

NA M 611

Z866 - 687 9

Marco Lehmann-Waffenschmidt

Economic Evolution and Equilibrium

Bridging the Gap

With 75 Figures

 Springer

Contents

1	General Introduction	1
2	Notations and Mathematical Preliminaries	13
<hr/>		
Part I Conceptualization and Definition of Evolutions of Economies in Four General Equilibrium Frameworks		
<hr/>		
3	Introduction to Part I	27
4	Evolutions in the Traditional Walrasian Exchange Equilibrium Framework	29
4.1	Evolutions Based on the Model of an Exchange Economy by Arrow and Hahn	30
4.2	Evolutions Based on Dierker's Version of the Model of an Exchange Economy	34
4.3	Evolutions Based on a Model of a Large Exchange Economy ..	37
5	Evolutions in an Exchange Equilibrium Framework Without Walras' Law and Homogeneity	41
5.1	Evolutions Based on a Model of an Exchange Economy Without Walras' Law and Homogeneity	42
5.2	Evolutions Based on a Model With Weakened Boundary Assumptions	54
6	Evolutions in a General Equilibrium Framework With Production, Taxes, and Subsidies	61
6.1	Evolutions Based on a General Equilibrium Model With Production and Taxes	62
6.2	Evolutions Based on a General Equilibrium Model With Production, Taxes, and Subsidies	68

7	Evolutions in the Temporary Fixprice Equilibrium Framework	71
7.1	Evolutions Based on a Quantity Constrained Micromodel With Effective Demand à la Benassy	72
7.2	Evolutions Based on a Quantity Constrained Multi-Sectoral Model.....	77
8	Conclusions	87

Part II Formal Analysis

9	Introduction to Part II	91
10	Near-Equilibrium Paths	95
10.1	Existence of Joining Equilibrium Components and of Near-Equilibrium Paths for Each Type of Evolution From Part I.....	96
10.2	A Criterion for Identifying Points on Joining Equilibrium Components	103
11	Equilibrium Paths	105
11.1	Approximating Evolutions of Exchange Economies With Nice Equilibrium Paths Based on Dierker's Model from Section 4.2 .	106
11.1.1	Polynomial Approximating Exchange Evolutions	107
11.1.2	Piecewise Linear Approximating Exchange Evolutions..	115
11.2	Approximating Evolutions With Equilibrium Paths for the Other Basic Models From Part I	120
11.3	A Strong Connectedness Result for the Graphs of the Equilibrium Correspondences of the Basic Models From Part I	126
12	Economic Refinements of the Notion of an Evolution of Economies	141
12.1	Course Evolutions and Connection Evolutions.....	142
12.2	New and Old Commodities	149
13	The Structure of the Equilibrium Price Set of an Evolution of Exchange Economies	155
14	Comparison With Related Results in the Literature	161
14.1	Studies of the Graph of the Walras Correspondence	161
14.2	The Regular Approach	164
15	Conclusions	175

Part III Economic Analysis

16 Introduction to Part III 179

17 Applications of the Analytical Results From Part II in the Economist's Laboratory 183

 17.1 Extending the Path-Following Method to the Computation of Equilibria of Non-Regular Economies 184

 17.2 Generalizing Comparative Statics to Economies With Multiple Equilibria 187

18 The Method of Kinetic Analysis of Evolving Economies in Historical Time 189

19 Evolving Economies in Historical Time 199

 19.1 Evolving Economies in Discrete Historical Time 203

 19.2 Alternative Models of Evolving Economies in Continuous Historical Time 204

 19.2.1 Flow Commodity Models of Piecewise Continuously Balanced Evolving Economies 204

 19.2.2 The Frequency Model of a Piecewise Continuously Balanced Evolving Economy 210

 19.3 Time Consuming Equilibrium Adjustment Processes 214

 19.4 Frictionless Tuning of Coordination Signals in Evolving Economies in Continuous Historical Time 217

 19.4.1 General Conceptualization 217

 19.4.2 Frictionless Tuning in the Quantity Constrained Multi-Sectoral Model From Chapter 4 221

 19.4.3 Frictionless Tuning in the General Equilibrium Framework With Production, Taxes, and Subsidies From Chapter 3 222

20 Conclusions 223

Part IV General Conclusions and Outlook

21 General Conclusions and Outlook 227

Appendix A 231

Appendix B 241

Appendix C 259

VIII Contents

References 263

Subject Index 271