

DUXBURY APPLIED SERIES

BUSINESS RESEARCH

FOR DECISION MAKING



SIXTH EDITION

DUANE DAVIS

CONTENTS

About the Author	vi
Preface	xix

PART ONE BUSINESS RESEARCH, KNOWLEDGE MANAGEMENT, AND SCIENTIFIC INQUIRY

CHAPTER 1 Business Research and Decision Making 1

Overview	2
The Nature of Decision Making	2
Levels of Decision Making	3
Decision-Making Processes	5
The Role of Research in Decision Making	7
Business Research Defined	7
Business Research and Ethics	8
Role in Decision Making	9
Research and the Global Marketplace	11
The Manager-Researcher Relationship	12
Plan of the Book	14
The Business Research Process	15
Summary	19
Discussion Questions	19
Notes	20
Suggested Reading	21

CHAPTER 2 Information, Research, and Knowledge Management 23

Overview	24
Understanding the Basics of KM	24
So What Is KM	26
Definition	26
Expected Benefits	27
Information Systems (IS) and KM	31
Technology and ISM	31
Decision Support Systems (DSS)	33
Database Management (DBM) and Online Analytical Processing (OLAP)	35
Business Research (BR) and KM	36
Summary	39
Discussion Questions	39

Notes	40
Suggested Reading	41

CHAPTER 3 Scientific Inquiry 43

Overview	44
Definitions	45
Observations, Facts	45
Concepts, Constructs, Definitions, Variables	45
Problems, Hypotheses, Laws	47
Theories, Models	49
Methods of Theory Construction	53
Model-Based Theory	54
Deductive Theory	54
Functional Theory	55
Inductive Theory	55
Relevance of Science in Business Research	55
Science Versus Nonscience	56
Scientific Method	57
State of the Art in Business Research	57
Levels of Scientific Endeavor	60
Where Do We Go from Here?	62
Summary	63
Discussion Questions	63
Notes	64
Suggested Reading	66

PART TWO BEGINNING THE BUSINESS RESEARCH PROCESS

CHAPTER 4 Secondary Data Collection in Business Inquiry 69

Overview	70
Secondary Data in Business Research	70
Uses of Secondary Data	71
Development of a Search Strategy	74
Data Retrieval Methods	74
Data Locations	77
Internet Searching	79
The Internet	85
Background	86
An Example—Researching Harley-Davidson on the Web	87
Managerial Considerations	91
Summary	94
Discussion Questions	95
Notes	96
Suggested Reading	97

CHAPTER 5 Problem and Proposal Development and Management 99

Overview	100
Problem Identification and Formulation	101
Problem Identification	101
Problem Formulation	103
The Question of Value	105
Proposal Development	107
A Typology of Business-Related Research Proposals	108
Structure of a Proposal	110
A Sample Research Proposal	111
Managerial Considerations	117
Proposal Evaluation Mechanisms	118
Other Control Mechanisms	120
Summary	123
Discussion Questions	123
Notes	124
Suggested Reading	125
Appendix: Methods of Assessing the Value of Research Information	126

PART THREE RESEARCH DESIGN

CHAPTER 6 Fundamentals of Research Design 133

Overview	134
The Nature of Research Design	134
Error Reduction Through Design	136
Potential Sources of Error in the Research Design Process	136
Managerial Strategies for Dealing with Error	139
Major Types of Designs	140
Ex Post Facto Designs	144
Experimental Designs	147
Specific Design Configurations	149
Validity Concerns	149
Specific Designs	151
Online Research Design Issues	157
Managerial Considerations	158
Summary	160
Discussion Questions	161
Notes	162
Suggested Reading	164
Appendix: Advanced Experimental Designs	165

CHAPTER 7 Foundations of Measurement 173

Overview	174
The Nature of Measurement	174

Components of Measurement	175
The Measurement Process	177
Levels of Measurement	179
Nominal	180
Ordinal	182
Interval	183
Ratio	184
Evaluation of Measurement Scales	184
Validity	185
Reliability	188
Managerial Considerations	192
Summary	194
Discussion Questions	195
Notes	196
Suggested Reading	197

CHAPTER 8 Scaling and Instrument Design 199

Overview	200
The Nature of Instrument Design	200
Scale Development	202
Item Phrasing	203
Response Formats	209
Frequently Used Scaling Techniques	210
Instrument Design	213
Scale Sequencing and Layout	213
Online Design Aids	214
Pretesting and Correcting	219
Managerial Considerations	220
Summary	222
Discussion Questions	223
Notes	224
Suggested Reading	225

CHAPTER 9 Sampling Design 227

Overview	228
The Nature of Sampling	228
Terminology	228
The Rationale for Sampling	231
The Sampling Process	232
An Introduction to the Philosophy of Sampling	235
Sample Designs	237
Sample Design Choice Considerations	237
Probability Designs	242
Nonprobability Designs	250

Practical Considerations in Sampling	251
Incidence and Response Rates	255
Internationalization of the Marketplace	256
Online Sampling Design Issues	257
Managerial Considerations	259
Summary	260
Discussion Questions	261
Notes	262
Suggested Reading	263
Appendix: A Computational Example Illustrating the Properties of the Central Limit Theorem	265

PART FOUR PRIMARY DATA COLLECTION (PDC)

