# Hanna Halaburda

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#### **Affiliation**

2019–present	New York University, Stern School of Business  Associate Professor of Technology, Operations and Statistics courtesy affiliation with Economics
2016–2019	New York University, Stern School of Business Visiting Scholar
2015–2016	New York University, Stern School of Business Visiting Associate Professor of Management and Organizations
2012–2019	Bank of Canada Senior Economist
2007-2012	Harvard Business School Assistant Professor of Business Administration, Strategy Unit

### Education

2007	PhD, Economics, Northwestern University
2001	M.A., Economics, Warsaw School of Economics
2001	M.A., Philosophy, Warsaw University

## Peer-Reviewed Journal Publications

[\*\* marks 500+ Google Scholar citation; \* marks 100+ Google Scholar citation]

- 1. Hanna Halaburda, Natalia Levina and Semi Min, "Digitization of Transaction Terms Shift Parameter within TCE: Strong Smart Contract as a New Mode of Transaction Governance," MISQ (forthcoming)
- 2. \* Yannis Bakos and Hanna Halaburda, "Overcoming the Coordination Problem in New Marketplaces via Cryptographic Tokens," *Information Systems Research* 33, no. 4, Special Issue on Market Design and Analytics (2022): 1368–1385
- 3. \* Hanna Halaburda, Guillaume Haerringer, Joshua Gans and Neil Gandal, "The Microeconomics of Cryptocurrencies," *Journal of Economic Literature* 60, no. 3 (2022): 971–1013
- 4. \* Tony Haitao Cui, Anindya Ghose, Hanna Halaburda, Raghuram Iyengar, Koen Pauwels, S. Sriram, Catherine Tucker and Sriramanwith Venkataraman, "Informational Challenges in Omnichannel Marketing: Remedies and Future Research," *Journal of Marketing* 85, no. 1 (2021): 103–120

- 5. Yannis Bakos, Hanna Halaburda and Christoph Mueller-Bloch, "When Permissioned Blockchains Deliver More Decentralization Than Permissionless," *Communications of ACM* 64 (2021): 20–22
- 6. Yannis Bakos and Hanna Halaburda, "Platform Competition with Multi-homing on Both Sides: Subsidize or Not?," *Management Science* 66, no. 12 (2020): 5599–5607
- 7. Hanna Halaburda, Bruno Jullien and Yaron Yehezkel, "Dynamic Competition with Network Externalities: Why History Matters," RAND Journal of Economics, 51 (2020): 3-31; lead article
- 8. Ran Abramitzky and Hanna Halaburda, "Were Jews in Interwar Poland More Educated?" Journal of Demographic Economics 86, Special Issue on The Economics of Religion (September 2020): 291–304
- 9. Hanna Halaburda and Yaron Yehezkel, "Focality Advantage in Platform Competition," *Journal of Economics & Management Strategy* 28, Special Issue on Platforms (2019): 49–59
- 10. \* Hanna Halaburda, "Blockchain Revolution without the Blockchain," Communications of the ACM 61 (July 2018): 27–29
- 11. \* Hanna Halaburda, Mikolaj Jan Piskorski and Pinar Yildirim, "Competing by Restricting Choice: The Case of Search Platforms," *Management Science* 64 (2018): 3574–3594
- 12. Hanna Halaburda, "Digital Currencies: Beyond Bitcoin," Communications & Strategies 103, Special Issue on Fintech (2016): 77–92
- 13. \*\* Neil Gandal and Hanna Halaburda, "Can We Predict the Winner in a Market with Network Effects? Competition in the Cryptocurrency Market," *GAMES* 7, Special Issue on Game Theoretic Analyses of Multi-Sided Markets (2016): 16–36
- Guillaume Haeringer and Hanna Halaburda, "Monotone Strategyproofness," Games and Economic Behavior 98 (2016): 68–77
- 15. Hanna Halaburda and Yaron Yehezkel, "The Role of Coordination Bias in Platform Competition," Journal of Economics & Management Strategy 25, no. 2 (2016): 274–312
- 16. \* Andrei Hagiu and Hanna Halaburda, "Information and Two-Sided Platform Profits," *International Journal of Industrial Organization* 34 (May 2014): 25–35
- 17. \* Ramon Casadesus-Masanell and Hanna Halaburda, "When Does a Platform Create Value by Limiting Choice?" *Journal of Economics & Management Strategy* 23, no. 2 (2014): 258–292

