

The Economics of Innovation Policy Volume I

Foundations of Innovation Policy



Edited by

Albert N. Link

Professor of Economics

University of North Carolina at Greensboro, USA

THE INTERNATIONAL LIBRARY OF CRITICAL WRITINGS IN ECONOMICS

An Elgar Reference Collection

Cheltenham, UK • Northampton, MA, USA

Contents

<i>Acknowledgements</i>	vii
<i>Introduction</i> Albert N. Link	ix
PART I GOVERNMENT'S ROLE IN INNOVATION	
1. Paul M. Romer (1993), 'Implementing a National Technology Strategy with Self-Organizing Industry Investment Boards', <i>Brookings Papers on Economic Activity: Microeconomics</i> , 2 , 345–99	3
2. Partha Dasgupta and Paul A. David (1994), 'Toward a New Economics of Science', <i>Research Policy</i> , 23 , 487–521	58
3. Stephen Martin and John T. Scott (2000), 'The Nature of Innovation Market Failure and the Design of Public Support for Private Innovation', <i>Research Policy</i> , 29 , 437–47	93
4. Gregory Tassej (2005), 'Underinvestment in Public Good Technologies', <i>Journal of Technology Transfer</i> , 30 (1/2), 89–113	104
PART II THE PATENT SYSTEM	
5. Rebecca S. Eisenberg (1989), 'Patents and the Progress of Science: Exclusive Rights and Experimental Use', <i>University of Chicago Law Review</i> , 56 , 1017–86	131
6. Richard Gilbert and Carl Shapiro (1990), 'Optimal Patent Length and Breadth', <i>RAND Journal of Economics</i> , 21 (1), Spring, 106–12	201
7. Janusz A. Ordover (1991), 'A Patent System for Both Diffusion and Exclusion', <i>Journal of Economic Perspectives</i> , 5 (1), Winter, 43–60	208
8. Adam B. Jaffe (2000), 'The U.S. Patent System in Transition: Policy Innovation and the Innovation Process', <i>Research Policy</i> , 29 , 531–57	226
9. Wesley M. Cohen (2005), 'Patents and Appropriation: Concerns and Evidence', <i>Journal of Technology Transfer</i> , 30 (1/2), 57–71	253
PART III DIRECT FUNDING OF INNOVATION	
10. Gregory Tassej (1996), 'Choosing Government R&D Policies: Tax Incentives vs. Direct Funding', <i>Review of Industrial Organization</i> , 11 (5), 579–600	271
11. John T. Scott (1998), 'Financing and Leveraging Public/Private Partnerships: The Hurdle-Lowering Auction', <i>STI Review</i> , 23 , 67–84	293

-
- | | | |
|-----|--|-----|
| 12. | Josh Lerner (1999), 'The Government as Venture Capitalist: The Long-Run Impact of the SBIR Program', <i>Journal of Business</i> , 72 (3), 285–318 | 311 |
| 13. | Scott J. Wallsten (2000), 'The Effects of Government-Industry R&D Programs on Private R&D: The Case of the Small Business Innovation Research Program', <i>RAND Journal of Economics</i> , 31 (1), Spring, 82–100 | 345 |
| 14. | David Audretsch, Albert N. Link and John T. Scott (2002), 'Public/Private Technology Partnerships: Evaluating SBIR-Supported Research', <i>Research Policy</i> , 31 , 145–58 | 364 |

PART IV FISCAL POLICIES TO PROMOTE INNOVATION

- | | | |
|-----|--|-----|
| 15. | Barry Bozeman and Albert N. Link (1984), 'Tax Incentives for R&D: A Critical Evaluation', <i>Research Policy</i> , 13 , 21–31 | 381 |
| 16. | C.W. Swenson (1992), 'Some Tests of the Incentive Effects of the Research and Experimentation Tax Credit', <i>Journal of Public Economics</i> , 49 , 203–18 | 392 |
| 17. | Bronwyn H. Hall (1993), 'R&D Tax Policy during the 1980s: Success or Failure?', <i>Tax Policy and the Economy</i> , 7 , 1–35 | 408 |
| 18. | Rachel Griffith, Daniel Sandler and John Van Reenen (1995), 'Tax Incentives for R&D', <i>Fiscal Studies</i> , 16 (2), 21–44 | 443 |
| 19. | John T. Scott (1995), 'The Damoclean Tax and Innovation', <i>Journal of Evolutionary Economics</i> , 5 , 71–89 | 467 |

Name Index

487

The Economics of Innovation Policy Volume II

Innovation Policies and Social Impact



Edited by

Albert N. Link

Professor of Economics

University of North Carolina at Greensboro, USA

THE INTERNATIONAL LIBRARY OF CRITICAL WRITINGS IN ECONOMICS

An Elgar Reference Collection

Cheltenham, UK • Northampton, MA, USA

Contents

Acknowledgements

ix

An introduction to both volumes by the editor appears in Volume I

PART I PUBLIC RESEARCH AND DEVELOPMENT

1. Richard R. Nelson (1983), 'Government Support of Technical Progress: Lessons from History', *Journal of Policy Analysis and Management*, 2 (4), 499–514 3
2. David M. Levy and Nestor E. Terleckyj (1983), 'Effects of Government R&D on Private R&D Investment and Productivity: A Macroeconomic Analysis', *Bell Journal of Economics*, 14 (2), Autumn, 551–61 19
3. Frank R. Lichtenberg (1984), 'The Relationship Between Federal Contract R&D and Company R&D', *American Economic Review, Papers and Proceedings*, 74 (2), May, 73–8 30
4. Dennis Patrick Leyden and Albert N. Link (1991), 'Why are Governmental R&D and Private R&D Complements?', *Applied Economics*, 23, 1673–81 36
5. Maryann P. Feldman and Maryellen R. Kelley (2003), 'Leveraging Research and Development: Assessing the Impact of the U.S. Advanced Technology Program', *Small Business Economics*, 20 (2), March, 153–65 45

