

CHRISTOS ANDREAS ARISTOTELES MAKRIDIS

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ACADEMIC APPOINTMENTS AND AFFILIATIONS

Nov 2023 — PRESENT | Professor, Executive Academy, Vienna University of Economics & Business
Feb 2022 — PRESENT | Adjunct and Visiting Faculty, Institute for the Future, University of Nicosia
Sep 2023 — PRESENT | Associate Research Professor, Arizona State University, W. P. Carey School
Nov 2019 — Aug 2023 | Assistant Research Professor, Arizona State University, W. P. Carey School
Dec 2020 — PRESENT | Research Affiliate, Center for Human, Artificial Intelligence, and Robot Teaming, Global Security Initiative, Arizona State University
Aug 2020 — PRESENT | Digital Fellow, Stanford University, Digital Economy Lab
Jan 2020 — PRESENT | Senior Adviser, National AI Institute, Department of Veterans Affairs
Dec 2018 — PRESENT | Non-resident Fellow, Baylor University Institute for Studies of Religion
Aug 2019 — Jun 2023 | Senior Adviser, Gallup
Jul 2021 — Oct 2022 | Adjunct Fellow, Manhattan Institute
May 2020 — Jun 2020 | Visiting Fellow, Foundation for Defense of Democracies
Mar 2018 — Apr 2021 | Digital Fellow, MIT Sloan Initiative on the Digital Economy
Mar 2018 — Jun 2020 | Non-resident Fellow, Harvard Kennedy School Cyber Security Project
Jul 2018 — Aug 2019 | Economist, White House Council of Economic Advisers
Sep 2020 — Dec 2021 | Non-resident Research Scientist, DataCamp

EDUCATION

2012-2018 STANFORD UNIVERSITY

PhD, Management Science & Engineering, Department of Engineering
PhD Minor and Masters, Economics, Department of Economics
Advisers: Nicholas Bloom, Mark Duggan, Luigi Pistaferri, and Amit Seru

2009-2012 ARIZONA STATE UNIVERSITY

Bachelor of Science, Economics; Minor in Mathematics
G.P.A. 4.00, Summa Cum Laude, Outstanding Graduating Senior

RESEARCH FIELDS

Labor Economics, Digital Economics / Innovation, Household Finance, Art and Culture

CORE ECONOMICS PEER REVIEWED PUBLICATIONS

Choudhury, Raj, Tarun Khanna, Christos A. Makridis, and Kyle Schirmann. (2024). Is Hybrid Work the Best of Both Worlds? Evidence from a Field Experiment. *Review of Economics and Statistics*, forthcoming.