- 18. Hanna Halaburda and Yaron Yehezkel, "Platform Competition under Asymmetric Information," *American Economic Journal: Microeconomics* 5, no. 3 (2013): 22–68
- 19. David Goldreich and Hanna Halaburda, "When Smaller Menus are Better: Variability in Menu-Setting Ability," *Management Science* 59, no. 11 (2013): 2518–2535
- 20. Hanna Halaburda, "Unraveling in Two-Sided Matching Markets and Similarity of Preferences," Games and Economic Behavior 69, no. 2 (2010): 365–393

# Working Papers (including submitted papers)

- 21. Yannis Bakos and Hanna Halaburda, "Tradeoffs in Permissioned vs Permissionless Blockchains: Trust and Performance," with Yannis Bakos, NYU working paper, April 2023; best paper finalist at WISE 2021; submitted to Management Science
- 22. Hanna Halaburda, Zhiguo He and Jiasun Li, "An Economic Model of Consensus of Distributed Ledgers," NBER working paper, May 2023; submitted to *Management Science*
- 23. Yannis Bakos and Hanna Halaburda, "Blockchains, Smart Contracts and Connected Sensors: Enforceable Execution vs Better Information" NYU working paper, May 2023 (to be submitted soon)
- 24. Yannis Bakos and Hanna Halaburda, "Will Blockchains Disintermediate Platforms? The Problem of Credible Decentralization in DAOs," NYU working paper, March 2023
- 25. Hanna Halaburda and David Yermack, "Bitcoin Mining Meets Wall Street: A Study of Publicly Traded Crypto Mining Companies," NYU working paper, January 2023
- 26. Hanna Halaburda and Daniel Obermeier, "Competition on a Market for Transactions: The Effect of Ethereum's Gas Price Mechanism on Complement Heterogeneity," NYU working paper, May 2022; best paper finalist at WISE 2022

### **Books**

- 27. Hanna Halaburda, Miklos Sarvary and Guillaume Haeringer, Beyond Bitcoin: The Economics of Digital Currencies and Blockchain Technologies, 2nd ed, Palgrave Macmillan 2022
- 28. \* Hanna Halaburda and Miklos Sarvary, Beyond Bitcoin: The Economics of Digital Currencies, Palgrave Macmillan 2015

## **Book Chapters**

- Guillaume Haeringer and Hanna Halaburda, "Unraveling," in Online and Matching-Based Market Design, Federico Echenique, Nicole Immorlica, Vijay Vazirani (eds), Cambridge University Press, 2023
- 30. Guillaume Haeringer and Hanna Halaburda, "Bitcoin: A Revolution?," in *Digital Economy*, J. Ganuza and G. Llobet (eds), 2018
- 31. \* Joshua Gans and Hanna Halaburda, "Some Economics of Private Digital Currency," in *Economic Analysis of the Digital Economy*, A. Goldfarb, S. Greenstein and C. Tucker (eds), The University of Chicago Press, 2015

#### Conference Publications

- 32. Hanna Halaburda, Natalia Levina and Semi Min, "Understanding Smart Contracts as a New Concept in Transaction Cost Economics," 40th International Conference on Information Systems (ICIS), Munich, Germany, December 2019
  - updated and extended version has *minor revision at MISQ* as Hanna Halaburda, Natalia Levina and Semi Min, "Strong Smart Contracts as a New Mode of Transaction Governance: A Transaction Cost Economics Perspective"
- 33. Neil Gandal and Hanna Halaburda, "Competition in Cryptocurrency Market," 13th Workshop on the Economics of Information Security (WEIS), Pennsylvania State University, June 2014
  - updated and extended version published as Neil Gandal and Hanna Halaburda, "Can We Predict the Winner in a Market with Network Effects? Competition in the Cryptocurrency Market," *GAMES* 7, Special Issue on Game Theoretic Analyses of Multi-Sided Markets (2016): 16–36

### **Policy Analysis**

- 34. \* Ben S.C. Fung and Hanna Halaburda, "Central Bank Digital Currencies: A Framework for Assessing Why and How," Bank of Canada Staff Discussion Paper 2016-22
- 35. Ben S.C. Fung and Hanna Halaburda, "Understanding Platform-Based Digital Currencies," Bank of Canada Review, Spring 2014: 12–20

