

# Contents

Preface xii

## >part I

### Introduction to Business Research 1

- 1 Research in Business 2**
  - Why Study Business Research? 4
  - Planning Drives Business Research 7
    - Goals* 7
    - Decision Support* 7
    - Business Intelligence* 8
    - Strategy* 8
    - Tactics* 9
    - Emerging Hierarchy of Information-Based Decision Makers* 9
  - How the Research Industry Works 12
    - Internal Research Suppliers* 12
    - External Research Suppliers* 13
  - What is Good Research? 22
  - >summary** 24
  - >key terms** 25
  - >discussion questions** 25
  - >www exercises** 26
  - >cases** 26
- 2 Thinking Like a Researcher 28**
  - Research and the Scientific Method 30
    - Sound Reasoning for Useful Answers* 31
  - The Language of Research 35
    - Concepts* 36
    - Constructs* 37
    - Definitions* 38
    - Variables* 40
    - Propositions and Hypotheses* 43
    - Theory* 46

*Models* 48

- >summary** 50
- >key terms** 50
- >discussion questions** 50
- >www exercise** 51
- >cases** 51

### **3 The Research Process: An Overview 52**

- The Research Process 54
- The Management-Research Question Hierarchy 56
  - The Management Question* 58
  - Exploration* 62
  - The Research Question* 63
  - Investigative Questions* 66
  - Measurement Questions* 67
- Research Process Issues 69
  - The Favored-Technique Syndrome* 69
  - Company Database Strip-Mining* 70
  - Unresearchable Questions* 70
  - Ill-Defined Management Problems* 71
  - Politically Motivated Research* 71
- Designing the Study 71
- Sampling Design 72
- Resource Allocation and Budgets 73
- Valuing Research Information 73
  - Evaluation Methods* 73
- The Research Proposal 75
  - Proposal Content* 76
- Pilot Testing 76
- Data Collection 77
- Analysis and Interpretation 77
- Reporting the Results 78
- >summary** 79
- >key terms** 79
- >discussion questions** 79
- >www exercises** 80

- >cases 81
- 4 Business Research Requests and Proposals 82**
  - Proposing Research 84
  - The Request for Proposal (RFP) 84
    - Creating the RFP* 85
  - The Research Proposal 91
  - Sponsor Uses 91
  - Researcher Benefits 92
  - Types of Research Proposals 93
    - Internal Proposals* 93
    - External Proposals* 95
  - Structuring the Research Proposal 96
    - Executive Summary* 96
    - Problem Statement* 96
    - Research Objectives* 96
    - Literature Review* 96
    - Importance/Benefits of the Study* 96
    - Research Design* 98
    - Data Analysis* 98
    - Nature and Form of Results* 98
    - Qualifications of Researchers* 98
    - Budget* 99
    - Schedule* 100
    - Facilities and Special Resources* 101
    - Project Management* 101
    - Bibliography* 102
    - Appendices* 102
  - Evaluating the Research Proposal 105
    - >summary 107
    - >key terms 107
    - >discussion questions 107
    - >www exercise 108
    - >cases 108
- Appendix 4a Covering Kids RFP 109
- 5 Ethics in Business Research 114**
  - What Are Research Ethics? 116
  - Ethical Treatment of Participants 117
    - Benefits* 118
    - Deception* 118
  - Informed Consent* 119
  - Debriefing Participants* 120
  - Rights to Privacy* 121
  - Data Collection in Cyberspace* 122
  - Ethics and the Sponsor 124
    - Confidentiality* 125
    - Right to Quality Research* 125
    - Sponsor's Ethics* 126
  - Researchers and Team Members 127
    - Safety* 127
    - Ethical Behavior of Assistants* 127
    - Protection of Anonymity* 127
  - Professional Standards 127
  - Resources for Ethical Awareness 129
    - >summary 130
    - >key terms 130
    - >discussion questions 131
    - >www exercises 133
    - >case 133
- >part II**
- The Design of Business Research 135**
- 6 Research Design: An Overview 136**
  - What Is Research Design? 138
    - Classification of Designs* 139
  - Exploratory Studies 143
    - Qualitative Techniques* 143
    - Secondary Data Analysis* 144
    - Experience Survey* 145
    - Focus Groups* 146
    - Two-Stage Design* 150
  - Descriptive Studies 151
  - Causal Studies 152
    - The Concept of Cause* 152
    - Causal Relationships* 154
    - Testing Causal Hypotheses* 155
  - >summary 159
  - >key terms 159
  - >discussion questions 160