- Makridis, Christos A., Michael Froewis, Kiran Sridhar, and Rainer Boehme. (2023). The Rise of Decentralized Cryptocurrency Exchanges Evaluating the Role of Airdrops and Governance Tokens. *Journal of Corporate Finance*, 79.
- Liu, Tim, Christos A. Makridis, Paige Ouimet, and Elena Simintzi. (2023). The Distribution of Non-Wage Benefits: Maternity Benefits and Gender Diversity. *Review of Financial Studies*, 36(1): 194–234.
- Makridis, Christos A., and Jason Schloetzer. (2023). Extreme Local Temperatures Lower Expressed Sentiment About U.S. Economic Conditions with Implications for the Stock Returns of Local Firms. *Journal of Behavioral and Experimental Finance*, 37.
- Makridis, Christos A. (2022). When Houses of Worship Go Empty: The Effects of State Restrictions on Well-being Among Religious Adherents. *European Economic Review*, 149.
- Makridis, Christos A. (2022). The Social Transmission of Economic Sentiment on Consumption. *European Economic Review*, 148: 104232.
- Graham, James, and Christos A. Makridis. (2022). House Prices and Consumption: A New Instrumental Variables Approach. *American Economic Journal: Macroeconomics*, 15(1): 411-443.
- Granja, Joao, Christos A. Makridis, Constantine Yannelis, and Eric Zwick. (2022). Did the Paycheck Protection Program Hit the Target? *Journal of Financial Economics*, 145(3): 725-761.
- Makridis, Christos A., and Maury Gittleman. (2022). On the Cyclicity of Real Wages and Employment: New Evidence and Stylized Facts from Performance Pay and Fixed Wage Jobs. *Journal of Law, Economics, and Organization*, 38:(3): 889-920.
- Makridis, Christos A., and Michael Ohlrogge. (2022). Foreclosure Spillovers and Individual Well-being: Evidence from the Great Recession. *Real Estate Economics*, 50(1): 122-146.
- Gallipoli, Giovanni, and Christos A. Makridis. (2022). Sectoral Digital Intensity and GDP Growth After a Large Employment Shock: A Simple Extrapolation Exercise. *Canadian Journal of Economics*, 55(S1): 446-479.
- Binder, Carola, and Christos A. Makridis. (2022). Stuck in the Seventies: Gas Prices and Macroeconomic Expectations. *Review of Economics and Statistics*, 104(2): 293-305.
- Makridis, Christos A. (2021). Do Data Breaches Damage Reputation? Evidence from 43 Companies Between 2002 and 2018. *Journal of Cybersecurity*, 7(1).
- Makridis, Christos A. (2021). (Why) Is There a Public/Private Pay Gap? *Journal of Government and Economics*, 1.
- Kizilcec, Rene, Christos A. Makridis, and Katharine Sadowski. (2021). Pandemic Response Policies' Democratizing Effects on Online Learning. *Proceedings of the National Academy of Science*, 118(11).
- Ali, Umair, Chris Herbst, and Christos A. Makridis. (2021). The Impact of Covid-19 on the U.S. Child Care Market: Evidence from Stay-at-Home Orders. *Economics of Education Review*, 82.
- Makridis, Christos A., and Michael Ohlrogge. (2021). Moving to Opportunity? The Geography of the Foreclosure Crisis and the Importance of Location. *Journal of Economic Geography*, 22(1): 159–180.
- Makridis, Christos A. (2021). Is Recycling Effective? Evidence from California between 2004 and 2017, *Spring Issue, Land Economics*.
- Bronshtein, Gila, and Christos A. Makridis. (2020). The Declining Insurance Benefit in the Municipal Bond Market. *National Tax Journal*, 73(1): 115-156.
- Makridis, Christos A. (2020). Do Right-to-Work Laws Work? Evidence from Individual Well-being and Economic Sentiment. *Journal of Law and Economics*, 62(2): 713-745.
- Choudhury, Prithwiraj, and Khanna, Tarun, and Christos A. Makridis. (2020). Do Managers Matter? A Natural Experiment from 42 R&D Labs in India. *Journal of Law, Economics, and Organization*, 36(1): 47-83.

Makridis, Christos A. and Dean, Benjamin. (2018). Measuring the Economic Effects of Data Breaches on Firm Outcomes: Challenges and Opportunities, *Journal of Economic and Social Measurement*, 43: 59-83.

Gallipoli, Giovanni and Christos A. Makridis. (2018). Structural Transformation and the Rise of Information Technology. *Journal of Monetary Economics*, 97: 91-110.

Makridis, Christos A. and Ohlrogge, Michael. (2017). Validating RefUSA micro-data with the Longitudinal Employer- Household Dynamics Data. *Economics Letters*, 152:83-87.

ARTIFICIAL INTELLIGENCE AND VETERANS PEER REVIEWED PUBLICATIONS

Makridis, Christos A., Michael Darden, and Gil Alterovitz. (2024). The Effects of COVID-19 on Veterans: The Role of Health Equity and Access to Care. *Armed Forces & Society*, forthcoming.

Makridis, Christos A., Anthony Boese, Rafael Fricks, Don Workman, Molly Klote, Joshua Mueller, Isabel Hildebrandt, Michael Kim, and Gil Alterovitz. (2023). Informing the Ethical Review of Human Subjects Research Utilizing Artificial Intelligence. *Frontiers in Computer Science*, 14(5).

Makridis, Christos A., J.D. Kelly, and Gil Alterovitz. (2022). The Effects of Department of Veterans Affairs Medical Centers on Socio-economic Outcomes: Evidence from the Paycheck Protection Program. *PLOS One*, 17(12).

