Bhaven N. Sampat

Academic Training

Graduate School of Arts and Sciences, Columbia University
Ph.D. Economics, with Distinction, 2001.
M.Phil. Economics, 2000.
M.A. Economics, 1998.

Columbia College, Columbia University
B.A. Economics–Political Science, 1996.

Academic Appointments

Columbia University

- Associate Professor, Department of Health Policy and Management (HPM), Mailman School of Public Health, July 2012-present.
- Assistant Professor, Department of Health Policy and Management (HPM), Mailman School of Public Health, September 2005 - June 2012.

National Bureau of Economic Research (NBER)

- Research Associate, May 2013-present

University of Michigan, August 2003 to August 2005:

- Robert Wood Johnson Foundation Scholar in Health Policy Research, Department of Health Management and Policy, School of Public Health

Georgia Institute of Technology, August 2001 to August 2003:

- Assistant Professor, School of Public Policy

1 Honors

- Robert Wood Johnson Foundation Investigator Award In Health Policy Research, 2007
- Faculty Member of the Year Teaching Award, School of Public Policy, Georgia Institute of Technology, 2002-2003
- Faculty Member of the Year Teaching Award, School of Public Policy, Georgia Institute of Technology, 2001-2002
- Dissertation awarded Distinction, Columbia University, Graduate School of Arts and Sciences, 2001
- Sanford Parker Award in Economics, Columbia College, Columbia University, 1996
- B.A. awarded with honors, summa cum laude. Elected to Phi Beta Kappa. Columbia College, Columbia University, 1996

Working Papers

- "How Do Patents Affect Follow On Innovation? Evidence from the Human Genome" (with Heidi Williams) [Revise and Resubmit, *American Economic Review*] `http://economics.mit.edu/files/9778`
- "Public R&D investments and private sector patenting: Evidence from NIH Funding Rules" (with Pierre Azoulay, Joshua Graff Zivin, and Danielle Li) [Revise and Resubmit, *Review of Economic Studies*] `http://www.nber.org/papers/w20889.pdf`

Publications

Book

David C. Mowery, Richard R. Nelson, Bhaven N. Sampat, and Arvids A. Ziedonis. 2004. *Ivory Tower and Industrial Innovation: University–Industry Technology Transfer Before and After Bayh-Dole.* Stanford, CA: Stanford University Press.

Articles

1. Sampat, Bhaven N., and Kenneth C. Shadlen. 2017. "Secondary pharmaceutical patenting: A global perspective" *Research Policy* 46.3: 693-707.

2. Li, Danielle, Pierre Azoulay, and Bhaven N. Sampat. 2017. "The applied value of public investments in biomedical research." *Science* 356.6333: 78-81.

3. Bhaven Sampat and Kenneth Shadlen. 2015. "Drug patenting in India: looking back and looking forward." *Nature Reviews: Drug Discovery* 14: 519-20.

4. Hegde, Deepak, and Bhaven Sampat. 2015. "Can private money buy public science? Disease group lobbying and federal funding for biomedical research." *Management Science.*

5. Sampat, Bhaven N., and Kenneth C. Shadlen. 2015. "TRIPS Implementation and Secondary Pharmaceutical Patenting in Brazil and India." *Studies in Comparative International Development*: 1-30.

6. C. Scott Hemphill and Bhaven N. Sampat. 2013. "Drug Patents at the Supreme Court." *Science* 339(6126): 1386-1387

7. Bhaven N. Sampat, Kristen Buterbaugh, and Marcel Perl. 2013. "New Evidence on the Allocation of NIH Funds across Diseases" *Milbank Quarterly*, March: 163-185.

8. Christopher Cotropia, Mark Lemley, and Bhaven Sampat. 2013. "Do Applicant Citations Matter?" *Research Policy.*

9. Bhaven N. Sampat and Tahir Amin. 2013. "How Do Public Health Safeguards in Indian Patent Law Affect Pharmaceutical Patenting in Practice?" *Journal of Health Politics, Policy, and Law.*

10. Arti Rai and Bhaven N. Sampat. 2012. "Accountability in Patenting of Federally Funded Research" *Nature Biotechnology* 30(10): 953-956.

