
Contents

	<i>Acknowledgments</i>	xi
1.	Introduction Zvi Griliches	1
2.	Who Does R & D and Who Patents? John Bound, Clint Cummins, Zvi Griliches, Bronwyn H. Hall, and Adam Jaffe	21
3.	Patents and R & D at the Firm Level: A First Look Ariel Pakes and Zvi Griliches	55
4.	The Rate of Obsolescence of Patents, Research Gestation Lags, and the Private Rate of Return to Research Resources Ariel Pakes and Mark Schankerman	73
5.	International Invention: Implications for Technology Market Analysis Robert E. Evenson <i>Comment:</i> Frederic M. Scherer	89
6.	R & D and Innovation: Some Empirical Findings Edwin Mansfield <i>Comments:</i> Zvi Griliches George C. Eads <i>Reply:</i> Edwin Mansfield	127

7.	Long-Run Trends in Patenting John J. Beggs <i>Comment: Mark Schankerman</i>	155
8.	Tests of a Schumpeterian Model of R & D and Market Structure Richard C. Levin and Peter C. Reiss <i>Comment: Pankaj Tandon</i>	175
9.	An Exploration into the Determinants of Research Intensity Ariel Pakes and Mark Schankerman	209
10.	Firm versus Industry Variability in R & D Intensity John T. Scott <i>Comment: Albert N. Link</i>	233
11.	Market Value, R & D, and Patents Zvi Griliches	249
12.	Patents, R & D, and the Stock Market Rate of Return: A Summary of Some Empirical Results Ariel Pakes	253
13.	R & D and the Market Value of the Firm: A Note Andrew B. Abel	261
14.	An Extended Accelerator Model of R & D and Physical Investment Jacques Mairesse and Alan K. Siu <i>Comment: John J. Beggs</i>	271
15.	The R & D and Investment Decision and Its Relationship to the Firm's Market Value: Some Preliminary Results Uri Ben-Zion <i>Comment: Robert E. Evenson</i>	299
16.	Investment in R & D, Costs of Adjustment, and Expectations Mark Schankerman and M. Ishaq Nadiri	315

17.	Productivity and R & D at the Firm Level Zvi Griliches and Jacques Mairesse	339
18.	Productivity and R & D at the Firm Level in French Manufacturing Philippe Cuneo and Jacques Mairesse	375
19.	Productivity Growth and R & D at the Business Level: Results from the PIMS Data Base Kim B. Clark and Zvi Griliches	393
20.	Using Linked Patent and R & D Data to Measure Interindustry Technology Flows Frederic M. Scherer <i>Comment:</i> Edwin Mansfield	417
21.	R & D and Productivity Growth at the Industry Level: Is There Still a Relationship? Zvi Griliches and Frank Lichtenberg <i>Comment:</i> Nestor E. Terleckyj	465
	<i>List of Contributors</i>	503
	<i>Author Index</i>	505
	<i>Subject Index</i>	509