
Contents

<i>Contributors</i>	xii
<i>Acknowledgements</i>	xviii
Introduction	1
<i>H. Hanusch and A. Pyka</i>	
PART 1 FROM SCHUMPETER'S UNIVERSAL SOCIAL SCIENCES TO NEO-SCHUMPETERIAN THINKING	
1 Schumpeter, Joseph Alois (1883–1950)	19
<i>H. Hanusch and A. Pyka</i>	
2 Schumpeter's views on methodology: their source and their evolution	27
<i>M. Perlman</i>	
3 Schumpeterian universal social science	55
<i>Y. Shionoya</i>	
4 The pillars of Schumpeter's economics: micro, meso, macro	65
<i>K. Dopfer</i>	
5 Reflections on Schumpeter's 'lost' seventh chapter to the <i>Theory of Economic Development</i>	78
<i>J.A. Mathews</i>	
6 'Schumpeterian capitalism' in capitalist development: toward a synthesis of capitalist development and the 'economy as a whole'	97
<i>Z.J. Acs</i>	
7 The neo-Schumpeterian element in the sociological analysis of innovation	107
<i>M. Weber</i>	
8 A Schumpeterian renaissance?	130
<i>C. Freeman</i>	

**PART 2 NEO-SCHUMPETERIAN MESO DYNAMICS:
THEORY**

2.1 Essentials of Innovation Processes

2.1.1 Entrepreneurship, Firms and Networks

- | | | |
|----|--|-----|
| 9 | Neo-Schumpeterian perspectives in entrepreneurship research
<i>T. Grebel</i> | 147 |
| 10 | From a routine-based to a knowledge-based view: towards an
evolutionary theory of the firm
<i>F. Rahmeyer</i> | 159 |
| 11 | Managing the process of new venture creation: an integrative
perspective
<i>M. Gruber</i> | 182 |
| 12 | Technological collaboration
<i>M. Dodgson</i> | 193 |
| 13 | Strategic and organizational understanding of inter-firm
partnerships and networks
<i>N. Roijakkers and J. Hagedoorn</i> | 201 |
| 14 | The models of the managed and entrepreneurial economies
<i>D. Audretsch and A.R. Thurik</i> | 211 |

2.1.2 Knowledge and Competencies

- | | | |
|----|--|-----|
| 15 | Tacit and codified knowledge
<i>D. Foray</i> | 235 |
| 16 | Localized technological change
<i>C. Antonelli</i> | 248 |
| 17 | Competencies, capabilities and the neo-Schumpeterian
tradition
<i>M. Augier and D.J. Teece</i> | 267 |
| 18 | Firm organization
<i>B.J. Loasby</i> | 287 |
| 19 | The role of knowledge in the Schumpeterian economy
<i>E. Helmstädter</i> | 296 |

- 20 Selection, learning and Schumpeterian dynamics: a conceptual debate 316
U. Witt and C. Cordes

2.1.3 Innovation Processes and Patterns

- 21 Technological paradigms and trajectories 331
G. Dosi and M. Sylos Labini
- 22 Schumpeterian patterns of innovation and technological regimes 344
F. Malerba
- 23 Innovation networks 360
A. Pyka
- 24 Technological diffusion: aspects of self-propagation as a neo-Schumpeterian characteristic 377
P. Stoneman

2.2 Modelling Industry Dynamics

- 25 Schumpeterian modelling 389
W. Kwasnicki
- 26 Neo-Schumpeterian simulation models 405
P. Windrum
- 27 Replicator dynamics 440
J.S. Metcalfe
- 28 'History-friendly' models of industrial evolution 453
L. Orsenigo
- 29 Agent-based modelling: a methodology for neo-Schumpeterian economics 467
A. Pyka and G. Fagiolo

PART 3 NEO-SCHUMPETERIAN MESO DYNAMICS: EMPIRICS

3.1 Measuring Industry Dynamics

- 30 Empirical tools for the analysis of technological heterogeneity and change: some basic building blocks of 'evolometrics' 493
U. Cantner and J.J. Krüger