11. Amy Kapczynski, Chan Park, and Bhaven N. Sampat. 2012. "Hydrates and Solvates and Salts (oh my!): Secondary Patents in Pharmaceuticals" *PloS ONE*, 12 December.

12. Bhaven N. Sampat. 2012. "Mission-oriented Biomedical Research at the NIH" *Research Policy* 41(10): 1729-1741

13. Bhaven N. Sampat, Ken Shadlen, and Tahir Amin. 2012. "Challenges to India's Pharmaceutical Patent Laws" *Science* 337(6093): 414-5.

14. C. Scott Hemphill and Bhaven N. Sampat. 2012. "Evergreening, Patent Challenges, and Effective Market Life in Pharmaceuticals" *Journal of Health Economics*, 327-329.

15. Mark Lemley and Bhaven N. Sampat. 2012. "Examiner Characteristics and Patent Office Outcomes." *Review of Economics and Statistics.*

16. C. Scott Hemphill and Bhaven N. Sampat. 2011. "When Do Generics Challenge Drug Patents?" *Journal of Empirical Legal Studies* 8(4): 613649.

17. Peter Muennig, Bhaven N. Sampat, Nicholas Tilipman, Lawrence Brown, and Sherry Glied. 2011. "We All Want It But Don't Know What It Is: Toward A Standard of Affordability for Health Insurance Premiums." *Journal of Health Politics, Policy and Law* 36(5): 829-53.

18. Bhaven N. Sampat and Michael Drummond. 2011. "Another Special Relationship? Health Technology Policies and Healthcare Systems in the United States and United Kingdom." *Journal of Health Politics, Policy and Law.* 36(1): 119-139.

19. Bhaven N. Sampat and Frank Lichtenberg. 2011. "What Are The Respective Roles Of The Public And Private Sectors In Pharmaceutical Innovation?" *Health Affairs.* 30(2): 332-339.

20. Bhaven N. Sampat. 2010. "When Do Patent Applicants Search for Prior Art?" *Journal of Law and Economics.* 53: 399-416.

21. Bhaven N. Sampat. 2010. "Lessons from Bayh-Dole." *Nature.* 468: 755-756

22. Bhaven N. Sampat. 2010. "Research Locally, Diffuse Globally? American Research Universities, Patents, and Global Public Health." *Columbia Journal of International Affairs.* 64(1): 69-82.

23. Swathi Padmanabhan, Tahir Amin, Bhaven Sampat, Robert Cook-Deegan, and Subhashini Chandrasekharan. 2010. "Intellectual Property, Technology Transfer and Developing Country Manufacture of Low-Cost HPV Vaccines - A Case Study of India." *Nature Biotechnology.* 28: 671-678.

24. Julia Carbone, Richard Gold, Bhaven N. Sampat, Subhashini Chandrasekharan, Lori Knowles, Misha Angrist, and Robert Cook-Deegan. 2010. "DNA Patents and Diagnostics: Not a Pretty Picture." *Nature Biotechnology* 28: 784-791.

25. Deepak Hegde and Bhaven N. Sampat. 2009. "Applicant Citations, Examiner Citations, and the Private Value of Patents." *Economics Letters.* 5(3): 287-289.

26. Bhaven N. Sampat. 2009. "Academic Patents and Access to Medicines in Developing Countries." *American Journal of Public Health.* 99: 9-17.

27. Juan Alcacer, Michelle Gittleman, and Bhaven N. Sampat. 2009. "Applicant and Examiner Citations in U.S. Patents: An Overview and Analysis." *Research Policy.* 38(2): 415-27.

28. Anthony So, Bhaven N. Sampat, Arti K. Rai, Robert Cook-Deegan, Jerome Reichman, Robert Weissman, and Amy Kapczynski. 2008. "Is Bayh–Dole Good for Developing Countries? Lessons From the U.S. Experience." *PLoS Biology.* 6(10): 2078-2084.

29. Mark J. Russo, Annetine C. Gelijns, Lynne W. Stevenson, Bhaven Sampat, Keith D. Aaronson, Dale G. Renlund, Deborah D. Ascheim, Kimberly N. Hong, Mehmet C. Oz, Alan J. Moskowitz, Eric A. Rose, Leslie W. Miller, and the REMATCH Investigators. 2008. "The Cost of Medical Management in Advanced Heart Failure During the Final Two Years of Life."2008. *Journal of Cardiac Failure.* 14(8): 651-8.

