

Measuring the Returns to Innovation

Globelics Academy, Lisbon

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Professor Bronwyn H. Hall

Suggested Readings and Bibliography

1. Papers circulated

Crepon, Bruno, Emmanuel Duguet, and Jacques Mairesse. 1998. "Research, Innovation, and Productivity: An Econometric Analysis at the Firm Level," *Economics of Innovation and New Technology* 7(3): 115-56.

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Harhoff, Dietmar, Frederic M. Scherer and Katrin Vopel. 2003. "Citations, Family Size, Opposition, and the Value of Patent Rights," *Research Policy* 32 (8): 1343-1364.

2. Estimating the returns to R&D using production functions

Bernstein, Jeffrey I. and Nadiri, M. Ishaq. 1989. "Research and Development and Intra-Industry Spillovers: An Empirical Application of Dynamic Duality," *Review of Economic Studies* 56: 249-69.

Bond, Stephen, Dietmar Harhoff, and John Van Reenen. 2002. "Corporate R&D and Productivity in Germany and the United Kingdom," Institute for Fiscal Studies, London, and Ludwig-Maximilians-Universitaet, Muenchen.

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Guellec, Dominique and van Pottelsberge de la Potterie, Bruno. 2001. "R&D and Productivity Growth: Panel Data Analysis of 16 Oecd Countries," Paris: OECD.

Hall, Bronwyn H. and Jacques Mairesse. 1995. "Exploring the Relationship Between R&D and Productivity in French Manufacturing Firms," *Journal of Econometrics* 65: 263-293.

Hall, Bronwyn H. 1993. "Industrial Research During the 1980s: Did the Rate of Return Fall?" *Brookings Papers on Economic Activity* Micro (2): 289-344.

Mairesse, Jacques and Sassenou, Mohamed. 1991. "R&D and Productivity: A Survey of Econometric Studies at the Firm Level," *OECD Science-Technology Review* 8: 9-44.

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3. Estimating the returns to R&D using Market Value

Blundell, Richard, Rachel Griffith, and John van Reenen. 1999. "Market Share, Market Value, and Innovation in a Panel of British Manufacturing Firms." *Review of Economic Studies* 66: 529-554.

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Griliches, Zvi, Bronwyn H. Hall, and Ariel Pakes. 1991. "R&D, Patents, and Market Value Revisited: Is There a Second (Technological Opportunity) Factor?" *Economics of Innovation and New Technology* 1 (3): 1183-1201.

Hall, Bronwyn H. and Raffaele Oriani. 2004. "Does the Market Value R&D Investment by European Firms? Evidence from a Panel of Manufacturing Firms in France, Germany, and Italy," UC Berkeley and Università di Bologna.

Hayashi, Fumio. 1982. "Tobin's Marginal Q and Average Q: A Neoclassical Interpretation," *Econometrica* 50 (1): 213-224.

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Jaffe, Adam. 1986. "Technological Opportunity and Spillovers of R&D: Evidence from Firms' Patents, Profits, and Market Value," *American Economic Review* 76: 984-1001.

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4. Patents as indicators

Griliches, Zvi, Ariel Pakes, and Bronwyn H. Hall. 1987. "The Value of Patents as Indicators of Inventive Activity," in Dasgupta and Stoneman (eds.), *Economic Policy and Technological Performance*, Cambridge: Cambridge University Press.

Hausman, Jerry A., Zvi Griliches, and Bronwyn H. Hall. 1984. "Econometric Models for Count Data with an Application to the Patents-R&D Relationship," *Econometrica* 52 (July): 909-37.

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Toivanen, Otto, Paul L. Stoneman and Derek Bosworth. 2002. "Innovation and the Market Value of UK Firms, 1989 - 1995," *Oxford Bulletin of Economics and Statistics* 64 (1): 39-62.

Note that readings for which I am a coauthor can be found on my UC Berkeley website:

<http://emlab.berkeley.edu/users/bhhall/bhpapers.html>