>www exercise 161

>cases 161

**7 Secondary Data Searches 162**

The Exploratory Phase Search Strategy 164

*Levels of Information* 166

*Types of Information Sources* 167

*Evaluating Information Sources* 169

*Searching a Bibliographic*

*Database* 172

*Searching the World Wide Web for*

*Information* 176

*Searching for Specific Types of*

*Information on the Web* 179

*Government Information* 180

Mining Internal Sources 185

*Evolution of Data Mining* 186

*Data-Mining Process* 188

>summary 191

>key terms 191

>discussion questions 192

>www exercises 192

>cases 193

**8 Qualitative Research 194**

What Is Qualitative Research? 196

Qualitative versus Quantitative Research 196

*The Controversy* 196

*The Distinction* 198

The Process of Qualitative Research 200

Qualitative Research Methodologies 202

*Sampling* 203

*Interviews* 204

*Individual Depth Interviews* 208

*Group Interviews* 210

Combining Qualitative Methodologies 217

*Case Study* 217

*Action Research* 217

Merging Qualitative and Quantitative

Methodologies 219

>summary 219

>key terms 220

>discussion questions 220

>www exercise 221

>cases 221

**9 Observation Studies 222**

The Uses of Observation 224

*Nonbehavioral Observation* 225

*Behavioral Observation* 227

Evaluation of the Observation Method 228

The Observer-Participant Relationship 229

*Directness of Observation* 229

*Concealment* 229

*Participation* 230

Conducting an Observation Study 231

*The Type of Study* 231

*Content Specification* 233

*Observer Training* 234

*Data Collection* 235

Unobtrusive Measures 237

>summary 240

>key terms 240

>discussion questions 240

>www exercise 241

>cases 241

**10 Surveys 242**

Characteristics of the Communication

*Approach* 244

*Error in Communication Research* 245

*Choosing a Communication Method* 252

Self-Administered Surveys 254

*Evaluation of the Self-Administered Survey* 254

*Maximizing Participation in the Self-Administered Survey* 257

*Self-Administered Survey Trends* 258

Survey via Telephone Interview 259

*Evaluation of the Telephone Survey* 260

*Telephone Survey Trends* 264

Survey via Personal Interview 265

*Evaluation of the Personal Interview*

*Survey* 265

Selecting an Optimal Survey Method	268
<i>Outsourcing Survey Services</i>	269
>summary	269
>key terms	270
>discussion questions	270
>www exercise	271
>cases	271
<b>11 Experiments and Test Markets</b>	272
What Is Experimentation?	274
An Evaluation of Experiments	275
<i>Advantages</i>	275
<i>Disadvantages</i>	275
Conducting an Experiment	276
<i>Selecting Relevant Variables</i>	276
<i>Specifying Treatment Levels</i>	278
<i>Controlling the Experimental Environment</i>	279
<i>Choosing the Experimental Design</i>	279
<i>Selecting and Assigning Participants</i>	279
<i>Pilot Testing, Revising, and Testing</i>	281
<i>Analyzing the Data</i>	282
Validity in Experimentation	282
<i>Internal Validity</i>	282
<i>External Validity</i>	284
Experimental Research Designs	286
<i>Preexperimental Designs</i>	286
<i>True Experimental Designs</i>	288
<i>Field Experiments: Quasi- or Semi-Experiments</i>	290
Test Marketing	292
<i>Test Market Selection</i>	292
<i>Types of Test Markets</i>	293
>summary	299
>key terms	300
>discussion questions	300
>www exercises	301
>>cases	301
<b>Appendix 11a Complex Experimental Designs</b>	302

