

Curriculum Vitae

Name: REBECCA M. HENDERSON **Department:** BPS, Sloan School
Birth Date: Oct 29, 1960 **Place of Birth:** London
Citizenship: British **Immigration status:** US Citizen

Education

Harvard University Ph.D. 1983-1988
Doctorate in Business Economics. Thesis: *The Failure of Established Firms in the Face of Technological Change: A Study of Photolithographic Alignment Equipment.*
Massachusetts Institute of Technology S.B. 1978-1981
Mechanical Engineering.

Academic Employment:

Marvin Bower Visiting Professor, Harvard Business School 2002-
Eastman Kodak LFM Professor, MIT Sloan School, 1999-
Tenured Associate Professor, MIT Sloan School, 1995-1999
Research Associate, National Bureau of Economic Research, 1995-
Thomas Henry Carroll Foundation Visiting Professor of Management,
Harvard Business School. 1996-1997
Robert Noyce Associate Professor, MIT Sloan School, 1993-1995
Research Fellow, National Bureau of Economic Research, 1990-1995
Visiting Assistant Professor, Stanford Graduate School of Business, 1992-1993.
Assistant Professor, MIT Sloan School, 1988-1992

Non Academic Employment:

McKinsey and Company Summer associate. Summer 1986
Harvard University Research assistant, K. Clark. Summer 1985
General Electric Analyst, strategic planning. Summer 1984
McKinsey and Company Analyst. 1981-1983

Honors and Awards:

ASQ Award for Scholarly Contribution 1996
Teacher of the Year 2001
Runner-up, Teacher of the Year 1990-1993, 1995-1996, 1998-2000
Dively Award for best thesis proposal, Harvard. 1988
Alumnae Award, (outstanding female graduate) MIT. 1981
Elected to *Phi Beta Kappa* 1981

Boards and Advisory Panels

Boards

The Whitehead Institute for Biomedical Research, Cambridge, MA.	1999 -
Linbeck Construction Corporation, Houston Texas.	2000 -
The Ember Corporation, Cambridge MA	2001 -
Idexx Laboratories	2003 -

Advisory Panels

The Department of Social and Decision Sciences, Carneige Mellon	1995 –
The Wharton School of Business, Management Department	1995 –
ThePlatform, Inc	2000 – 2001
3G	2001 – 2002

Anti-Trust Experience

Retained by the Department of Justice as an expert witness in connection with the remedies phase of the Microsoft trial. Summer 1999 – Spring 2000. Declaration available on line at:
www.usdoj.gov/atr/cases/ms_remediespapers.htm

Editorial Responsibilities

Member, Editorial Board:

Administrative Science Quarterly	1994 –
The Strategic Management Journal	1994 – 2002
Economics of Innovation and New Technology	1995 –
Research Policy	1998 –
Management Science	2000 –
Strategic Organization	2001 –
Organization Science	2002 –
Department Head, Strategy, <u>Management Science</u>	1995 – 2000

Publications

Journal Articles (Refereed).

“Discontinuities and senior management: assessing the role of recognition in pharmaceutical firm response to biotechnology” Joint with Sarah Kaplan and Fiona Murray
Industrial & Corporate Change 2003 Vol 12: pp 203-233.

“Putting Patents in Context: Exploring Knowledge Transfer from MIT” Joint with Ajay Agrawal. Management Science, Vol 28, No 1, 2002, pp 44-60.

Scale and scope in drug development: unpacking the advantages of size in pharmaceutical research. Jointly with Iain Cockburn. Journal of Health Economics, 2001, Vol 20, p 1033-1057.

"Untangling the Origins of Competitive Advantage" Jointly with Iain Cockburn and Scott Stern, Strategic Management Journal, Fall 2000, Volume 21, 1123-1145. Reprinted in The SMS Blackwell Handbook of Organizational Capabilities: Emergence, Development and Change, C. Helfat, ed. Blackwell, 2003. Oxford, UK

"Absorptive Capacity, Coauthoring Behavior, and the Organization of Research in Drug Discovery" Jointly with Iain Cockburn. Journal of Industrial Economics, June 1998, Volume XLVI, No. 2. pp157-182.

"Universities as a Source of Commercial Technology: A Detailed Analysis of University Patenting, 1965-1988" Jointly with Adam Jaffe and Manuel Trajtenberg. Review of Economics and Statistics, Vol. 80, No. 1, February 1998 pp 119-127.