#### **Editor-Reviewed Publications**

- 36. Andrea Baronchelli, Hanna Halaburda and Alex Teytelboym, "Central bank digital currencies risk becoming a digital Leviathan," *Nature Human Behavior* (commentary), July 2022
- 37. Hanna Halaburda and Christoph Mueller-Bloch, "Toward a Multidimensional Conceptualization of Decentralization in Blockchain Governance: Commentary on "Two Sides of The Same Coin? Decentralized Versus Proprietary Blockchains and the Performance of Digital Currencies" by Cennamo, Marchesi, and Meyer," *Academy of Management Discoveries*, 2020, Vol. 6, No. 4, 713–714
- 38. Hanna Halaburda and Christoph Mueller-Bloch, "Will We Realize Blockchain's Promise of Decentralization?," *Harvard Business Review*, September 2019
- 39. Hanna Halaburda and Felix Oberholzer-Gee, "The Limits of Scale: Companies That Get Big Fast Are Often Left Behind," *Harvard Business Review* 92, no. 4 (April 2014): 95-99
- 40. Hanna Halaburda and Mikolaj Jan Piskorski, "When Should a Platform Give People Fewer Choices and Charge More for Them?" *The CPI Antitrust Journal* 6, no. 2 (2010): 2010–2011

## Course Development Materials

New undergraduate course developed at NYU-Stern in 2021, "Blockchain and Cryptocurrencies: Technology and Strategy Perspective"

"Chances Are? Course Selection at HBS and at Kellogg," HBS Case (711-449) and Teaching Note (711-449), with Aldo Sesia

"Developing an App for That: Mobile Application Strategy (Banking)," HBS Case (711-415) and Teaching Note (711-535), with Joshua Gans and Nathaniel Burbank

"eHarmony," HBS Case (709-424) and Teaching Note (709-446), with Mikolaj Jan Piskorski and Troy Smith

"If We Ran The World," HBS Case (711-490) and Teaching Note (712-413), with Radka Dohnalowa and Aldo Sesia

"One Game to Rule Them All: Lord of the Rings Online and the MMO Market," HBS Case (711-529) and Teaching Note (712-435), with William Collis, Rob McKeon and Ivan Nausieda

"Responding to the Wii?" HBS Case (709-448) and Teaching Note (709-481), with Andrei Hagiu

"Tequila Mobile SA" HBS Case (712-453) and Teaching Note (712-473), with Jerzy Surma and Aldo Sesia

"Analyzing Relative Costs," HBS Note (708-462), with Jan W. Rivkin

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# Awards and Honors

2023	NYU Stern Teaching Award for Pedagogical Innovation
2022	Keynote address at the 4th Tokenomics Conference
2022	Keynote address at Munich Summer Institute
2022	Workshop on Information Systems and Economics (WISE) best paper finalist
2022	NBER Economics of Digitization grant
2021	Keynote address at the 19th ZEW Conference on the Economics of ICT
2021	Workshop on Information Systems and Economics (WISE) best paper finalist
2021	U Penn Economics of Digital Services grant
2019	The Networks, Electronic Commerce and Telecommunications (NET) Institute grant
2010 – 2015	The Networks, Electronic Commerce and Telecommunications (NET) Institute grants
2012	EECH Case Award
2011	Bergman Memorial Research Award
2011	US-Israeli Binational Science Foundation grant

# **Editorial Roles**

2023	Review of Network Economics, Editor of Special Issue on Cryptocurrency and Blockchain
2022-present	MIS Quarterly, Associate Editor
$2022{\rm -present}$	ACM Transactions on Economics and Computation, Associate Editor
2022	Journal of Economics and Management Strategy,
	Editor of Special Issue on the Digital Business Revolution
2018-present	Management Science, Associate Editor
2018 – 2021	Journal of Economics and Management Strategy, Co-Editor

# Conference Organizing & Program Committee Service

2022 – 2023	Crypto and Blockchain Economics Research Forum (CBER) Conference, Co-organizer
2022	ACM Conference on Economics and Computation, Area Editor for Blockchain
2022	ACM Advances in Financial Technology, Program Committee
2021	3rd International Conference on Blockchain Economics, Security and Protocols (Tokenomics), Organizer, Chair of Economics Program Committee
2021	Conference on Information Systems and Technology (CIST), Program Committee
2021	Crypto and Blockchain Economics Research Forum (CBER) Conference, Program Committee
2020	Cornell Fintech Conference, Program Committee
2020	NY Fed Fintech Conference, Program Committee
2019 – 2021	ACM Conference on Economics and Computation, Program Committee
2019 – 2020	Tokenomics (Paris & Toulouse), Program Committee
2017 - 2020	International Conference on Information Systems (ICIS), Associate Editor
2017 - 2020	Toronto Fintech Conference, Program Committee

### Teaching Experience

2021 – 2023	Blockchain and Cryptocurrencies: Technical and Strategic Perspective, NYU-Stern
2021 – 2022	Fintech – Experiential Learning, NYU-Stern
2019 – 2022	Foundations of Fintech, NYU-Stern
2016	Game Theory (MBA and Undergraduate), NYU-Stern
2015	Strategy, INE PAN (Polish Academy of Sciences)
2014	Business Economics, Executive MBA, Queen's University at Kingston
2011 – 2012	Competing through Business Models (MBA elective course), Harvard Business School
2008 – 2010	Strategy (MBA required course), Harvard Business School

