

CRAIG GARTHWAITE
Strategy Department
Kellogg School of Management, Northwestern University
2211 Campus Drive, Evanston, IL 60208
Email: c-garthwaite@kellogg.northwestern.edu

APPOINTMENTS

Kellogg School of Management, Northwestern University
Professor of Strategy, 2020 - Present
Herman R. Smith Research Professor in Hospital and Health Services, 2017-Present
Director, Program on Healthcare at Kellogg, 2016 - Present
Associate Professor of Strategy (with tenure), 2016 – 2020
Assistant Professor of Strategy, 2010 - 2016
Senior Lecturer and Donald P. Jacobs Scholar in Management and Strategy, 2009 - 2010

National Bureau of Economic Research
Research Associate, 2016-Present
Faculty Research Fellow, 2011-2016

Institute for Policy Research, Northwestern University
Faculty Associate, 2015 - Present

EDUCATION

Ph.D. Economics, University of Maryland at College Park, 2009
M.A. Economics, University of Maryland at College Park, 2008
M.P.P. Gerald R. Ford School of Public Policy at the University of Michigan, 2001
B.A. Political Science, cum laude, University of Michigan, 2000

PUBLIC SERVICE

Member, Aspen Economic Strategy Group (2021 – Present)

Member, Congressional Budget Office Panel of Healthcare Advisers (2020 – Present)

Member, Congressional Budget Office Technical Review Panel for the Health Insurance Simulation Model (2018-2020)

Member, Health Affairs Council on Spending and Value (2018-2023)

Testimony, United States House of Representatives, 2018

- House Judiciary Committee, Subcommittee on Regulatory Reform, Commercial and Antitrust Law: [“Competition in the Pharmaceutical Supply Chain: The Proposed Merger of CVS Health and Aetna”](#)

Testimony, United States House of Representatives, 2019

- House Judiciary Committee, Subcommittee on Regulatory Reform, Commercial and Antitrust Law: [“Diagnosing the Problem: Exploring the Effects of Consolidation and Anticompetitive Conduct in Health Care Markets”](#)

Testimony, United States Senate, 2019

- Senate Judiciary Committee, Subcommittee on Antitrust, Competition Policy, and Consumer Rights: ["Your Doctor/Pharmacist/Insurer Will See You Now: Competitive Implications of Vertical Consolidation in the Healthcare Industry"](#)

Testimony, United States House of Representatives, 2019

- House Education and Labor Committee, Subcommittee on Health, Education, Labor and Pensions: ["Making Health Care More Affordable: Lowering Drug Prices and Increasing Transparency"](#)

Testimony, United States House of Representatives, 2021

- House Oversight and Reform Committee ["Unsustainable Drug Prices \(Part III\)"](#)

Testimony, United States Senate, 2022

- Senate Committee on Commerce, Science, and Transportation's Consumer Protection, Product Safety, and Data Security Subcommittee: ["Ensuring Fairness and Transparency in the Market for Prescription Drugs"](#)

Testimony, United States Senate, 2023

- Senate Committee on Health, Education, Labor, and Pensions: ["Taxpayers paid billions for it: So why is Moderna considering quadrupling the price of the COVID vaccine?"](#)

ACADEMIC PUBLICATIONS

"The Impact of Early Discharge Laws on the Health of Newborns," (with William Evans and Heng Wei), *Journal of Health Economics*, 2008, 27(4): 843-870.

"The Economic Benefits of Pharmaceutical Innovations: The Case of Cox-2 Inhibitors," *American Economic Journal: Applied Economics*, 2012, 4(3): 116-137.

"Empirical Evidence on the Value of Pharmaceuticals," (with Mark Duggan), in *The [Oxford] Handbook of the Economics of the Biopharmaceutical Industry*: Oxford University Press: Oxford, 2012: 463-492.

"The Doctor Might See You Now: The Supply Side Effects of Public Health Insurance Expansions." *American Economic Journal: Economic Policy* 2012, 4(3): 190-217.

"Heterogeneity in the Benefits of Greater Treatment Intensity" (with William Evans), *The Review of Economics and Statistics*, 2012, 94(3): 635-649.

"Can Celebrity Endorsements Affect Political Outcomes: Evidence from the 2008 US Democratic Presidential Primary," (with Tim Moore), *The Journal of Law, Economics, and Organizations*, 2013, 29(2): 355-384.

“Demand Spillovers, Combative Advertising, and Celebrity Endorsements,” *American Economic Journal: Applied Economics*, 2014, 6(2): 76-104.