"The Perils of Excellence: Barriers to Effective Process Improvement in Product-Driven Firms" Jointly with Jesus del Alamo, Todd Becker, James Lawton, Peter Moran, Saul Shapiro and Dean Vlasak. Production and Operations Management, Vol. 7, No. 1, Spring 1998, pp 2-18.

"University versus Corporate Patents: A Window on the Basicness of Invention" Jointly with Adam Jaffe and Manuel Trajtenberg. Economics of Innovation and New Technology, 1997, Vol 5, No. 1, pp 19-50.

"Scale, Scope and Spillovers: The Determinants of Research Productivity in Drug Discovery." Jointly with Iain Cockburn. Rand Journal of Economics, Spring 1996, 27(1), pp. 32-59.

"Measuring Competence? Exploring firm effects in drug discovery." Jointly with Iain Cockburn. Strategic Management Journal, Volume 15, pp 63-84, Special issue Winter 1994.

"The Evolution of Integrative Capability: Innovation in Cardiovascular Drug Discovery" Industrial and Corporate Change, Vol 3, No. 3, Winter 1994 pp 607-630.

"Racing to Invest? The Dynamics of Competition in Ethical Drug Discovery." Jointly with Iain Cockburn. Journal of Economics and Business Strategy, Volume 3, No. 3, Fall 1994, 481-519.

"Of Life Cycles Real and Imaginary: The Unexpectedly Long Old Age of Optical Lithography" Research Policy, 1995, Vol. 24, pp 631-643.

"Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations." Joint with Adam Jaffe and Manuel Trajtenberg. Quarterly Journal of Economics, August 1993, Vol. 434, pp 578-598. Reprinted in Recent Developments in Growth Theory, Daron Acemoglu Editor, Elgar, Cheltenham UK, Fall 2004.

"Underinvestment and Incompetence as Responses to Radical Innovation: Evidence from the Photolithographic Industry." Rand Journal of Economics. Vol.24, No.2, Summer 1993

"A Process Control Methodology Applied to Manufacturing GaAs MMICs. (Jointly with Peter Moran, Scott Elliott, Neil Wylie and Jesus del Alamo.) IEEE Transactions on Semiconductor Manufacturing, November 1991, Vol.4., No.4

"Manufacturing Costs for Advanced Composites Aerospace Parts." With C. Shipp and T. Gutowski. SAMPE, (Society for the Advancement of Material and Process Engineering.) Vol. 27, No. 3, May/June 1991.

"Architectural Innovation: The Reconfiguration of Existing Product Technologies and The Failure of Established Firms." With Kim Clark, March 1990, Administrative Science Quarterly, Vol 35, p9-30. Reprinted in The Management of Innovation, John Storey Ed, Elgar, London, 2004, in Managing Strategic Innovation and Change, M.Tushman and P. Anderson Eds, Oxford University Press, 2004, and in Strategic Management of Technology and Innovation, Robert Burgelman, Clayton Christensen and Steven Wheelwright, Eds, Oxford University Press, 2004.

Journal Articles (Non-refereed).

"Drug Industry mergers Won't Necessarily Benefit R&D" Research Technology Management July –August 2000, Vol 43 No 4. P 10 – 11.

"The Interactions of Organizational and Competitive Influences on Strategy and Performance." With Will Mitchell, Summer 1997, Strategic Management Journal Vol 18, Summer special issue, pp5-14.

"Managing Innovation in the Information Age" Harvard Business Review, January-February 1994, 100-106. Reprinted in Seeing Differently, J.S. Brown, Ed., Harvard Business School Press, Boston MA, 1997 and in The Product Development Challenge, Kim B. Clark and Steven C. Wheelwright, Eds, Harvard Business School Press, Boston MA, 1995.

"Breaking the Chains of Embedded Knowledge: Architectural Innovation as a Source of Competitive Advantage." Design Management Journal, Vol.2, No.3, Summer 1991

Chapters in Edited Volumes.

"Strategic Advantage and the Dynamics of Organizational Competence". Chapter 17 in S. Chowdhury, Next Generation Business Handbook: New Strategies from Tomorrow's Thought Leaders, 2004 by John Wiley & Sons, New Jersey, pp. 294-312.

"Publicly funded science and the productivity of the pharmaceutical industry" with Iain Cockburn, Chapter 1 in Innovation Policy and the Economy, Number 1, 2000, National Bureau of Economic Research, Adam Jaffe, Josh Lerner and Scott Stern, editors, The MIT Press, Cambridge MA.