## >part III

### The Sources and Collection of Data 305

<b>12 Measurement</b>	306
The Nature of Measurement	308
<i>What Is Measured?</i>	311
Measurement Scales	311
<i>Nominal Scales</i>	312
<i>Ordinal Scales</i>	314
<i>Interval Scales</i>	315
<i>Ratio Scales</i>	315
Sources of Measurement Differences	316
<i>Error Sources</i>	316
The Characteristics of Good Measurement	318
<i>Validity</i>	318
<i>Reliability</i>	321
<i>Practicality</i>	323
>summary	324
>key terms	325
>discussion questions	325
>www exercise	326
>cases	326
<b>13 Measurement Scales</b>	328
The Nature of Attitudes	330
<i>The Relationship between Attitudes and Behavior</i>	331
<i>Attitude Scaling</i>	332
Selecting a Measurement Scale	332
<i>Research Objectives</i>	333
<i>Response Types</i>	333
<i>Data Properties</i>	333
<i>Number of Dimensions</i>	333
<i>Balanced or Unbalanced</i>	334
<i>Forced or Unforced Choices</i>	334
<i>Number of Scale Points</i>	335
<i>Rater Errors</i>	336
Rating Scales	336
<i>Simple Attitude Scales</i>	337
<i>Likert Scales</i>	339

*Semantic Differential Scales* 340  
*Numerical/Multiple Rating List Scales* 345  
*Stapel Scales* 345  
*Constant-Sum Scales* 346  
*Graphic Rating Scales* 346  
 Ranking Scales 346  
 Sorting 349  
 Cumulative Scales 351  
**>summary** 352  
**>key terms** 353  
**>discussion questions** 354  
**>www exercise** 355  
**>cases** 355

**14 Questionnaires and Instruments** 356

Revisiting the Research Question Hierarchy 358  
*Type of Scale for Desired Analysis* 359  
*Communication Approach* 359  
*Disguising Objectives and Sponsors* 360  
*Preliminary Analysis Plan* 362  
 Constructing and Refining the Measurement Questions 362  
*Question Categories and Structure* 363  
*Question Content* 365  
*Question Wording* 365  
*Response Strategy* 367  
*Sources of Existing Questions* 373  
 Drafting and Refining the Instrument 374  
*Participant Screening and Introduction* 376  
*Measurement Question Sequencing* 377  
*Instructions* 381  
*Conclusion* 381  
*Overcoming Instrument Problems* 381  
*The Value of Pretesting* 384  
**>summary** 385  
**>key terms** 386  
**>discussion questions** 386  
**>www exercises** 387  
**>cases** 387

**Appendix 14a Crafting Effective Measurement Questions** 389

**Appendix 14b Pretesting Options and Discoveries** 396

**15 Sampling** 400

The Nature of Sampling 402  
*Why Sample?* 403  
*What Is a Good Sample?* 404  
*Types of Sample Design* 406  
 Steps in Sampling Design 409  
*What Is the Target Population?* 409  
*What Are the Parameters of Interest?* 409  
*What Is the Sampling Frame?* 411  
*What Is the Appropriate Sampling Method?* 412  
*What Size Sample Is Needed?* 413  
 Probability Sampling 414  
*Simple Random Sampling* 414  
*Complex Probability Sampling* 414  
 Nonprobability Sampling 422  
*Practical Considerations* 423  
*Methods* 423  
**>summary** 426  
**>key terms** 427  
**>discussion questions** 427  
**>www exercise** 428  
**>cases** 428

**Appendix 15a Determining Sample Size** 429

**>part IV**  
**Analysis and Presentation of Data**

**16 Data Preparation and Description 438**

- Introduction 440
- Editing 441
  - Field Editing* 442
  - Central Editing* 442
- Coding 443
  - Codebook Construction* 444
  - Coding Closed Questions* 444
  - Coding Free-Response Questions* 445
  - Coding Rules* 447
  - Using Content Analysis for Open Questions* 448
  - "Don't Know" Responses* 452
  - Missing Data* 453
- Data Entry 455
  - Alternative Data Entry Formats* 455
  - On the Horizon* 459
- >summary** 460
- >key terms** 460
- >discussion questions** 460
- >www exercises** 461
- >cases** 462