“Giving Mom a Break: The Effect of Higher EITC Payments on Maternal Health” (with William Evans), *American Economic Journal: Economic Policy*, 2014, 6(2): 258-290.

“Public Health Insurance, Labor Supply, and Employment Lock,” (with Tal Gross and Matthew Notowidigdo), *Quarterly Journal of Economics*, 2014, 129(2): 653-696.

“Health Spending Slowdown Is Mostly Due to Economic Factors, Not Structural Change in the Health Care Sector” (with David Dranove and Christopher Ody), *Health Affairs*, 2014, 33(8): 1399-1406.

“The Economic Downturn and its Lingering Effects Reduced Medicare Spending Growth by \$4 Billion In 2009–12,” (with David Dranove and Christopher Ody), *Health Affairs*, 2015, 34(8): 1368-1375.

“Investment Subsidies and the Adoption of Electronic Medical Records in Hospitals.” (with David Dranove, Chris Ody, and Bingyang Li), *Journal of Health Economics*, 2015, 44: 309- 19.

“The Market Impacts of Product Patents in Developing Countries,” (with Mark Duggan and Aparajita Goyal), *American Economic Review*, 2016, 106(1): 99-135

“The Black/White Educational Gap, Stalled Progress, and the Long Term Consequences of the Emergence of Crack Markets,” (with William Evans and Timothy J. Moore), *The Review of Economics and Statistics*, 2016, 98(5): 832-847.

“Affordable Care Act’s Medicaid Expansion Led to Substantial Decreases in Uncompensated Care but Levels and Many Hospitals Remain High,” (with David Dranove and Christopher Ody), *Health Affairs*, 2016, 35(8): 1471-1479.

“How do Hospitals Respond to Negative Financial Shocks? The Impact of the 2008 Stock Market Crash (with David Dranove and Christopher Ody),” *The RAND Journal of Economics*, 2017, 48(2): 485–525.

“Insurance Expansion and Hospital Emergency Department Access: Evidence from the Affordable Care Act,” (with John Graves, Tal Gross, and Matthew Notowidigdo), *Annals of Internal Medicine*, Feb 7 2017, 166(3):172-179

“Success and Failure in the Insurance Exchanges (with John Graves),” *New England Journal of Medicine*, March 9, 2017, 376(10):907-910

“The Economics of Indication Based Pricing (with Amitabh Chandra),” *New England Journal of Medicine*, July 2017, 377(2):103-106.

“Hospitals as Insurers of Last Resort,” (with Tal Gross and Matthew Notowidigdo), *American Economic Journal: Applied Economics*, 2018, 10(1): 1-39.

“The CVS–Aetna Merger: Another Large Bet on the Changing U.S. Health Care Landscape,” (with Austin Frakt), *Annals of Internal Medicine*, January 9, 2018.

“The Orphan Drug Act at 35: Observations and an Outlook for the Twenty-First Century,” (with Nicholas Bagley, Benjamin Berger, Amitabh Chandra, and Ariel D. Stern) in *Innovation Policy and the Economy*, 2018, Volume 19, pages 97-137, National Bureau of Economic Research, Inc.

“Characterizing the Drug Development Pipeline for Precision Medicine, (with Chandra, Amitabh, Garthwaite, Craig and Stern, Ariel Dora Stern), *Economic Dimensions of Personalized and Precision Medicine*, 2018, National Bureau of Economic Research, Inc.

“It’s Time to Reform the Orphan Drug Act,” (with Nicholas Bagley, Amitabh Chandra, and Ariel D. Stern), *NEJM Catalyst*, Dec 19, 2018.

“Economic Principles for Medicare Reform (with Amitabh Chandra),” *ANNALS of the American Academy of Political and Social Science*, 2019, 686(1): 63-92.

“All Medicaid Expansions Are Not Created Equal: The Geography and Targeting of the Affordable Care Act,” *Brookings Papers on Economic Activity*, Fall 2019 (with John Graves, Tal Gross, Zeynal Karaca, Victoria Marone, and Matthew Notowidigdo)

“The Economics of Medicare for All,” book chapter in *Maintaining the Strength of American Capitalism* published by the *Aspen Economic Strategy Group*, eds. Melissa Kearney and Amy Ganz, December 2019.

“Insurance access and demand response: Price and welfare implications,” (with David Dranove and David Besanko), *Journal of Health Economics*, 2020, 73.