Atkins, David, Christos A. Makridis, Rachel Ramoni, Gil Alterovitz, and Carolyn Clancy. (2022). Developing and Implementing Predictive Models in a Learning Healthcare System: Traditional and Artificial Intelligence Approaches in the Veterans Health Administration. *Annual Review of Biomedical Data Science*, 5: 393-413.

Makridis, Christos A., Tim Strebel, Rafael Fricks, and Gil Alterovitz. (2021). Applications of Artificial Intelligence to Early Warning Scores for Clinical Decision-making: Evidence from the Department of Veterans Affairs. *AAAI 2021 Fall Symposium Series*.

Makridis, Christos A., and Barry Hirsch. (2021). The Labor Market Earnings of Veterans: Is Military Experience More or Less Valuable than Civilian Experience? *Journal of Labor Research*, 42: 303-333.

Makridis, Christos A., Seth W. Hurley, Molly Klote, and Gil Alterovitz. (2021). Ethical Applications of Artificial Intelligence: Evidence from Health Research on Veterans. *Journal of Medical and Internet Research: Medical Informatics*, 9(6).

Makridis, Christos A., David Zhao, Adi Bejan, and Gil Alterovitz. (2021). Leveraging Machine Learning to Characterize the Role of Socio-economic Determinants on Physical Health and Well-being Among Veterans. *Computers in Biology and Medicine*, 133.

Makridis, Christos A., Tim Strebel, Vincent Marconi, and Gil Alterovitz. (2021). Designing Covid-19 Mortality Predictions to Advance Clinical Outcomes: Evidence from the Department of Veterans Affairs. *BMJ Health & Care Informatics*, 28(1): 1-9.

Makridis, Christos A., Anish Mudibe and Gil Alterovitz. (2020). How Much Does the (Social) Environment Matter? Using Artificial Intelligence to Predict COVID-19 Outcomes with Socio-demographic Data. *Pacific Symposium on Biocomputing*.

GENERAL SOCIAL SCIENCE PEER REVIEWED PUBLICATIONS

Makridis, Christos A. and Jonathan Kuuskoski. (2024). Narrowing the Gap : Implications of Arts Entrepreneurship Curricula on Artist Labor Market Outcomes. *Artivate*, forthcoming.

Makridis, Christos A. (2024). Discrimination in the Spotlight: The Effects of Political and Religious Bias on Consumer Behavior and Labor Markets. *Journal of Economics, Management and Religion*, forthcoming.

Makridis, Christos A., Andrew Borkowski, and Gil Alterovitz. (2024). Perspectives on Advancing Outcomes and Impact through a Network of AI Institutes, with Gil Alterovitz and Andrew Borkowski. *Science and Public Policy*, forthcoming.