**Appendix 16a Describing Data Statistically 463**

**17 Exploring, Displaying, and Examining Data 470**

- Exploratory Data Analysis 472
  - Frequency Tables, Bar Charts, and Pie Charts* 473
  - Histograms* 475
  - Stem-and-Leaf Displays* 477
  - Pareto Diagrams* 479
  - Boxplots* 479
  - Mapping* 481
- Cross-Tabulation 482
  - The Use of Percentages* 484
  - Other Table-Based Analysis* 486
- >summary** 488
- >key terms** 488
- >discussion questions** 488
- >www exercise** 489

**>cases** 489**18 Hypothesis Testing 490**

- Introduction 492
  - Statistical Significance* 492
  - The Logic of Hypothesis Testing* 494
  - Statistical Testing Procedures* 500
  - Probability Values (p values)* 501
- Tests of Significance 502
  - Types of Tests* 502
  - How to Select a Test* 504
  - Selecting Tests Using the Choice Criteria* 505
  - One-Sample Tests* 506
  - Two-Independent-Samples Tests* 509
  - Two-Related-Samples Tests* 513
  - k-Independent-Samples Tests* 516
  - k-Related-Samples Tests* 523
- >summary** 526
- >key terms** 527
- >discussion questions** 527
- >www exercise** 530
- >cases** 530

**19 Measures of Association 532**

- Introduction 535
- Bivariate Correlation Analysis 535
  - Pearson's Product Moment Coefficient r* 536
  - Scatterplots for Exploring Relationships* 537
  - The Assumptions of r* 538
  - Computation and Testing of r* 539
  - Interpretation of Correlations* 542
- Simple Linear Regression 544
  - The Basic Model* 545
  - Concept Application* 546
  - Method of Least Squares* 548
  - Predictions* 552
  - Testing the Goodness of Fit* 552
- Nonparametric Measures of Association 556
  - Measures for Nominal Data* 556
  - Measures for Ordinal Data* 560
- >summary** 564

- >key terms 565
- >discussion questions 565
- >www exercise 567
- >cases 568

**20 Multivariate Analysis: An Overview 570**

- Introduction 572
- Selecting a Multivariate Technique 573
- Dependency Techniques 574
  - Multiple Regression* 574
  - Discriminant Analysis* 578
  - MANOVA* 579
  - Structural Equation Modeling* 583
  - Conjoint Analysis* 586
- Independency Techniques 590
  - Factor Analysis* 590
  - Cluster Analysis* 595
  - Multidimensional Scaling* 598
- >summary 600
- >key terms 601
- >discussion questions 602
- >www exercise 603
- >cases 603

**21 Presenting Insights and Findings:**

- Written and Oral Reports 604**
- Introduction 606
- The Written Research Report 606
  - Short Reports* 607
  - Long Reports* 607
- Research Report Components 609
  - Prefatory Items* 610
  - Introduction* 611
  - Methodology* 612
  - Findings* 613
  - Conclusions* 614
  - Appendices* 615
  - Bibliography* 615
- Writing the Report 615
  - Prewriting Concerns* 615
  - Writing the Draft* 617
  - Presentation Considerations* 619
- Presentation of Statistics 620
  - Text Presentation* 620

- Semitabular Presentation* 631
- Tabular Presentation* 632
- Graphics* 632
- Oral Presentations 639
  - Preparation* 639
  - Delivery* 641
  - Audiovisuals* 643

- >summary 644
- >key terms 645
- >discussion questions 645
- >www exercises 646
- >cases 646

**>case abstracts 647**

**>appendices 657**

**a Focus Group Discussion Guide 658**

- Background 658

**b Nonparametric Significance Tests 660**

- One-Sample Test 660
  - Kolmogorov-Smirnov Test* 660
- Two-Samples Tests 661
  - Sign Test* 661
  - Wilcoxon Matched-Pairs Test* 661
  - Kolmogorov-Smirnov Two-Samples Test* 663
  - Mann-Whitney U Test* 663
  - Other Nonparametric Tests* 665
- k*-Samples Tests 665
  - Kruskal-Wallis Test* 665

**c Selected Statistical Tables 668**

References and Readings 680

Glossary 709

Photo Credits 730

Index 733