“The Economics of Medical Procedure Innovation,” (with David Dranove, Christopher Heard, and Bingxiao Wu), *Journal of Health Economics*, January 2022, Vol. 81.

“Guns and Violence: The Enduring Impact of Crack Cocaine Markets on Young Black Males,” (with Bill Evans and Timothy J. Moore), *Journal of Public Economics*, February 2022, vol. 206.

“Endogenous Quality Investments in the US Hospital Market,” (with Chris Ody and Amanda Starc), *Journal of Health Economics*, July 2022, 84:10236.

“Does consumer demand pull scientifically novel drug innovation?,” (with David Dranove and Manuel Hermosilla), *RAND Journal of Economics*, August 18 2022, Vol. 53 Issue 3.

“The Returns to Medical Inventions,” (with David Dranove and Bingxiao Wu), *The Journal of Law & Economics*, November 2022, Vol 65 Num. S2.

“Why Drug Pricing Reform Is Complicated: A Primer and Policy Guide to Pharmaceutical Prices in the US,” (with Amanda Starc), *Aspen Economic Strategy Group*, November 8, 2023.

“Artificial Intelligence, the Evolution of the Healthcare Value Chain, and the Future of the Physician,” (with David Dranove) in *The Economics of Artificial Intelligence: Health Care Challenges*, Agrawal, Gans, Goldfarb, and Tucker. 2023

WORKING PAPERS

“Economics Markets and Pharmaceutical Innovation,” revised and resubmitted to *Journal of Economic Perspectives*.

“Origin of Physician Practice Variation: Role of Training and Clinical Trials,” (with David Dranove and Bingxiao Wu)

“Regulatory Approval and Expanded Market Size,” NBER Working Paper #28889 (with Amitabh Chandra and Benjamin Berger)

“Who Profits From Amateurism: Rent-Sharing in Modern College Sports,” NBER Working Paper #27734 (with Jordan Keener Matthew J. Notowidigdo Nicole F. Ozminkowski), *revise and resubmit, American Economic Journal: Applied Economics*

“The Impact of Private Contracting on Healthcare for the Old and Sick: Evidence from California’s Medicaid Program” (with Mark Duggan and Adelina Wang)

“Reinsuring the Insurers of Last Resort” (with Chris Ody and David Dranove)

“The Opportunities and Limitations of Monopsony Power in Healthcare: Evidence from the United States and Canada,” July 2019 (with Jillian Chown, David Dranove, and Jordan Keener)

OTHER PUBLICATIONS

The Impact of the ACA’s Medicaid Expansion on Hospitals’ Uncompensated Care Burden and the Potential Effects of Repeal (with David Dranove and Christopher Ody), *Commonwealth Fund Issue Brief*, May 2017.

“A Floor and Trade Proposal for Hospital Charity Care,” The Hamilton Project working paper.

CASES

Wildcat Physical Therapy (with Dylan Duffy), 2019

Evaluating Vertical Integration at AB-Inbev Across the Globe (with Sarit Markovich, Eugenio Gomez A Latorre, and Andrea Meyer), 2018, Kellogg 5-118-002)

Consumer Cost Sharing in Health Insurance (with Chris Ody), 2018

Quality Provision in the Nursing Home Industry (with Chris Ody),

2017 Renal Care in the United States, 2020

Sovaldi: Pricing a Breakthrough Drug (with Meghan Busse), 2015

The Global Aircraft Manufacturing Industry, 2002-2011 (with Jen Brown), 2012. Kellogg Case #5-312-505.

Starbucks: A Story of Growth, (with Jen Brown and Meghan Busse), 2011. Kellogg Case #5- 211-259.

The US Brewing Industry (B): “Big Beer” Responds to the Craft-Beer Challenge, KE1312

The US Brewing Industry (A): Early Years to the Eras of Consolidation and Craft Beer, KE1311

Creating and Sustaining Success at Walmart, #5-323-509

Amazon (A): Building a Retail Giant on a Stack of Books, #5-322-501(A)

Amazon (B): Competing against a Giant, 5-322-501(B)

Disney and the Big Business of Make-Believe: From Silent Movies to the Streaming Wars, 5-223-250

Over the Top: The Rise of Streaming and the Television Industry Value Chain, 5-321-510

Bain Capital Life Sciences and the High-Risk, High-Reward Quest for a New COVID-19 Drug (with Theo Anderson) #5-122-001

Gilead Sciences: Developing a Biopharmaceutical Pipeline Through M&A (with Amitabh Chandra and Paul Clancy), Harvard Case #622-075.

