Understanding Economic Change

Although the economy has always been changing, ever more innovations now seem to accelerate the transformation process. Are there any laws governing the incessant global change? Does it accord with our intentions and desires and make us happier? Do our institutions and our democracies cope with the challenges? How does economic theory explain what is going on? In this volume, experts in the field discuss the advances that evolutionary economics has made in exploring questions like these. The broad range of topics include a review of the development of the field: its conceptual and methodological characteristics are outlined; problems posed by macroeconomic evolution and the institutional challenges are highlighted; and, last but not least, the implications of the evolution of the economy for wellbeing and sustainability are addressed. Taken together, the contributions demonstrate the potential of an evolutionary paradigm for making sense of economic change and for assessing its consequences.

Ulrich Witt is Past Director of the Evolutionary Economics Group at the Max Planck Institute of Economics in Jena, Germany. He has published a vast number of articles and books on evolutionary economics and is Editor-in-chief of the Journal of Bioeconomics.

Andreas Chai is an applied economist and Head of Economics and Business Statistics Discipline at the Griffith Business School, Griffith University, Australia. Andreas has published in various economic journals, including the Journal of Economic Perspectives and the Cambridge Journal of Economics.
Understanding Economic Change

Advances in Evolutionary Economics

Edited by

ULRICH WITT
Max Planck Institute and Griffith University

ANDREAS CHAI
Griffith University
Contents

List of Figures

List of Tables

List of Contributors

Part I  Introduction

1 Evolutionary Economics: Taking Stock of Its Progress and Emerging Challenges
ULRICH WITT AND ANDREAS CHAI

Part II  Conceptual and Methodological Problems

2 Missed Connections and Opportunities Forgone: A Counterfactual History of Twentieth-Century Economics
BRIAN J. LOASBY

3 Science, Technology, and Knowledge: What Economic Historians Can Learn from an Evolutionary Approach
JOEL MOKYR

4 Generalized Darwinism in Evolutionary Economics: The Devil Is in the Detail
JACK VROMEN

Part III  Perspectives on Evolutionary Macroeconomics

5 Macroeconomic Evolution: Long-Run Development and Short-Run Policy
RICHARD H. DAY

6 Evolutionary Micro-Founded Technical Change and the Kaldor-Verdoorn Law: Estimates from an Artificial World
ANDRÉ LORENTZ
Part IV  Advances in Explaining and Assessing Institutional Evolution  213

7  Democracy, Rationality and Religion  
   DENNIS C. MUeller  215

8  On the Evolution of Organisational Governance: Divided Governance and Survival in the Long Run  
   ROGER D. CONGLETON  258

9  Strategic Interaction and Externalities: FD-Games and Pollution  
   REINOUD JOOSTEN  288

10  Fairness in Urban Land Use: An Evolutionary Contribution to Law and Economics  
   CHRISTIAN SCHUBERT  309

Part V  Evolutionary Perspectives on Welfare and Sustainability  341

11  As Innovations Drive Economic Change, Do They Also Improve Our Welfare?  
   MARTIN BINDER AND ULRICH WITT  343

12  Sustainable Consumption Patterns and the Malleability of Consumer Preferences: An Evolutionary Perspective  
   ANDREAS CHAI  369

Index  393
Figures

4.1 Adjacent levels of abstraction in Hodgson and Knudsen’s Generalized Darwinism  
4.2 What sort of evolutionary theory is general and abstract enough to fit both the biological and the cultural domain?  
6.1 Labour productivity and capital/labour ratio over 500 simulation steps (benchmark setting)  
6.2 Labour productivity growth rate: $\tau$ vs. $\sigma$  
6.3 Labour productivity growth rate: $\chi$ vs. $\phi$  
6.4 Estimates and statistics for the Verdoorn coefficient: $\tau$ vs. $\sigma$  
6.5 Estimates and statistics for the Verdoorn coefficient: $\phi$ vs. $\chi$  
9.1 Stage payoffs for the Bathroom Game with $\xi = 7$  
9.2 The sets of jointly convergent pure-strategy rewards for various values of $\xi$  
9.3 The set of jointly convergent pure-strategy rewards and its convex hull for $\xi = 7$  
9.4 All rewards in $E'$ are equilibrium rewards
Tables

6.1 Parameter settings (initial conditions and benchmark setting) page 192
6.2 Labour productivity, capital–output ratio and Herfindahl index correlations to output and capital intensity (LAD) 195
6.3 Labour productivity, capital–output ratio, Herfindahl index dynamic correlations (VAR estimates) 197
6.4 Parameter settings (default values in bold) 200
6.5 Kaldor-Verdoorn Law estimates (OLS) 204
6.6 Main simulation results 208
8.1 The shirking dilemma 261
8.2 Mutual gains from sharing authority 276
8.3 Asymmetric conflict 278
Contributors

Martin Binder
Bard College, Berlin, Germany

Andreas Chai
Griffith Business School, Griffith University, Australia

Roger D. Congleton
College of Business and Economics, University of West Virginia, USA

Richard H. Day
Economics Department, University of Southern California, Los Angeles, USA

Reinoud Joosten
Department of Industrial Engineering & Business Information Systems, School of Behavioural, Management and Social Sciences, Twente University, The Netherlands

Brian J. Loasby
Economics Department, Stirling University, Scotland

André Lorentz
Bureau d’Economie Théorique et Appliquée & Economics Department, Université de Strasbourg, Université de Lorraine, CNRS, BETA, Strasbourg, France

Joel Mokyr
Economics Department, Northwestern University, Evanston, USA

Dennis C. Mueller
Economics Department, University of Vienna, Austria

Christian Schubert
Economics Department, German University of Cairo, Egypt
List of Contributors

Jack Vromen
Erasmus School of Philosophy and Erasmus School of Economics,
Erasmus University, Rotterdam, The Netherlands

Ulrich Witt
Max Planck Institute for the Science of Human History, Jena,
Germany & Department of Accounting, Finance and Economics,
Griffith University, Australia