS AND OPENERS	309
DESIGNING OBSERVATION FORMS	311
Structuring Observational Studies,	311
Build-Up and Break-Down Approaches,	312
 RED LOBSTER RESTAURANT: RECODING AND COMPUTING VARIABLES	314

12 Determining the Sample Plan 320

BASIC CONCEPTS IN SAMPLES AND SAMPLING 322

- Population, 322
- Sample and Sample Unit, 322
- Census, 323
- Sampling Error, 324
- Sample Frame and Sample Frame Error, 324

REASONS FOR TAKING A SAMPLE 325

TWO BASIC SAMPLING METHODS: PROBABILITY VERSUS NONPROBABILITY 326

- Probability Sampling Methods, 326
- Nonprobability Sampling Methods, 336

DEVELOPING A SAMPLE PLAN 341

- Step 1: Define the Relevant Population, 341
- Step 2: Obtain a “Listing” of the Population, 342
- Step 3: Design the Sample Plan (Size, Method), 343
- Step 4: Access the Population, 344
- Step 5: Draw the Sample, 344
- Step 6: Validate the Sample, 345
- Step 7: Resample, if Necessary, 345



NOXZEMA SKIN CREAM: SELECTING MULTIPLE CONDITIONS 346

13 Determining the Size of a Sample 352

METHODS OF DETERMINING SAMPLE SIZE 354

- Arbitrary Approach, 355
- Conventional Approach, 355
- Cost Basis Approach, 356
- Statistical Analysis Approach, 358
- Confidence Interval Approach, 358

COMPUTING SAMPLE SIZE USING THE CONFIDENCE INTERVAL APPROACH 366

- Determining Sample Size Using a Percentage, 366
- Determining Sample Size Using a Mean, 368

PRACTICAL CONSIDERATIONS IN SAMPLE SIZE DETERMINATION 370

- How to Estimate Variability in the Population, 370
- How to Determine the Amount of Precision Desired, 371
- How to Calculate the Level of Confidence Desired, 373

SPECIAL SAMPLE SIZE DETERMINATION SITUATIONS 374

- Sampling from Small Populations, 374
- Sample Size Using Nonprobability Sampling, 375