PERMANENT WORKING PAPERS

Pharmaceutical Profits and the Social Value of Innovation, NBER Working Paper #20212, (with David Dranove and Manuel Hermosilla)

“The Effect of In-Utero Conditions on Long Term Health: Evidence from the 1918 Spanish Flu Pandemic,” April 2008 (First Draft, July 2007).

TEACHING

Core Business Strategy (STRT 431), Kellogg School of Management, 2009-Present
Foundations of Strategy, Kellogg-HKUST EMBA, 2016-Present
Strategy Frameworks Kellogg EMBA, 2017-Present
Healthcare Strategy (STRT 443), Kellogg School of Management, 2017-Present
Healthcare Strategy (STRTX 945), Kellogg School of Management EMBA, 2017-Present
Value Creation and Capture in Biopharmaceuticals (HCAK 960), 2022 – Present
Growing & Sustaining Success in Biopharmaceutical Firms (HCAK-985), 2023-Present

HONORS AND AWARDS

Lavengood Professor of the Year Finalist, 2024
Sidney J. Levy Teaching Award for Electives, 2021
Kellogg Chairs' Core Course Teaching Award, 2019
Lavengood Professor of the Year Finalist, 2019
Lavengood Professor of the Year Finalist, 2018
Kellogg Faculty Impact Award, Healthcare Strategy, 2018
Sidney J. Levy Teaching Award for Electives, 2017
Poets and Quants 40 Best Under 40 Professors, 2015
Kellogg Faculty Impact Teaching Award, Business Strategy, 2012
Kellogg Faculty Impact Teaching Award, Business Strategy, 2012
Kellogg Chairs' Core Course Teaching Award, 2011
International Institute of Public Finance (IIPF) Young Economists Award, 2011
Kellogg Faculty Impact Teaching Award, Business Strategy, 2010
University of Maryland Third Year Paper Fellowship

INVITED PRESENTATIONS

2008: University of Notre Dame
2009: Chicago Booth Graduate School of Business
2010: University of Wisconsin-Madison, Dartmouth College, University of Notre Dame
2011: AEA Annual Meeting, University of Illinois-Chicago, Olin Business School at Washington University, Harris School of Public Policy at the University of Chicago, Indiana University SPEA, National Tax Association Annual Meeting, AcademyHealth Research Insights Meeting
2012: AEA Annual Meeting (Presenter and Discussant), Society of Labor Economists Annual Meeting, NBER Summer Institute, University of Illinois Urbana-Champaign, University of California-Davis, Columbia University
2013: University of Chicago Health Economics Workshop, University of British Columbia, University of California-San Diego, University of Kentucky, Texas A&M University, Wharton School of the University of Pennsylvania, University of Maryland, Brookings Institution, UC-Davis Poverty Center

- 2014: AEA Annual Meeting, Northwestern Law School, RAND Corporation, Rice University/University of Houston, HDMS User Forum, Bates/White Life Science Conference, Vanderbilt University, University of Michigan RWJF Scholars, Northwestern University Economics Department
- 2015: AEA Annual Meeting, Stanford University, University of California-Irvine, MIT/BU Health Economics Seminar, Syracuse University, NBER Summer Institute, UT-Austin, University of Maryland
- 2016: Harris School of Public Policy at the University of Chicago, Owen School of Management, Vanderbilt University.
- 2017: National Tax Association Annual Meeting
- 2018: University of Georgia, Auburn University, Harvard University, Boston University, American Enterprise Institute, University of Southern California
- 2019: American Medical Association, Ohio State University, University of Louisville, Emory University, Aspen Ideas Festival, Aspen Economic Strategy Group, University of Utah, Aspen Ideas Festival, Aspen Ideas Health Festival, Aspen Economic Strategy Group
- 2020: Harris School of Public Policy at the University of Chicago
- 2022: The Wharton School

ACADEMIC ACTIVITIES

Co-Editor, *Journal of Public Economics*, (2016 – 2020)

Reviewer: *American Economic Review*, *Quarterly Journal of Economics*; *Journal of Political Economy*; *Econometrica*; *Review of Economic Studies*; *New England Journal of Medicine*, *The Journal of Public Economics*; *American Economic Journal: Economic Policy*; *Health Affairs*; *The Review of Economics and Statistics*; *The Journal of Industrial Economics*; *The Journal of Health Economics*; *The Journal of Human Resources*; *Journal of Policy Analysis and Management*; *International Journal of Industrial Organization*; *Health Economics*; *Social Science and Medicine*; *Economic Inquiry*