- Ali, Umair, Chris Herbst, and Christos A. Makridis. (2024). Minimum Quality Regulations and the Demand for Child Care Labor. *Journal of Policy Analysis and Management*, forthcoming.
- Makridis, Christos A. (2023). The Labor Market Returns of Being An Artist: Evidence from the United States, 2006-2021. Forthcoming, *Journal of Cultural Economics*.
- Makridis, Christos A., Lennart Maschmeyer and Max Smeets. (2023). If it Bleeps it Leads? - Media Coverage on Cyber Conflict and Misperception. Forthcoming, *Journal of Peace Research*.
- Rothwell, Jonathan, Christos A. Makridis, Christine Ramirez, and Sonal Desai. (2023). The Effects of Information on Policy and Behavioral Beliefs During a Pandemic. *Frontiers in Public Health*, 11.
- Makridis, Christos A., and Gordon Liao. (2023). Democratizing Effects of Digital Ledger Technologies: Implications for Economic Mobility. *Frontiers in Blockchain Economics*, 6.
- Makridis, Christos A., and Erin McGuire. (2023). The Quality of Innovation 'Booms' During 'Busts'. *Research Policy*, 52(1).
- Paik, Yongwook, and Christos A. Makridis. (2023). The Social Value of a Ridesharing Platform: A Hedonic Pricing Approach. *Empirical Economics*, 64:2125–2150.
- Makridis, Christos A., and Saurabh Mishra. (2022). Artificial Intelligence as a Service, Economic Growth, and Well-Being. *Journal of Services Research*, 25(4).
- DeAngelis, Corey, and Christos A. Makridis. (2022). Are School Reopening Decisions Related to Funding? Evidence from Over 12,000 Districts During the Covid-19 Pandemic. *Journal of School Choice*, 16(3): 454-476.
- Makridis, Christos A. (2022). Religious, Civil, and Economic Freedoms: What's the Chicken and What's the Egg. *Journal of Economics, Management and Religion*, 2(2).
- Makridis, Christos A., and Joo Han. (2021). Future of Work and Employee Empowerment: Evidence from a Decade of Technological Change. *Technological Forecasting and Social Change*, 173.
- Litina, Anastasia, Christos A. Makridis, and George Tsiachtsiras. 2021. Do Product Market Reforms Raise Innovation? Evidence from Micro-data Across 12 Countries. *Technological Forecasting and Social Change*, 169.
- Jace, Clara, and Christos A. Makridis. (2021). Does Marriage Protect Mental Health? Evidence from the Covid-19 Pandemic. *Social Science Quarterly*, 102(6): 2499-2515.
- DeAngelis, Corey, and Christos A. Makridis. (2021). Are School Reopening Decisions Related to Union Influence? *Social Science Quarterly*, 102(5): 2266-2284.
- Makridis, Christos A. and Cary Wu. (2021). How Social Capital Helps Communities Weather the COVID-19 Pandemic. *PLoS ONE*, 16(1).
- Makridis, Christos and Byron Johnson, and Koenig, Harold G. (2021). Does Religious Affiliation Protect People's Well-being? Evidence from the Great Recession After Correcting for Selection Effects. *Journal for the Scientific Study of Religion*, 60(2): 252-273.
- Makridis, Christos. (2020). Human Flourishing and Religious Liberty: Evidence from Over 150 Countries. *PLoS ONE*, 15(10).
- Huang, Arthur, Christos A. Makridis, Mark Baker, Marcos Medeiros, and Zhishan Guo. (2020). Understanding the Impact of COVID-19 Intervention Policies on the Hospitality Labor Market. *International Journal of Hospitality Management*, 91.
- Makridis, Christos A., and Max Smeets. (2019). The Cross-section of Cyber Security Readiness: Evidence from 35 Countries. *Journal of Cyber Policy*, 4(1): 72-89.
- Craxton, Melanie and Christos A. Makridis, James Merrick, and John Taggart. (2017). On the Climate Policy Implications of Substitutability and Flexibility in the Economy: An In-depth Integrated Assessment Model Diagnostic. *Technology Forecasting and Social Change*, 125: 289-298.

LAW REVIEW PUBLICATIONS

Makridis, Christos A., Stamatias Papangelou, Neil Barnes, and JiNan Glasgow-George. (2024). The Future of Intellectual Property: The Complementary Role of Artificial Intelligence and Blockchain. *Journal of the Patent & Trademark Office Society*, conditional acceptance.

Makridis, Christos A., and Joel Thayer. (2024). The Big Tech Antitrust Paradox: A Reevaluation of the Consumer Welfare Standard for Digital Markets. *Stanford Technology Law Review*.

Makridis, Christos A., and Patrick McLaughlin. (2022). Never Letting a Crisis Go to Waste and the Ratcheting Effect of Regulation: Evidence from the COVID-19 Pandemic. *NYU Journal of Law and Liberty*, 15(3): 606-627.

Desai, Deven, and Christos A. Makridis. (2022). Identifying Critical Infrastructure in a World with Network Cybersecurity Risk. *Jurimetrics: The Journal of Law, Science, and Technology*. (winner of the Loevinger Prize)

Shackelford, Scott, Anne Boustead, and Christos A. Makridis. (2022). Defining “Reasonable Cybersecurity: Evidence from the States. *Yale Journal of Law and Technology*.

WORKING PAPERS IN REVIEW OR PREPARATION

Does Monetary Policy Shift Household Expectations, with Karel Mertens and Daniel Lewis, *R&R at Journal of Monetary Economics*.

The Local Effects of Foreclosures, with Michael Ohlrogge, *R&R at Journal of Urban Economics*

Split Personalities? Behavioral Effects of Temperature on Financial Decision-making, with Anastasia Litina, and Despoina Gavresi, *R&R at Kyklos*.

