

CONTENTS

About the authors	xvii
Preface	xix
Chapter 1 Introduction to research	1
What is research?	2
Business research	2
Definition of business research	3
Research and the manager	3
Types of business research: applied and basic	5
Applied research	6
Basic or fundamental research	7
Managers and research	9
The manager and the consultant–researcher	10
The manager–researcher relationship	11
Internal versus external consultants/researchers	12
Internal consultants/researchers	12
External consultants/researchers	13
Knowledge about research and managerial effectiveness	14
Ethics and business research	15
Summary	15
Discussion questions	16
Chapter 2 Scientific investigation	17
The hallmarks of scientific research	19
Purposiveness	19
Rigor	19
Testability	20
Replicability	20

Precision and confidence	21
Objectivity	22
Generalizability	22
Parsimony	23
Some obstacles to conducting scientific research in the management area	23
The hypothetico-deductive method	24
The seven-step process in the hypothetico-deductive method	24
Review of the hypothetico-deductive method	28
Other types of research	30
Case studies	30
Action research	31
Summary	31
Discussion questions	32
Chapter 3 The research process: the broad problem area and defining the problem statement	35
Broad problem area	36
Preliminary information gathering	37
Nature of information to be gathered	37
Literature review	38
Conducting the literature review	39
Defining the problem statement	45
What makes a good problem statement?	45
The research proposal	47
Managerial implications	50
Ethical issues in the preliminary stages of investigation	50
Summary	51
Discussion questions	52
Practice projects	53
Appendix	55
Some online resources useful for business research	55
Bibliographical databases	60
APA format for referencing relevant articles	61
Referencing and quotation in the literature review section	64

Chapter 4 The research process: theoretical framework and hypothesis development	67
The need for a theoretical framework	69
Variables	69
Types of variables	70
Theoretical framework	80
The components of the theoretical framework	80
Theoretical framework for the example of air safety violations	82
Hypothesis development	86
Definition of a hypothesis	87
Statement of hypotheses: formats	87
Directional and nondirectional hypotheses	88
Null and alternate hypotheses	88
Hypothesis testing with qualitative research: negative case analysis	92
Managerial implications	95
Summary	96
Discussion questions	96
Practice project	99
Chapter 5 The research process: elements of research design	101
The research design	102
Purpose of the study: exploratory, descriptive, hypothesis testing (analytical and predictive), case study analysis	103
Exploratory study	103
Descriptive study	105
Hypothesis testing	108
Case study analysis	109
Review of the purpose of the study	109
Type of investigation: causal versus correlational	110
Extent of researcher interference with the study	111
Study setting: contrived and noncontrived	114
Unit of analysis: individuals, dyads, groups, organizations, cultures	116
Time horizon: cross-sectional versus longitudinal studies	119
Cross-sectional studies	119
Longitudinal studies	119

Review of elements of research design	120
Managerial implications	122
Summary	123
Discussion questions	123
Chapter 6 Measurement of variables: operational definition	125
How variables are measured	126
Operationalization of variables	127
Operationalization: dimensions and elements	129
Operationalizing the (multidimensional) concept of achievement motivation	129
What operationalization is not	135
Review of operationalization	136
International dimensions of operationalization	137
Summary	137
Discussion questions	137
Chapter 7 Measurement: scaling, reliability, validity	139
Scales	141
Nominal scale	141
Ordinal scale	142
Interval scale	143
Ratio scale	145
Review of scales	148
Rating scales	149
Dichotomous scale	149
Category scale	149
Semantic differential scale	150
Numerical scale	150
Itemized rating scale	151
Likert scale	152
Fixed or constant sum scale	152
Stapel scale	153
Graphic rating scale	153

Consensus scale	154
Other scales	154
Ranking scales	155
Paired comparison	155
Forced choice	155
Comparative scale	156
International dimensions of scaling	156
Goodness of measures	157
Item analysis	157
Validity	158
Reliability	161
Reflective versus formative measurement scales	163
What is a reflective scale?	163
What is a formative scale and why do the items of a formative scale not necessarily hang together?	163
Summary	165
Discussion questions	165
Appendix	167
Examples of some measures	167
Chapter 8 Data collection methods	179
Sources of data	180
Primary sources of data	181
Secondary sources of data	184
Data collection methods	184
Interviewing	186
Questionnaires	197
Other methods of data collection	211
Multimethods of data collection	216
Review of the advantages and disadvantages of different data collection methods and when to use each	217
Setting from which data are gathered	218
International dimensions of surveys	218
Special issues in instrumentation for cross-cultural research	219
Issues in data collection	219

