

Contents

Acknowledgements

ix

Introduction

xi

PART I TECHNICAL CHANGE AND ECONOMIC GROWTH

- | | | |
|----|---|----|
| 1. | Robert M. Solow (1957), 'Technical Change and the Aggregate Production Function', <i>Review of Economics and Statistics</i> , XXXIX , August, 312–20 | 3 |
| 2. | Paul M. Romer (1990), 'Endogenous Technological Change', <i>Journal of Political Economy</i> , 98 (5), October, S71–S102 | 12 |
| 3. | Gene M. Grossman and Elhanan Helpman (1990), 'Comparative Advantage and Long-Run Growth', <i>American Economic Review</i> , 80 (4), September, 796–815 | 44 |

PART II SOCIAL AND PRIVATE RETURNS FROM RESEARCH AND DEVELOPMENT

- | | | |
|----|--|-----|
| 4. | Zvi Griliches (1958), 'Research Costs and Social Returns: Hybrid Corn and Related Innovations', <i>Journal of Political Economy</i> , LXVI , October, 419–31 | 67 |
| 5. | Edwin Mansfield, John Rapoport, Anthony Romeo, Samuel Wagner and George Beardsley (1977), 'Social and Private Rates of Return from Industrial Innovations', <i>Quarterly Journal of Economics</i> , XCI , May, 221–40 | 80 |
| 6. | Jeffrey I. Bernstein and M. Ishaq Nadiri (1988), 'Interindustry R&D Spillovers, Rates of Return, and Production in High-Tech Industries', <i>American Economic Review</i> , 78 (2), May, 429–34 | 100 |
| 7. | Richard R. Nelson (1959), 'The Simple Economics of Basic Scientific Research', <i>Journal of Political Economy</i> , LXVII , June, 297–306 | 106 |
| 8. | Zvi Griliches (1986), 'Productivity, R&D, and Basic Research at the Firm Level in the 1970s', <i>American Economic Review</i> , 76 (1), March, 141–54 | 116 |

PART III MARKET STRUCTURE AND TECHNICAL CHANGE

- | | | |
|-----|--|-----|
| 9. | Partha Dasgupta and Joseph Stiglitz (1980), 'Industrial Structure and the Nature of Innovative Activity', <i>Economic Journal</i> , 90 , June, 266–93 | 133 |
| 10. | P.A. Geroski (1990), 'Innovation, Technological Opportunity, and Market Structure', <i>Oxford Economic Papers</i> , New Series, 42 , July, 586–602 | 161 |

11. F.M. Scherer (1992), 'Schumpeter and Plausible Capitalism', *Journal of Economic Literature*, XXX (3), September, 1416–33 178

PART IV INTELLECTUAL PROPERTY RIGHTS

12. Suzanne Scotchmer (1991), 'Standing on the Shoulders of Giants: Cumulative Research and the Patent Law', *Journal of Economic Perspectives*, 5 (1), Winter, 29–41 199
13. Janusz A. Ordover (1991), 'A Patent System for Both Diffusion and Exclusion', *Journal of Economic Perspectives*, 5 (1), Winter, 43–60 212
14. Edwin Mansfield, Mark Schwartz and Samuel Wagner (1981), 'Imitation Costs and Patents: An Empirical Study', *Economic Journal*, 91, December, 907–18 230
15. Richard C. Levin, Alvin K. Klevorick, Richard R. Nelson and Sidney G. Winter (1987), 'Appropriating the Returns from Industrial Research and Development', *Brookings Papers on Economic Activity*, 3 (Special Issue), 783–831 242

PART V THE DIFFUSION OF INNOVATIONS

16. Edwin Mansfield (1961), 'Technical Change and the Rate of Imitation', *Econometrica*, 29 (4), October, 741–66 293
17. Paul A. David (1985), 'Clio and the Economics of QWERTY', *American Economic Review*, 75 (2), May, 332–7 319
18. Michael L. Katz and Carl Shapiro (1986), 'Technology Adoption in the Presence of Network Externalities', *Journal of Political Economy*, 94 (4), August, 822–41 325
19. Jennifer F. Reinganum (1981), 'On the Diffusion of New Technology: A Game-Theoretic Approach', *Review of Economic Studies*, XLVIII, July, 395–405 345

PART VI INTERNATIONAL TECHNOLOGY TRANSFER

20. Raymond Vernon (1966), 'International Investment and International Trade in the Product Cycle', *Quarterly Journal of Economics*, LXXX, May, 190–207 359
21. Nathan Rosenberg (1970), 'Economic Development and the Transfer of Technology: Some Historical Perspectives', *Technology and Culture*, 11 (4), October, 550–75 377
22. D.J. Teece (1977), 'Technology Transfer by Multinational Firms: The Resource Cost of Transferring Technological Know-How', *Economic Journal*, 87, June, 242–61 403

PART VII THE MANAGEMENT OF TECHNOLOGY

23. Kenneth J. Arrow (1962), 'The Economic Implications of Learning by Doing', *Review of Economic Studies*, XXIX, June, 155–73 425

24. Richard R. Nelson (1961), 'Uncertainty, Learning, and the Economics of Parallel Research and Development Efforts', *Review of Economics and Statistics*, XLIII, November, 351-64 444
25. Wesley M. Cohen and Daniel A. Levinthal (1989), 'Innovation and Learning: The Two Faces of R&D', *Economic Journal*, 99, September, 569-96 458

Name Index 487