### PhD Advising

Chitra Marti (Econ Stern), committee member

Chenshuo Sun, committee member

Nicholas Garcia, committee member

Semi Min, committee member; coauthored

Hanna Halaburda, Natalia Levina and Semi Min, "Strong Smart Contracts as a New Mode of Transaction Governance: A Transaction Cost Economics Perspective," Oct 2022; minor revision at MISQ

Daniel Obermeier, visiting PhD student 2021, current post-doc; coauthored

Hanna Halaburda and Daniel Obermeier, "Competition on a Market for Transactions: The Effect of Ethereum's Gas Price Mechanism on Complement Heterogeneity," NYU working paper, May 2022; best paper finalist at WISE 2022

Christoph Mueller-Bloch, visiting PhD student 2019; coauthored

Yannis Bakos, Hanna Halaburda and Christoph Mueller-Bloch, "When Permissioned Blockchains Deliver More Decentralization Than Permissionless," *Communications of ACM* 64 (2021): 20–22

Hanna Halaburda and Christoph Mueller-Bloch, "Toward a Multidimensional Conceptualization of Decentralization in Blockchain Governance: Commentary on "Two Sides of The Same Coin? Decentralized Versus Proprietary Blockchains and the Performance of Digital Currencies" by Cennamo, Marchesi, and Meyer," *Academy of Management Discoveries*, 2020, Vol. 6, No. 4, 713–714

Hanna Halaburda and Christoph Mueller-Bloch, "Will We Realize Blockchain's Promise of Decentralization?," *Harvard Business Review*, September 2019

# Other Service to NYU and Stern

2018-present	Scientific Mentor to Endless Frontier Lab
2019-present	Fubon Innovation Fellow
2019–present	Volatility and Risk Institute Faculty Advisory Board
2022-present	NYU Shanghai Business and Economics Honors Program Advisory Board
2018, 2022	organizing and moderating sessions at NYU Stern Fintech Conference
2019	organizing and moderating session at NYU Stern Digital Innovation Conference
2019/20,  2021/22	organizing IS seminars
2019/20	co-organizing TOPS department seminars
2019/20	IS recruiting committee member
2019-present	participating in SPUR program
2019/20,  2021/22	mentoring Stern Honor's Thesis
2022-present	mentoring in NYU's Presidential Honors Scholars Program

# Recent Invited Research Talks

2023	University of British Columbia
2022	Board of Directors of the Federal Reserve Bank, Cornell University, MIT,
	Asia Innovation and Entrepreneurship Association (AIEA), Tilburg University,
	CB&DC webinar, Boston Fed, Carnegie-Mellon University, Luohan Academy,
	Bank of Canada, University of Southern California, University of Toronto, CBER-Forum
2021	VIDE Virtual Digital Economy Seminar, Southern Methodist University, Luohan Academy,
	Bolzano Blockchain Evenings, Toulouse School of Economics Platforms Online Seminar
2020	Paris Fintech Webinar, University of Pennsylvania, Harvard Business School, INSEAD
2019	Columbia University, University of Michigan

# Recent Conference Talks

2023	Theory in Economics and Information Systems (TEIS), NBER Digitization,
	American Economic Association Annual Meeting
2022	Workshop on Information Systems and Economics (WISE), CoDE@MIT, INFORMS,
	Platforms Workshop at National University of Singapore,
	Conference on Information Systems and Technology (CIST),
	1st Conference on DeFi at USC Chapel Hill
2021	Workshop on Information Systems and Economics (WISE), INFORMS,
	Philadelphia Fed Annual Fintech Conference, TUM Workshop on Smart Contracts,
	Conference on Information Systems and Technology (CIST),
	Academy of Management Annual Meeting, BU Platforms Symposium
2020	Workshop on Information Systems and Economics (WISE), CryptoEconomics Security Confe
	Toronto Fintech Conference, Tokenomics, NY Fed Fintech Conference, NBER Digitization,
	TUM Workshop on Smart Contracts, Theory in Economics and Information Systems (TEIS)
2019	Workshop on Information Systems and Economics (WISE), Toronto Fintech Conference,
	International Conference on Information Systems (ICIS), CryptoEconomics Systems Forum,
	University of Chicago Blockchain Conference, Academy of Management Annual Meeting,
	BU Platforms Symposium, NBER Digitization, NET Institute, Tokenomics

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#### **Podcasts**

Digital Insider, "The Promise and Peril of Blockchain, Cryptocurrencies and Web3", 2023

Taking About Platforms, "Will Blockchains Disintermediate Platforms?", 2022

Brave New World, "Hanna Halaburda and Yannis Bakos on Bitcoin, Blockchain and DeFi", 2022

#### Media Mentions

2023:

The Guardian, "Bitcoin is terrible for the environment? can it ever go green?"