Managerial implications	220
Ethics in data collection	220
Ethics and the researcher	221
Ethical behavior of respondents	221
Summary	222
Discussion questions	222
Chapter 9 Experimental designs	225
The lab experiment	228
Control	229
Manipulation of the independent variable	229
Controlling the contaminating exogenous or “nuisance” variables	231
Internal validity of lab experiments	233
External validity or generalizability of lab experiments	233
The field experiment	234
External validity	234
Trade-off between internal and external validity	235
Factors affecting the validity of experiments	235
History effects	235
Maturation effects	236
Testing effects	237
Selection bias effects	238
Mortality effects	238
Statistical regression effects	239
Instrumentation effects	239
Identifying threats to validity	240
Internal validity in case studies	241
Review of factors affecting internal and external validity	242
Types of experimental design and validity	242
Quasi-experimental designs	243
True experimental designs	245
Simulation	249
Ethical issues in experimental design research	251
Managerial implications	252
Summary	253

Discussion questions	253
Appendix	255
Further experimental designs	255
Chapter 10 Sampling	261
Population, element, sample, sampling unit, and subject	262
Population	262
Element	263
Sample	263
Sampling unit	263
Subject	263
Parameters	264
Reasons for sampling	264
Representativeness of samples	265
Normality of distributions	265
The sampling process	266
Defining the population	267
Determining the sample frame	267
Determining the sampling design	267
Determining the sample size	268
Executing the sampling process	268
Probability sampling	270
Unrestricted or simple random sampling	270
Restricted or complex probability sampling	270
Review of probability sampling designs	275
Nonprobability sampling	276
Convenience sampling	276
Purposive sampling	276
Review of nonprobability sampling designs	278
Examples of when certain sampling designs would be appropriate	278
Simple random sampling	278
Stratified random sampling	282
Systematic sampling	283
Cluster sampling	284
Area sampling	284

Double sampling	284
Convenience sampling	285
Judgment sampling: one type of purposive sampling	285
Quota sampling: a second type of purposive sampling	286
Sampling in cross-cultural research	287
Issues of precision and confidence in determining sample size	287
Precision	287
Confidence	288
Sample data, precision, and confidence in estimation	289
Trade-off between confidence and precision	290
Sample data and hypothesis testing	291
Determining the sample size	293
Importance of sampling design and sample size	296
Efficiency in sampling	297
Sampling as related to qualitative studies	297
Managerial implications	298
Summary	298
Discussion questions	299
Chapter 11 Quantitative data analysis	303
Getting the data ready for analysis	306
Coding and data entry	306
Editing data	308
Data transformation	310
Getting a feel for the data	311
Frequencies	313
Measures of central tendency and dispersion	316
Relationships between variables	319
Excelsior Enterprises – descriptive statistics part 1	322
Testing goodness of data	324
Reliability	324
Validity	327
Excelsior Enterprises – descriptive statistics part 2	327
Summary	331
Discussion questions	331

Chapter 12 Quantitative data analysis: hypothesis testing	335
Introduction	336
Type I errors, type II errors, and statistical power	336
Choosing the appropriate statistical technique	337
Testing a hypothesis about a single mean	339
Testing hypotheses about two related means	340
Testing hypotheses about two unrelated means	345
Testing hypotheses about several means	346
Regression analysis	348
Standardized regression coefficients	351
Regression with dummy variables	351
Multicollinearity	352
Testing moderation using regression analysis: interaction effects	354
Other multivariate tests and analyses	355
Discriminant analysis	356
Logistic regression	356
Conjoint analysis	357
Two-way ANOVA	358
MANOVA	358
Canonical correlation	359
Excelsior Enterprises – hypothesis testing	359
Overall interpretation and recommendations to the president	361
Data warehousing, data mining, and operations research	363
Some software packages useful for data analysis	364
Summary	365
Discussion questions	365
 Chapter 13 Qualitative data analysis	 369
Introduction	369
Data reduction	372
Data display	382
Drawing conclusions	382
Reliability and validity in qualitative research	384
Some other methods of gathering and analyzing qualitative data	385

Content analysis	385
Narrative analysis	386
Summary	386
Discussion questions	387
Chapter 14 The research report	389
The report	390
The written report	390
The purpose of the written report	391
The audience for the written report	394
Characteristics of a well-written report	395
Contents of the research report	396
Integral parts of the report	397
Oral presentation	402
Deciding on the content	403
Visual aids	403
The presenter	404
The presentation	404
Handling questions	404
Summary	405
Discussion questions	405
Appendix	407
Report 1: Sample of a report involving a descriptive study	407
Report 2: Sample of a report where an idea has to be “sold”	412
Report 3: Sample of a report offering alternative solutions and explaining the pros and cons of each alternative	415
Report 4: Example of an abridged basic research report	418
A final note to students	423
Statistical tables	425
Glossary	435
Bibliography	449
Index	457