CHAPTER 10	PDC Using Survey Instruments	269
	Overview	270
	The Nature of Primary Data Collection (PDC)	270
	Active PDC Using Survey Instruments	274
	Offline Methods	274
	Online Methods	284
	A Comparison of Collection Methods	291
	PDC Vendors	292
	Panel Vendors	296
	Managerial Considerations	298
	Summary	300
	Discussion Questions	301
	Notes	302
	Suggested Reading	304
CHAPTER 11	PDC Using Observation, In-Depth Interviews, and Other Qualitative Techniques	305
	Overview	306
	Nature and Uses of Qualitative Research	306
	Passive PDC Using Observation	308
	Active PDC Using Qualitative Research Techniques	310
	Individual In-Depth Interviews	312
	Focus Groups	313
	Other Qualitative Research Techniques	316
	Qualitative Research Vendors	316
	Managerial Considerations	318
	Summary	320
	Discussion Questions	321
	Notes	322
	Suggested Reading	323

PART FIVE ANALYTICAL PROCEDURES

CHAPTER 12	Planning for Data Analysis	325
	Overview	326
	Planning Issues	326
	Selecting the Appropriate Analytical Software or Online Research Supplier	328
	Analytical Software	328
	Online Research Suppliers	333
	The Preanalytical Process	333
	Step 1: Data Editing	335
	Step 2: Variable Development	336
	Step 3: Data Coding	337
	Step 4: Error Check	339
	Step 5: Data Structure Generation	339
	Step 6: Preanalytical Computer Check	341
	Step 7: Tabulation	341
	Basic Analytical Framework for Business Research	344
	Managerial Considerations	346
	Summary	348
	Discussion Questions	348
	Notes	349
	Suggested Reading	350
CHAPTER 13	Basic Analytical Methods	351
	Overview	352
	Classification of Analytical Methods by Purpose	352
	Exploratory Data Analysis	360
	Basic Methods of Assessing Association	360
	Crosstabulation	361
	Contingency Correlation	362
	Spearman Rank Correlation	364
	Pearson's r	365
	Basic Methods of Assessing Differences	368
	Chi-Square (χ^2) Test	368
	Z-Test for Differences in Proportions	370
	t-Test for Differences in Means	371
	Summary	374
	Discussion Questions	375
	Notes	377
	Suggested Reading	378
	Appendix: Additional Basic Analytical Techniques	379

CHAPTER 14	Analysis of Variance and Regression Techniques	383
	Overview	384
	The Nature of Variance Decomposition	384
	Linear Models	387
	One-Way Analysis of Variance (ANOVA)	387
	Two-Way Analysis of Variance (ANOVA)	395
	Linear Regression	403
	Analysis of Covariance	419
	Nonparametric ANOVA	420
	Summary	422
	Discussion Questions	422
	Notes	425
	Suggested Reading	426
	Appendix: The Use of Dummy and Effect Coding to Examine Group Differences Using Multiple Linear Regression	427
CHAPTER 15	Advanced Multivariate Analysis	431
	Overview	432
	Introduction to Multivariate Analysis	432
	Selection of a Multivariate Technique	433
	Analysis of Dependency	435
	Multivariate Analysis of Variance	435
	Multiple Discriminant Analysis	438
	Conjoint Analysis	440
	Covariance Structure Analysis	442
	Analysis of Interdependency	444
	Factor Analysis	444
	Cluster Analysis	448
	Multidimensional Scaling	450
	Comment on Multivariate Techniques	454
	Summary	454
	Discussion Questions	455
	Notes	456
	Suggested Reading	457
PART SIX	RESEARCH REPORTING AND EVALUATION	
CHAPTER 16	Ethical Considerations in Business Research	459
	Overview	460
	Ethical Issues in Business Research	460
	Societal Rights	462
	Subjects' Rights	463
	Clients'/Managers' Rights	465

Researchers' Rights	467
Ethical Issues in a High-Technology Environment	468
Protection of Subjects' Rights	469
Quality of Research	469
Research Versus Direct Marketing	470
Codes of Ethics	470
Managerial Considerations	471
Summary	472
Discussion Questions	473
Notes	474
Suggested Reading	475
Appendix: Excerpts from the ICC/ESOMAR International Code of Marketing and Social Research Practice	476

CHAPTER 17 Research Reporting and Evaluation 483

Overview	484
Written Research Reports	484
The Outline	485
Guidelines	490
Oral Presentations	493
Research Evaluation	495
Communication Challenges in the Future	497
Managerial Considerations	498
Summary	499
Discussion Questions	500
Notes	501
Suggested Reading	501

Research Cases 503

Amtech, Inc.—Training Needs Analysis	504
Checker's Pizza—Employee Retention	511
Fastest Courier in the West—Selecting a Service	515
Glenco Bonus Program—Employee Absenteeism	519
Ryder Appraisal District—Property Tax Assessment	526
The Keels Agency—Advertising Media Selection	530
River End Golf and Entertainment Center—Market Assessment Study	535

APPENDIX A A Practitioner's Guide to Secondary Business Information Sources 543

Overview	544
Research Guides and Bibliographies	544
Encyclopedias, Directories, Dictionaries, and Handbooks	546
Indexes	547
Indexes of Periodicals	547

Indexes of Newspapers	548
Indexes of Documents	548
Statistical Sources	548
References for Individual Companies	551
Other Sources: International Business	551
Handbooks	551
Almanacs, Dictionaries, and Encyclopedias	552
Directories	552
Yearbooks	552
A Note on the Standard Industrial Classification (SIC) and the North American Industry Classification System (NAICS)	553

APPENDIX B Selected Statistical Tables 557

B.1 Areas Under the Normal Curve	558
B.2 Distribution of t	560
B.3 F Distribution	562
B.4 Distribution of χ^2	571

Index	573
--------------	------------