PAST EMPLOYMENT

Employment Policies Institute, Washington, DC
Director of Research and Chief Economist, 2003-2005
 Public Sector Consultants, Lansing, MI
Economist, 2002-2003

OUTSIDE ACTIVITIES

Senior Consultant, Compass Lexecon (2025 – Present)
 Affiliated Consultant, Analysis Group (2018-2025)
 Consultant for Wal-Mart Inc. (2019-2020)
 Eli Lilly Advisory Board (2020)
 Janssen Advisory Board (2021 – 2024)
 Speaking engagements for Allergan, Alexion, Biogen, Carefirst Blue Cross Blue Shield, Cayaba Care, Digestive Health Professionals Association, LUGPA, National Pharmaceutical Council, Wisconsin Association of Health Plans, Great American Insurance.

EXPERT CONSULTING AND TESTIMONY

1. (Presentation) Marshfield Clinic Zoning Appeal, Oneida County Planning and Development committee, Oneida County, WI, December 14, 2017 (on behalf of appellant).
2. (Deposition testimony) *In Re*: United States of America ex rel. Frank M. Rembert and Michael R. Paradise vs. Bozeman Health Deaconess Hospital D/B/A Bozeman Health and Deaconess-Intercity Imaging, LLC. D/B/A Advanced Medical Imaging, United States District Court, District of Montana, Butte Division, Case No. 2:15-cv-00080-SHE, December 11, 2015 (on behalf of Relators).
3. (Testimony) Before the House Judiciary Committee, Subcommittee on Regulatory Reform, Commercial and Antitrust Law, February 27, 2018.
4. (Testimony) Before the House Judiciary Committee, Subcommittee on Regulatory Reform, Commercial and Antitrust Law, March 7, 2019.
5. (Declaration) *In Re*: Merck, et al. v. United States Department of Health and Human Services, et al., United States District Court for the District of Columbia, Case 1:19-cv-01738, June 14, 2019 (on behalf of Plaintiffs).
6. (Declaration) *In Re*: Biotechnology Innovation Organization, et al. v. Alex Azar in his official capacity as Secretary of the United States Department of Health and Human Services, et al., United States District Court for the District of Northern California, Civil Case No: 20-cv-08603, December 11, 2020 (on behalf of Plaintiffs).
7. (Deposition testimony) *In Re*: National Prescription Opiate Litigation, United States District Court, Northern District of Ohio, Eastern Division, MDL No. 2804 Case No 17-MD-2804, June 7, 2019 and July 14, 2021 (on behalf of Defendant CVS).
8. (Testimony) Before the Senate Judiciary Committee, Subcommittee on Antitrust, Competition Policy, and Consumer Rights, June 12, 2019.
9. (Testimony) Before the United States House of Representatives, House Education and Labor Committee, Subcommittee on Health, Education, Labor and Pensions, September 26, 2019.
10. (Testimony) Before the House Oversight and Reform Committee, May 18, 2021.
11. (Deposition testimony) State of Florida, Office of the Attorney General, Department of Legal Affairs v. Purdue Pharma L.P. et al., in the Circuit Court of the Sixth Judicial Circuit in for Pasco County, Florida, Case No. 2018-CA-001438, December 13, 2021 (on behalf of Defendant CVS).
12. (Testimony) Before the Senate Committee on Commerce, Science, and Transportation's Consumer Protection, Product Safety, and Data Security Subcommittee, May 5, 2022.

13. (Testimony) Before the Senate Committee on Health, Education, Labor, and Pensions, March 22, 2023.
14. (Deposition Testimony) In Re: United States of America ex el. Benjamin Poehling v. United Health Group et al., Case No. CV 16-08697-FMO-PVCx, April 2, 2024 (on behalf of United States of America)
15. (Deposition testimony) Amgen, Inc. & Subsidiaries, v. Commissioner of Internal Revenue, United States Tax Court, 116017-21, 15631-22, July 25, 2024 (on behalf of Amgen).
16. (Deposition testimony) In Re: Express Scripts, Inc., and Subsidiaries, et al. v. United States of America, United States District Court, Eastern District of Missouri, Case Nos. 4:21-CV-00737 (HEA) and 4:21-CV-00740 (HEA), August 20, 2024 (on behalf of Defendant United States of America).
17. (Trial testimony) Amgen, Inc. & Subsidiaries, v. Commissioner of Internal Revenue, United States Tax Court, 116017-21, 15631-22, Jan 10, 2025 (on behalf of Amgen).