"Luck," "Leadership" and "Strategy". Economics Meets Sociology, Volume 17 in Advances in Strategic Management, Edited by Joel A.C. Baum and Frank Dobbin, pp 285-290, 2000 by Jai Press Inc, Stamford Connecticut

"Measuring Competence? Exploring Firm Effects in Drug Discovery" Jointly with Iain Cockburn. Chapter 6 in The Nature and Dynamics of Organizational Capabilities, Edited by Giovanni Dosi, Richard R. Nelson and Sidney G. Winter, 2000 by Oxford University Press, Oxford, UK.

“The Economics of Drug Discovery” Jointly with Iain Cockburn, Chapter 5 in Pharmaceutical Innovation, edited by Ralph Landau, Basil Achilladelis and Alexander Scriabine, Chemical Heritage Press, Philadelphia PA 1999, pp 308-331.

○Pharmaceuticals and Biotechnology○ Jointly with Iain Cockburn, Luigi Orsenigo and Gary Pisano. Chapter 13 in US Industry in 2000: Studies in Competitive Performance. David Mowery, Editor. Board on Science, Technology and Economic Policy, National Research Council. National Academy Press. Washington, DC, 1999.

"The Pharmaceutical Industry and the Revolution in Molecular Biology: Interactions Among Scientific, Institutional and Organizational Change." Jointly with Luigi Orsenigo and Gary Pisano. Chapter 7 in The Sources of Industrial Leadership, Cambridge University Press, David Mowery and Richard Nelson, Editors, Cambridge University Press, 1999, pp 267-311.

"On the Dynamics of Forecasting in Technologically Complex Environments: The Unexpectedly Long Old Age of Optical Lithography" In Technological Innovation: Oversights and Foresights, Raghu Garud, Praveen Nayyar and Zur Shapira, Editors, Cambridge University Press, New York, 1997.

"Trends in University Patenting 1965-1992," (Jointly with Adam Jaffe and Manuel Trajtenberg.) Forthcoming in the Center for Economic Policy Research conference volume: University Goals, Institutional Mechanisms and the "Industrial Transferability" of Research.

"The Determinants of Research Productivity in Ethical Drug Discovery." (Jointly with Iain Cockburn) In The American Enterprise Institute Conference Volume: Competitive Strategies in the Pharmaceutical Industry, Robert B Helms, Ed. Washington DC, 1996.

"Maintaining Leadership across Product Generations: The Case of Canon in Photolithographic Alignment Equipment" in Managing Product Development, Toshihiro Nishiguchi, Ed. Oxford University Press, 1996. (This book was awarded the 1996 Shingo Prize for Excellence in Manufacturing research.)

"Technological Change and The Management of Architectural Knowledge." In Transforming Organizations, Edited by T. Kochan and M. Useem. Oxford University Press, Oxford, U.K., 1992. Reprinted in Organizational Learning, edited by Michael D. Cohen and Lee S. Sproull, Sage Publications Inc, CA, 1996.

Conference Proceedings.

"Public-private interaction in pharmaceutical research" (Jointly with Iain Cockburn) in the Proceedings of the National Academy of Sciences 93/23 (November 12, 1996) p.12725-12730

"Controlling Variability of Sub-micron Gate Lithography in a GaAs MMIC Manufacturing Environment." (Jointly with Peter Moran, Jesus del Alamo, Neil Wylie and Scott Elliott.) Presented at the SEMI Advanced Semiconductor Manufacturing Conference, pp136a-g. September 1990, Danvers, MA.

"Workload Regulating Wafer Release in a GaAs Fab Facility." International Semiconductor Manufacturing Science Symposium, May 1990, San Francisco, CA. (Jointly with James Lawton, Al Drake, Lawrence Wein, Ron Whitney, and Dick Zuanich.)

Working Papers.

"Balancing Incentives: The Tension between Basic and Applied Research" Jointly with Iain Cockburn and Scott Stern.

"Is Incumbent Entry into Complementary Markets Always Optimal?" Evidence from Intel. Jointly with Annabelle Gawer

"Innovation in Firms and Markets: IBM, Microsoft and the Limitations of Large Firms." Joint with Tim Bresnahan and Shane Greenstein.

"Do Firms change capabilities by hiring new people? A study of the adoption of science-based drug discovery" Joint with Nico Lacetera and Iain M. Cockburn,