30. Pierre Azoulay, Ryan Michigan, and Bhaven N. Sampat. 2007. "The Anatomy of Medical School Patenting." *The New England Journal of Medicine.* 20(357): 2049-2056.

31. Bhaven N. Sampat. 2006. "Patenting and Academic Research in the Twentieth Century: The World Before and After Bayh–Dole." *Research Policy.* 35(6): 772-789.

32. David Mowery and Bhaven N. Sampat. 2005. "The Bayh–Dole Act of 1980 and University–Industry Technology Transfer: A Model for Other OECD Governments?" *Journal of Technology Transfer.* 30(1): 115–127.

33. Bhaven N. Sampat, David. C. Mowery, and Arvids Ziedonis. 2003. "Changes in University Patent Quality After Bayh–Dole: A Re–Examination." *International Journal of Industrial Organization*. 21(9): 1371–1390.

34. Richard R. Nelson, Alex Peterhansl, and Bhaven N. Sampat. 2003. "Why and How Innovations Get Adopted: A Tale of Four Models." *Industrial and Corporate Change*. 13(5): 679–699.

35. David Mowery, Bhaven Sampat, and Arvids Ziedons. 2002. "Learning to Patent? Institutional Experience and the Quality of University Patents." *Management Science*. 48(1): 73–89.

36. Jeannette Colyvas, Michael Crow, Annetine Gelijns, Roberto Mazzoleni, Richard Nelson, Nathan Rosenberg, and Bhaven N. Sampat. 2002. "How Do University Inventions Get Into Practice?" *Management Science*. 48(1): 61–72.

37. Roberto Mazzoleni and Bhaven N. Sampat. 2002. "University Patenting: An Assessment of the Causes and Consequences of Recent Changes in Strategies and Practices" *Revue D'Economie Industrielle*. 99: 233–248.

38. Richard R. Nelson and Bhaven N. Sampat. 2001. "Making Sense of Institutions as a Factor Shaping Economic Performance." *Journal of Economic Behavior and Organization*. 44(1): 31–54.

39. David C. Mowery, Richard R. Nelson, Bhaven N. Sampat, and Arvids Ziedonis. 2001. "The Growth of Patenting and Licensing by U.S. Universities: An Assessment of the Effects of the Bayh–Dole Act of 1980." *Research Policy*. 30(1): 99–119.

40. David C. Mowery and Bhaven N. Sampat. 2001. "Patenting and Licensing University Inventions: Lessons from the History of Research Corporation." *Industrial and Corporate Change*. 10(2): 317–355.

41. David C. Mowery and Bhaven N. Sampat. 2001. "University Patents, Patent Policies, and Patent Policy Debates: 1925–1980." *Industrial and Corporate Change*. 10(3): 781–814.

Book Chapters, Law Review Articles, and Other

1. Kapczynski, Amy, Bhaven N. Sampat, and Kenneth C. Shadlen. 2016. "The TPP and Drug Prices." *Foreign Affairs* (See also "Trade Agree-

ments, Patents and Drug Prices: Continuing the Debate" `https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2933574`)

2. Pierre Azoulay, Joshua Graff Zivin, and Bhaven N. Sampat. 2011. "The Diffusion of Scientific Knowledge Across Time and Space: Evidence from Professional Transitions for the Superstars of Medicine." *The Rate & Direction of Inventive Activity Revisited*, eds. Joshua Lerner and Scott Stern. Chicago: University of Chicago Press.

3. Arti Rai, John Allison, and Bhaven N. Sampat. 2011. "University Software: Patents, Open Source, and Commercialization" in *Perspectives on Commercializing Innovation*, eds. F. Scott Kieff and Troy A. Paredes. Cambridge: Cambridge University Press.

4. Mario Cimoli, Giovanni Dosi, Roberto Mazzoleni, and Bhaven N. Sampat. 2011. "Innovation, Technical Change, and Patents in the Development Process: A Long Term View". Forthcoming in *Intellectual Property Rights: Legal and Economic Challenges for Development*, eds. Giovanni Dosi, Mario Cimoli, and Joseph Stiglitz. Oxford, New York: Oxford University Press.