NOXZEMA SKIN CREAM: MISCELLANEOUS OPERATIONS 376

14 Data Collection in the Field, Nonresponse Error, and Questionnaire Screening 382

NONSAMPLING ERROR IN MARKETING RESEARCH 384

USE OF FIELD DATA COLLECTION COMPANIES 384

Options for Field Data Collection, 384

POSSIBLE ERRORS IN FIELD DATA COLLECTION, 389

Intentional Fieldworker Errors, 389

Unintentional Fieldworker Errors, 391

Intentional Respondent Errors, 393

Unintentional Respondent Errors, 395

FIELD DATA COLLECTION QUALITY CONTROLS 397

Control of Intentional Fieldworker Error, 398

Control of Unintentional Fieldworker Error, 399

Control of Intentional Respondent Error, 399

Control of Unintentional Respondent Error, 400

Final Comment on the Control of Data Collection Errors, 401

NONRESPONSE ERROR IN SURVEYS 401

Refusals to Participate in the Survey, 402

Break-Offs During the Interview, 402

Refusals to Answer Specific Questions, 402

REDUCING NONRESPONSE ERROR IN SURVEYS 402

ADJUSTING RESULTS TO REDUCE NONRESPONSE ERROR 403

Weighted Averages, 403

Oversampling, 404

PRELIMINARY QUESTIONNAIRE SCREENING 404

Unsystematic and Systematic Checks of Completed Questionnaires, 405

What to Look for in Questionnaire Inspection, 405

Exceptions and What to Do about Them, 407



SPSS® FOR WINDOWS™ HELP AND GLOSSARY 408

15 Basic Data Analysis: Descriptive Statistics 414

DATA REDUCTION 415

Four Functions of Data Reduction, 416

TYPES OF STATISTICAL ANALYSES USED IN MARKETING RESEARCH 418

Descriptive Analysis, 418

Inferential Analysis, 419

Differences Analysis, 420

Associative Analysis, 420

Predictive Analysis, 420

UNDERSTANDING DATA VIA DESCRIPTIVE ANALYSIS 421

Measures of Central Tendency, 421

Measures of Variability, 423

Other Descriptive Measures, 429

WHEN TO USE A PARTICULAR DESCRIPTIVE MEASURE 434



CELLULAR ONE: OBTAINING DESCRIPTIVE STATISTICS 435

16 Inferring Sample Findings to the Population and Testing for Differences 448

STATISTICS VERSUS PARAMETERS 450

THE CONCEPT OF INFERENCE AND STATISTICAL INFERENCE 450

PARAMETER ESTIMATION 452

Sample Statistic, 452

Standard Error, 453

Confidence Intervals, 455

How to Interpret an Estimated Population Mean or Percentage Range, 458



PAMPO'S SWIMWEAR: CONFIDENCE INTERVALS FOR A MEAN 459

HYPOTHESIS TESTING 460

Test of the Hypothesized Population Parameter Value, 462

Directional Hypotheses, 466

How to Interpret Hypothesis Testing, 467



HOW TO USE SPSS® FOR WINDOWS™, STUDENT VERSION,
TO TEST A HYPOTHESIS FOR A MEAN 467

TESTING FOR SIGNIFICANT DIFFERENCES BETWEEN TWO MEANS 468

Differences between Means with Two Groups (Independent Samples), 468

Differences between Two Means within the Same Sample (Paired Sample), 472

Small Sample Sizes: The Use of a *t*-test, 473



LIPTON PACKAGED DINNERS: DIFFERENCES BETWEEN TWO MEANS 474

TESTING FOR SIGNIFICANT DIFFERENCES IN MEANS AMONG MORE
THAN TWO GROUPS: ANALYSIS OF VARIANCE 477

Basic Logic in Analysis of Variance, 477

The Three Types of Variation in ANOVA, 477

Determining Statistical Significance in ANOVA, 478

An Example of How ANOVA Works, 479

The Computed *F* Value and *F* Distribution, 483

Determining Specific Statistically Significant Differences Between Group Means, 484



HOW TO RUN ANALYSIS OF VARIANCE

ON SPSS® FOR WINDOWS™, STUDENT VERSION 485

n-Way ANOVA, 487



n-WAY ANOVA WITH SPSS® FOR WINDOWS™, STUDENT VERSION 487

17 Determining and Interpreting Associations Between Two Variables 494

TYPES OF RELATIONSHIPS BETWEEN TWO VARIABLES 497

Nonmonotonic Relationships, 497




Monotonic Relationships, 498

Linear Relationships, 499






Curvilinear Relationships, 500

CHARACTERIZING RELATIONSHIPS BETWEEN VARIABLES 500

Presence, 500

	Direction, 501
	Strength of Association, 501
	CROSS-TABULATIONS 502
	CHI-SQUARE ANALYSIS 505
	Observed and Expected Frequencies, 506
	The Computed χ^2 Value, 507
	The Chi-Square Distribution, 508
	How to Interpret a Chi-Square Result, 510
	MICHELOB LIGHT BEER: ANALYZING CROSS-TABULATIONS FOR SIGNIFICANT ASSOCIATIONS 511
	CORRELATION COEFFICIENTS AND COVARIATION 513
	Graphing Covariation Using Scatter Diagrams, 515
	THE PEARSON PRODUCT MOMENT CORRELATION COEFFICIENT 518
	Basic Procedure in Pearson Product Moment Correlation Analysis, 519
	BURROUGHS CORPORATION: USING CORRELATIONS 521
	Special Considerations in Linear Correlation Procedures, 522
	THE RANK ORDER CORRELATION COEFFICIENT 522
	SPEARMAN RANK ORDER CORRELATION AND KENDALL'S TAU RANK CORRELATION 524
	CONCLUDING COMMENTS ON ASSOCIATIVE ANALYSES 524

18 Predictive Analysis in Marketing Research 532

	DEFINING PREDICTION 534
	Two General Approaches to Prediction, 534
	How to Determine the “Goodness” of Your Predictions, 534
	BIVARIATE REGRESSION ANALYSIS 536
	Basic Procedure in Bivariate Regression Analysis, 537
	BURROUGHS CORPORATION: BIVARIATE REGRESSION 540
	TESTING FOR STATISTICAL SIGNIFICANCE OF THE INTERCEPT AND THE SLOPE 542
	Making a Prediction and Accounting for Error, 542
	A Warning Regarding Regression Analysis, 545
	BURROUGHS CORPORATION: RUNNING REGRESSION ANALYSIS 545
	MULTIPLE REGRESSION ANALYSIS 546
	Basic Assumptions in Multiple Regression 546
	VITALITY PHARMACEUTICALS: RUNNING MULTIPLE REGRESSION 548
	Using Results to Make a Prediction, 551
	Special Uses of Multiple Regression Analysis, 552
	Final Comments on Regression Analysis, 555
	TIME SERIES ANALYSIS OF HISTORICAL DATA 556
	Trend, 556
	REGAL BICYCLE SALES: TIME SERIES ANALYSIS 557
	REGAL BICYCLE SALES: PERFORMING EXPONENTIAL SMOOTHING WITH SPSS® FOR WINDOWS™, STUDENT VERSION 560
	Cycle, 562
	Seasonality, 562

19 Presenting the Research Results 568

IMPORTANCE OF THE RESEARCH REPORT	569
ORGANIZATION OF THE WRITTEN REPORT	570
Front Matter,	571
Body,	575
End Matter,	580
GUIDELINES AND PRINCIPLES FOR THE WRITTEN REPORT	580
Form and Format,	580
Style,	581
GUIDELINES FOR THE USE OF VISUALS: TABLES AND FIGURES	582
Tables,	584
Pie Charts,	585
Bar Charts,	585
Line Graphs	589
AN ACCURATE AND ETHICAL VISUAL	589
ORAL PRESENTATIONS	590

Appendix A: Table of Random Numbers 594

Appendix B: Table of Standardized Normal Distribution 596

Appendix C: Critical Values of t 597

Appendix D: Critical Values of χ^2 600

Appendix E: Critical Values of F ($\alpha = .05$) 602
Critical Values of F ($\alpha = .01$) 603

Endnotes 604

Suggested Readings 611

Index 614

NAMES	614
SUBJECTS	615