Contents

List of illustrations vii
List of examples viii
List of abbreviations x
Acknowledgements xiii
Introduction xv

PART I
Longitudinal research 1

1 What is longitudinal research? 3
The development of longitudinal research: an historical overview 11

2 Longitudinal data: characteristics and analytic advantages 24
Repeated cross-sectional surveys 27
Panel design 30
Event oriented design (event history data) 42
'Qualitative' longitudinal sources 47

3 The issues of data collection and comparability within longitudinal research: some examples 55
Prospective studies – an example of good practices: the British Household Panel Study (BHPS) 55
Retrospective studies – how to develop a life-course study 'quantitatively': the German Life History Study (GLHS) 59
The issue of comparability within longitudinal research 62

4 Some problems connected with longitudinal research 70
The limitations of repeated cross-sectional design 70
Problems connected with panel design 71
Retrospective design and its drawbacks 96
Costs and timing of longitudinal research 100

PART II
Longitudinal analysis 105

5 An overview of the major techniques needed to perform longitudinal analysis 107
Time series analysis for repeated cross-sectional data 107
Structural equation models 110
Log-linear analysis and Markov models of categorical longitudinal data 113
Multilevel analysis 120
Event history analysis 123
Sequence analysis 128

Conclusions 135

Appendix 1: List of longitudinal studies mentioned in the book 138
Appendix 2: Longitudinal datasets available in Europe, Russia and North America 145
Bibliography 184
Index 201

Illustrations

Figures

4.1	The GSOEP data structure: cross-sectional data	80
4.2	The GSOEP data structure: longitudinal data	84

Tables

1.1	Longitudinal studies in Europe and North America	20
2.1	Life history calendar in the BHPS	48
2.2	Activity calendar in the GSOEP	49
4.1	Attrition rates in ECHP	72
4.2	Sampling plan of the GSOEP	79
4.3	Principles for naming survey variables in GSOEP	87
4.4	Temporary and permanent attrition in Dutch SEP	88
5.1	Examples of event histories	124
A2.1	NLS survey plan	147
A2.2	Core topics in the PSID	149
A2.3	Major PSID supplemental topics	149
A2.4	BCS70 survey plan	152
A2.5	GSOEP dataset: starting sample size in Wave 1	155
A2.6	Special topical modules, GSOEP dataset	156
A2.7	Effective HUS sample size	158
A2.8	Number of cases in the OSA Labour Supply Panel	165
A2.9	Wave-on-wave response rates in LII	167
A2.10	Number of interviewed households and individual respondents by country in BHPS	170
A2.11	The sample design of the Survey of Labour and Income Dynamics (SLID)	173
A2.12	Sample size and changes in the achieved sample size in ECHP	175
A2.13	Available countries in the PACO Data Archive	180
A2.14	Available countries and years in the PACO Database	181

Examples

1.1	Examples of repeated cross-sectional studies with a small panel section	7
1.2	Household Panel Studies	8
1.3	Examples of cohort studies	9
1.4	The Berkeley Guidance Study and the Oakland Growth Study	12
1.5	The PSID	15
1.6	The NLS and the BCS70	16
2.1	Examples of repeated cross-sectional surveys	29
2.2	The Survey of Labour and Income Dynamics, the Survey of Income and Program Participation, the Labour Force Survey and the Household Budget Continuous Survey	32
2.3	Age, period and cohort effects	36
2.4	Examples of linked panels	39
2.5	Examples of retrospective questions	43
2.6	WES	45
3.1	The BHPS questionnaire package	56
3.2	The CATI technique	61
3.3	The ECHP survey	64
3.4	Variables in the PACO file	65
3.5	Generated variables in the GSOEP	66
4.1	Linking operations between HPS data files	76
4.2	Special Supplemental Files in PSID	82
4.3	Tracking and tracing techniques	91
4.4	The CentERpanel	93
4.5	Types of missing data	95
4.6	Memory errors	97
5.1	Factor analysis and variance	110
5.2	Path analysis and multiple regression analysis	111

5.3	Levels of measurement of variables	113
5.4	OLS and MLE	115
5.5	Logistic regression, logit analysis and probit analysis	116
5.6	Markov models	119
5.7	EHA models	124
5.8	The Kaplan-Meier method and the life-table method	125
5.9	The properties of sequences	130
5.10	Approaches to reduce the number of careers in sequence analysis	131