5. Mark Lemley and Bhaven N. Sampat. 2010. "Examining Patent Examination." *Stanford Technology Law Review.*

6. Bhaven N. Sampat. 2010. "Catching Up in Indian Pharmaceuticals and Software: The Roles That Patents Did and Did Not Play." In *Intellectual Property Rights, Development, and Catch Up: An International Comparative Study*, eds. Richard R. Nelson, Hiroyuki Odagiri, Akira Goto, and Atsushi Sunami. Oxford, New York: Oxford University Press.

7. Bhaven N. Sampat. 2009. "The Dismal Science, The Crown Jewel and the Endless Frontier: An Economist's Perspective on the NIH." In *The New Economics of Technology Policy*, ed. D. Foray. Cheltenham UK, Northhampton, MA: Edward Elgar.

8. Arti K. Rai, John R. Allison, Bhaven N. Sampat, Colin Crossman. 2009. "University Software Ownership and Litigation: A First Examination." *North Carolina Law Review.* 87: 1519-1570.

9. Mark Lemley and Bhaven N. Sampat. 2008. "Is the Patent Office a Rubber Stamp?" *Emory Law Journal.* 58(1): 415-427.

10. Bhaven N. Sampat. 2007. "University Patenting: Shaping A New Government Patent Policy." In *Science, Technology, and Public Policy: The Next Generation of Research*, eds. D. H. Guston and D. Sarewitz. Madison, WI: University of Wisconsin Press.

11. Bhaven N. Sampat, David C. Mowery, and Arvids Ziedonis. 2007. "Changes in University Patent Quality After Bayh–Dole: A Re–Examination." In *Technological Entrepreneurship: Institutions and Agents Involved in University Technology Transfer*, ed. Donald Siegel. Cheltenham UK, Northhampton, MA: Edward Elgar.

12. David Mowery and Bhaven N. Sampat. 2006. "The Bayh-Dole Act of 1980 and University-Industry Technology Transfer: A Policy Model for Other Goverments?" In *Advancing Knowledge and the Knoweledge Economy*, eds. Brian Kahin and Dominique Foray. Cambridge, MIT Press.

13. David Mowery and Bhaven N. Sampat. 2005. "Universities and National Innovation Systems." In *The Oxford Handbook of Innovation*, eds. Jan Fagerberg, David C. Mowery, Richard R. Nelson. Oxford, New York: Oxford University Press.

14. Bhaven N. Sampat and Arvids Ziedonis. 2004. "Patent Citations and the Economic Value of Patents." In *The Handbook of Quantitative Science and Technology*, eds. Henk F. Moed, Wolfgang Glanzel, and Ulrich Schmoch. New York, NY: Springer.

15. Richard R. Nelson and Bhaven N. Sampat. 2003. "Making Sense of Institutions as a Factor Shaping Economic Performance." In *Recent Developments in Institutional Economics: International Library of Critical Writings in Economics*, ed. Geoffrey Hodgson. Cheltenham UK, Northhampton, MA: Edward Elgar.

16. Bhaven N. Sampat and Richard R. Nelson. 2002. "The Evolution of University Patenting and Licensing Procedures: An Empirical Study of Institutional Change." In *Advances In Strategic Management: The New Institutionalism in Strategic Management*, Volume 19, ed. Paul Ingram and Brian S. Silverman. Amsterdam, Netherlands: JAI Press, An Imprint of Elsevier.

17. David Mowery, Richard R. Nelson, Bhaven N. Sampat, and Arvids Ziedonis. 1999. "The Effects of the Bayh–Dole Act on U.S. University Research and Technology Transfer" In *The Industrialization of*

Knowledge, eds. Lewis M. Branscomb, Fumio Kodama, and Richard Florida. Cambridge, MA: MIT Press.

18. Christopher Tucker and Bhaven N. Sampat. 1998. "Laboratory Based Innovation in the American National Innovation System." In *Limited By Design: R&D Laboratories in the U.S. National Innovation System*, Michael M. Crow and Barry Bozeman. New York: Columbia University Press.