Money.com, "Coinbase for Beginners: A Complete Guide to Buying and Selling Cryptocurrency on a Popular Exchange."

Channel News Asia, "Knowledge Gaps, Fear or Hacks Top U.S Firms From Adopting Digital Payment Systems"

2022:

Pymnts.com, "Crypto Firms Put New Oversights in Place After FTX's Downfall"

Cointelegraph, "Was the fall of FTX really crypto's 'Lehman moment'?"

Pymnts.com, "FTX Collapse Was Old Tricks Powered by New Tech"

Spectrum NY1 (local TV), "Gillibrand Hopes Collapse of FTX Cryptocurrency Exchange Will Spur Congress to Act"

CoinDesk, "Is Voluntary Regulation the Right Approach to DeFi?"

Le Monde, "Il y a une absence déconcertante de débat public sur les questions de confidentialité qui entourent les monnaies centrales numériques"

Global Finance Magazine, "Straight Talk on CBDCs: Q&A with Hanna Halaburda of NYU Stern Business School."

OliverWyman Forum, "Crypto's Bear Market May Have a Silver Lining."

WWL First News (radio), "What's Going on with Cryptocurrency?"

Money.com, "What is Ethereum?"

Global Echo, "Bitcoin's Potential is Revealed in the Ukraine War"

ARD, "Bitcoin's Potential is Revealed in the Ukraine War" / "Ukraine-Krieg: Die Doppelrolle der Kryptowahrungen")

WWL First News, "Explaining Cryptocurrency and Central Bank Digital Currencies."

Money.com, "Can the Super Bowl Sell a New Generation of Investors on Crypto?"

Money.com: "Elon Musk Tweets, and Dogecoin Soars. What Does That Say About Crypto as an Investment?"

2021:

Cointelegraph, "Can Blockchain Solve Its Oracle Problem?"

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The Rockland Times, "The Old Portfolio Advice is Dead, Here's What Your Portfolio Needs Now"

Money.com, "A Crypto Expert Explains the Bizarre 1,000% Rise of the Omicron Token."

Money.com, "Crypto Paychecks: Why Politicians Are Jumping on the Trend to Get Paid in Bitcoin."

Quartz, "The U.S. Crackdown on Stablecoins is Targeting Tether First."

Quartz, "What Is the Point of a Stablecoin?"

Money.com, "It Just Got Easier to Mine Bitcoin at Home."

CryptoNews, "Why Fiat Currency is More Confusing Than Crypto."

Money.com, "Mark Cuban and Elon Musk Agree on the Merits of Dogecoin. Crypto Experts Have a Different Opinion."

Money.com, "Diversification is the Key to Investing in Stocks and Bonds. Here's Why it Can Work for Crypto, Too."

Quartz, "The Fed's Digital Dollar Could Bring Millions Into the Digital Economy."

Knowledge@Wharton, "How to Optimize Your Omnichannel Marketing Strategy."

Money.com, "How To Prepare for the Next Bitcoin Crash."

Money.com, "Coinbase for Beginners: A Complete Guide to Buying and Selling Cryptocurrency on the Popular Exchange."

Money.com, "You Can Buy Bitcoin on Venmo Now. Should You?"

Money.com, "A Beginner's Guide to Dogecoin, the Cryptocurrency That Started as a Joke and Is Now Worth Billions."

Science Codex, "How Blockchain and Machine Learning Can Deliver the Promise of Omnichannel Marketing."

2020 and before

The Gould Standard, "The Rise of Decentralized Finance (DeFi): Implications for Financial Services and Beyond"

Cointelegraph, "COVID-19 Popularized Decentralization, but Blockchain May not Catch on."

VoxEU, "The Microeconomics of Cryptocurrencies"

Cointelegraph, "Smart Contracts 'Have Limited Potential' Without IoT Sensors"

CryptoCompare, "A New Economic Order: What is the Post-COVID-19 Financial Paradigm?"

City A.M., "Hanna Halaburda talks to BEQUANT"

BBC, "Should I delete Tinder? These millennials think so"

BusinessMirror, "Will We Realize Blockchain's Promise of Decentralization?"

World Finance, "Discovering the makings of a successful cryptocurrency"