

Contents

| | |
|---------------------|-------|
| <i>Contributors</i> | ix |
| <i>Preface</i> | xxiii |

PART 1: THE NATURE, SOURCES AND OUTCOMES OF INDUSTRIAL INNOVATION

| | |
|--|-----|
| 1. Clusters, Chains and Complexes: Three Approaches to Innovation with a Public Policy Perspective | 3 |
| Jane Marceau | |
| 2. Technological Systems and Economic Performance | 13 |
| Bo Carlsson | |
| 3. The Creative Milieu: A Regional Perspective on Innovation | 25 |
| Philip Cooke and Kevin Morgan | |
| 4. Industrial Innovation: Success, Strategy, Trends | 33 |
| Roy Rothwell | |
| 5. Basic Research and Industrial Innovation | 54 |
| W. Edward Steinmueller | |
| 6. The Japanese Innovation System: How Does it Work? | 67 |
| Martin Fransman | |
| 7. Innovation and Growth | 78 |
| Chris Freeman | |
| 8. Innovation in East Asia: Diversity and Development | 94 |
| Mike Hobday | |
| 9. Diffusion of Innovation Ancient and Modern: A Review of the Main Themes | 106 |
| F. Lissoni and J. S. Metcalfe | |

PART 2: SECTORAL AND INDUSTRIAL STUDIES OF INNOVATION

| | |
|--|-----|
| 10. Innovation and Consumer Electronics | 145 |
| Alan Cawson | |
| 11. Innovation in Semiconductor Technology: The Limits of the Silicon Valley Network Model | 154 |
| Mike Hobday | |
| 12. Innovation in the Chemicals Industry | 169 |
| Margaret Sharp | |

| | |
|--|-----|
| 13. Innovation in Energy Supply: The Case of Electricity Gordon MacKerron | 182 |
| 14. Military Technology William Walker | 191 |
| 15. Innovation in the Construction Sector David M. Gann | 202 |
| 16. Innovation in a Globalizing Industry: The Case of Automobiles Andrew Graves | 213 |
| 17. Innovation in Telecommunication: Bridging the Supplier-User Interface Robin Mansell | 232 |
| 18. Innovation in Services Ian Miles | 243 |
| PART 3: KEY ISSUES AFFECTING INNOVATION | |
| 19. Financial Systems and Innovation Andrew Tylecote | 259 |
| 20. Supplier Relationships and Innovation Mari Sako | 268 |
| 21. User/Supplier Links and Innovation Brian Shaw | 275 |
| 22. Technological Collaboration and Innovation Mark Dodgson | 285 |
| 23. Marketing and Innovation Dale Littler | 293 |
| 24. Innovation and Intellectual Property Don Lamberton | 301 |
| 25. Innovation and Size of Firm Roy Rothwell and Mark Dodgson | 310 |
| 26. Innovation and Organization Gerard Fairtlough | 325 |
| 27. Innovation and Industrial Relations Roderick Martin | 337 |
| 28. Innovation and Training Malcolm Warner | 348 |
| PART 4: THE STRATEGIC MANAGEMENT OF INNOVATION | |
| 29. Key Characteristics of Large Innovating Firms Keith Pavitt | 357 |
| 30. Managing Innovation in Multi-Technology Corporations Ove Granstrand and Sören Sjölander | 367 |

| | |
|--|-----|
| 31. Technology and Business Strategy Rod Coombs | 384 |
| 32. Innovation and Manufacturing Strategy John Bessant | 393 |
| 33. Implementation of Manufacturing Innovations C. A. Voss | 405 |
| PART 5: FUTURE CHALLENGES OF INNOVATION IN A GLOBAL PERSPECTIVE | |
| 34. Environmental Issues and Innovation Jim Skea | 421 |
| 35. The Global Innovatory Challenge Across the Twenty-First Century Thomas G. Whiston | 432 |
| <i>Index</i> | 443 |

