## Contents

List offigures page ..... ix
Preface ..... xi
Acknowledgements ..... xiv
Introduction ..... 1
Part I Business cycles
Introduction to business cycles ..... 15
1 Sunspot and Venus theories of the business cycle ..... 18
1.1 Jevons' sunspot theory ..... 18
1.2 Moore's Venus theory ..... 26
1.3 The decline of periodic cycle analysis ..... 34
2 Measuring and representing business cycles ..... 40
2.1 Juglar's credit cycle ..... 41
2.2 The statistical approach of W. C. Mitchell ..... 44
2.3 Persons and business barometers ..... 56
2.4 The business cycle research institutes ..... 64
2.5 Statistical economics and econometrics ..... 68
Addendum: graphs and graphic methods ..... 70
3 Random shocks enter the business cycle scene ..... 73
3.1 The experiments of Yule and Slutsky ..... 74
3.2 Frisch's time-series analysis ..... 83
3.3 Frisch's rocking horse model of the business cycle ..... 90
4 Tinbergen and macrodynamic models ..... 101
4.1 The Dutch model ..... 102
4.2 The first League of Nations' report ..... 108
4.3 The second League of Nations' report ..... 114
4.4 The critical reaction to Tinbergen's work ..... 121
Part II Demand analysis
Introduction to demand analysis ..... 133
5 Narrowing the data-theory gap in demand analysis ..... 136
5.1 Difficulties in early statistical measurements of demand ..... 136
5.2 Static theory and time-series data ..... 142
5.3 Econometric models of demand ..... 152
5.4 The data-theory gap under review ..... 159
6 The evolution of identification questions ..... 162
6.1 The emergence of correspondence problems ..... 163
6.2 Identifying the demand curve ..... 169
6.3 The identification of two relationships ..... 176
6.4 Back to the single demand curve ..... 187
Part III Formal models in econometrics
Introduction to formal models ..... 193
7 Errors-in-variables and errors-in-equations models ..... 194
7.1 Errors and the single equation ..... 195
7.2 Errors and interdependent relationships ..... 204
7.3 Postscript: measurement errors and the method of instrumental variables ..... 220
8 Haavelmo's probability model ..... 229
8.1 Statistics without probability ..... 230
8.2 Signs of change ..... 238
8.3 Haavelmo's probabilistic revolution in econometrics ..... 242
8.4 The new consensus ..... 251
Conclusion ..... 259
References ..... 265
Index ..... 281