31	Typology of science and technology indicators <i>H. Grupp</i>	503
32	Sectoral taxonomies: identifying competitive regimes by statistical cluster analysis <i>M. Peneder</i>	525
33	Entropy statistics and information theory <i>K. Frenken</i>	544
34	A methodology to identify local industrial clusters and its application to Germany <i>T. Brenner</i>	556
35	Technology spillovers and their impact on productivity <i>B. Los and B. Verspagen</i>	574

3.2 Case and Industry Studies

36	The Japanese system from the neo-Schumpeterian perspective <i>K. Imai</i>	597
37	Biotechnology industries <i>M. McKelvey</i>	607
38	Telecommunications, the Internet and Mr Schumpeter <i>J. Krafft</i>	621
39	Innovation in services <i>P. Windrum</i>	633
40	Flexible labour markets and labour productivity growth: is there a trade-off? <i>A. Kleinknecht and C.W.M. Naastepad</i>	647

PART 4 NEO-SCHUMPETERIAN MACRO DYNAMICS: GROWTH AND DEVELOPMENT

4.1 Growth

41	Schumpeter and the micro-foundations of endogenous growth <i>F.M. Scherer</i>	671
42	New directions in Schumpeterian growth theory <i>E. Dinopoulos and F. Şener</i>	688

43	The dynamics of technology, growth and trade: a Schumpeterian perspective <i>J. Fagerberg</i>	705
44	Innovation and employment <i>M. Vivarelli</i>	719
45	Macro-econometrics <i>J. Foster</i>	733
4.2 Development		
46	The mechanisms of economic evolution: completing Schumpeter's theory <i>R.H. Day</i>	745
47	Innovation and demand <i>E.S. Andersen</i>	754
48	Long waves, the pulsation of modern capitalism <i>F. Louçã</i>	766
49	Finance and technical change: a long-term view <i>C. Perez</i>	775
50	Long waves: conceptual, empirical and modelling issues <i>G. Silverberg</i>	800
51	Qualitative change and economic development <i>P.P. Saviotti</i>	820
52	Understanding economic growth as the central task of economic analysis <i>R.R. Nelson</i>	840
PART 5 NEO-SCHUMPETERIAN ECONOMICS AND THE SYSTEMIC VIEW		
53	Innovation systems: a survey of the literature from a Schumpeterian perspective <i>B. Carlsson</i>	857
54	National innovation systems: from List to Freeman <i>B.-Å. Lundvall</i>	872
55	Catching a glimpse of national systems of innovation: the input-output approach <i>H. Schnabl</i>	882

- 56 Schumpeter and varieties of innovation: lessons from the
rise of regional innovation systems research 896
P. Cooke and N. Schall
- 57 Fundamentals of the concept of national innovation systems 926
M. Balzat and H. Hanusch

PART 6 RESEARCH AND TECHNOLOGY POLICY

- 58 Policy for innovation 943
J.S. Metcalfe
- 59 Growth policy 967
H. Siebert
- 60 Time strategies in innovation policy 978
G. Erdmann, J. Nill, C. Sartorius and S. Zundel
- 61 Macroeconomic policy 990
H. Hanappi

PART 7 THE IMPACT OF NEO-SCHUMPETERIAN THINKING ON DIFFERENT FIELDS

- 62 Schumpeter's influence on game theory 1003
J. Lesourne
- 63 Transaction costs, innovation and learning 1010
B. Nooteboom
- 64 Austrian economics and innovation 1045
J.-L. Gaffard
- 65 On Austrian-Schumpeterian economics and the Swedish
growth school 1055
G. Eliasson
- 66 Experimental economics 1077
S. Berninghaus and W. Güth
- 67 Complexity and the economy 1102
W.B. Arthur
- 68 Self-organization in economic systems 1111
P.M. Allen

69	Regional economics and economic geography from a neo-Schumpeterian perspective <i>C. Werker</i>	1149
70	A roadmap to comprehensive neo-Schumpeterian economics <i>H. Hanusch and A. Pyka</i>	1160
	<i>Index</i>	1171