PART II RESEARCH COOPERATION TO PROMOTE INNOVATION

6. Eric von Hippel (1987), 'Cooperation between Rivals: Informal Know-How Trading', *Research Policy*, 16 (6), 291–302 61
7. Dennis Patrick Leyden and Albert N. Link (1999), 'Federal Laboratories as Research Partners', *International Journal of Industrial Organization*, 17, 575–92 73
8. Bruce S. Tether (2002), 'Who Co-operates for Innovation and Why: An Empirical Analysis', *Research Policy*, 31, 947–67 91
9. Donald S. Siegel (2003), 'Data Requirements for Assessing the Private and Social Returns to Strategic Research Partnerships: Analysis and Recommendations', *Technology Analysis and Strategic Management*, 15 (2), 207–25 112

PART III STANDARDS AS TECHNOLOGY INFRASTRUCTURE

10. Joseph Farrell and Garth Saloner (1986), 'Installed Base and Compatibility: Innovation, Product Preannouncements and Predation', *American Economic Review*, 76 (5), December, 940–55 133

-
- | | | |
|--|--|-----|
| 11. | Paul A. David and Shane Greenstein (1990), 'The Economics of Compatibility Standards: An Introduction to Recent Research', <i>Economics of Innovation and New Technology</i> , 1 , 3–41 | 149 |
| 12. | Karl Ulrich (1995), 'The Role of Product Architecture in the Manufacturing Firm', <i>Research Policy</i> , 24 , 419–40 | 188 |
| 13. | Gregory Tassej (2000), 'Standardization in Technology-Based Markets', <i>Research Policy</i> , 29 , 587–602 | 210 |
| PART IV UNIVERSITIES AND THE INNOVATION PROCESS | | |
| 14. | Adam B. Jaffe (1989), 'Real Effects of Academic Research', <i>American Economic Review</i> , 79 (5), December, 957–70 | 229 |
| 15. | David C. Mowery, Richard R. Nelson, Bhaven N. Sampat and Arvids A. Ziedonis (2001), 'The Growth of Patenting and Licensing by U.S. Universities: An Assessment of the Effects of the Bayh-Dole Act of 1980', <i>Research Policy</i> , 30 , 99–119 | 243 |
| 16. | Bronwyn H. Hall, Albert N. Link and John T. Scott (2001), 'Barriers Inhibiting Industry from Partnering with Universities: Evidence from the Advanced Technology Program', <i>Journal of Technology Transfer</i> , 26 (1/2), 87–98 | 264 |
| 17. | Josh Lerner (2005), 'The University and the Start-Up: Lessons from the Past Two Decades', <i>Journal of Technology Transfer</i> , 30 (1/2), 49–56 | 276 |
| PART V TECHNOLOGY TRANSFER POLICIES | | |
| 18. | Michael M. Crow (1988), 'Technology and Knowledge Transfer in Energy R&D Laboratories: An Analysis of Effectiveness', <i>Evaluation and Program Planning</i> , 11 , 85–95 | 287 |
| 19. | Barry Bozeman (1994), 'Evaluating Government Technology Transfer: Early Impacts of the "Cooperative Technology Paradigm"', <i>Policy Studies Journal</i> , 22 (2), 322–37 | 298 |
| 20. | David C. Mowery and Bhaven N. Sampat (2005), 'The Bayh-Dole Act of 1980 and University–Industry Technology Transfer: A Model for Other OECD Governments?', <i>Journal of Technology Transfer</i> , 30 (1/2), 115–27 | 314 |
| 21. | David J. Teece (2005), 'Technology and Technology Transfer: Mansfieldian Inspirations and Subsequent Developments', <i>Journal of Technology Transfer</i> , 30 (1/2), 17–33 | 327 |
| PART VI SOCIAL IMPACT OF INNOVATION POLICY | | |
| 22. | Zvi Griliches (1958), 'Research Costs and Social Returns: Hybrid Corn and Related Innovations', <i>Journal of Political Economy</i> , 66 (5), October, 419–31 | 347 |

23.	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> , 91 (2), May, 221–40	360
24.	Manuel Trajtenberg (1989), 'The Welfare Analysis of Product Innovations, with an Application to Computed Tomography Scanners', <i>Journal of Political Economy</i> , 97 (2), 444–79	380
25.	Albert N. Link and John T. Scott (2001), 'Public/Private Partnerships: Stimulating Competition in a Dynamic Market', <i>International Journal of Industrial Organization</i> , 19 , 763–94	416
	<i>Name Index</i>	449