The Effects of Remote Instruction on Mental Health: Evidence from the COVID-19 Pandemic, with Clara Piano and Corey DeAngelis

From Bits to Bonds: The Economic Ripple of Local Cyberattacks on Municipalities, with Lefteris Andreadis, Eleni Kalotychoy, Christian Lundblad, Christodoulos Louca

Earnings Are Greater and Increasing in Occupations that Require Intellectual Tenacity, with Louis Hickman, and Benjamin Manning

Balancing Returns and Responsibility: Evidence from Shrinkage-based Portfolios, with Majeed Simaan

A task-interdependency model for complex collaboration towards human-centered crowd work, with David Lee

Digital Work and Consumption, with Giovanni Gallipoli

The Cross Section of Cybersecurity Vulnerabilities: Evidence from a Disclosure-Independent Risk Measure, with Tim Liu and Erick Galinkin

Partisanship and Policy on an Emerging Issue: Mass and Elite Responses to COVID-19 as the Pandemic Evolved, with Jonathan Rothwell and Brandice Canes-Wrone

Borrower Expectations and Mortgage Performance: Evidence from the COVID-19 Pandemic, FHFA Working Paper 21-02, with Will Larson and Chad Redmer

How Many Americans Work Remotely? A Survey of Surveys and Their Measurement Issues, with Erik Brynjolfsson, John Horton, Alex Mas, Daniel Rock, and Hong-Yi Tu

Social Integration via Third Place Interactions and Covid-19 Distancing and Outcomes, with Sunasir Dutta

Does Working Lead to Procrastination in Learning? Evidence from an Online Learning Experiment, with Victor Benjamin, Raghu Santanam, and Wen Ya Shen

Blockchain Philanthropy: DAO Non-Profits in a Web3 Ecosystem, with Eric Alston

Learning from Friends in a Pandemic: Social Networks and the Macroeconomic Response of Consumption, with Tao Wang

Does Working from Home Increase Job Satisfaction and Retention? Evidence from the COVID-19 Pandemic, with Jason Schloetzer

From Crisis to Norm: How Remote Work Patterns and Employee Engagement Have Transformed Across Occupations and Industries, with Jason Schloetzer

Quiet Quitting or Noisy Leisure? The Allocation of Time and Remote Work, 2019-2022

The Dark Side of Faster Internet Speeds: Evidence from 153 Countries, 2014-2019

Perceived Impact of Generative AI on Assessments: Comparing Educator and Student Perspectives in Australia, Cyprus, and the United States, with Rene Kizilcec, Elena Papanastasiou, Elaine Huber, and Adele Smolansky

HANDBOOKS AND BOOKS

Book chapter in “The Future of Labour: How Disruption, Technology and Practice will Change the Way we Work,” tentatively 2024 in Routledge

Multiply – How to Leverage Emerging Trends with Cryptocurrencies and the Remote Work Economy, Publisher: Post Hill Publishing, distributed through Simon and Schuster, work in progress.

Brown, Goldy III., and Christos A. Makridis. (2023). The Economics of Equity in K-12 Education: A Post-Pandemic Policy Handbook for Closing the Opportunity Gap and Using Education to Improve the American Economy, with Goldy Brown III, Publisher: Rowman and Littlefield.

Makridis, Christos A., Kathleen Guan, Evan Rey Ludington, Michael Hopkins, and Soula Parassidis. (2022). The Role of Arts and Music in Early Childhood Education. Handbook of Research on Innovative Approaches to Early Childhood Development and School Readiness. IGI Global.

POLICY PUBLICATIONS

Makridis, Christos A., Anne Boustead, and Scott Shackelford. (2024). Navigating the cybersecurity labyrinth: Defining “reasonable” standards for businesses. Brookings Institution.

Teodorescu, Mike, and Christos A. Makridis. (2024). Fairness in machine learning: Regulation or standards? Brookings Institution.

Makridis, Christos A. and Patrick A. McLaughlin. (2024). How State Occupational Licenses Affect Jobs and Salaries. Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA.

Teodorescu, Michael, and Christos A. Makridis. (2024). Fairness in Machine Learning: Regulation or Standards. Brookings Institution.

Makridis, Christos A., and Robert VerBruggen. (2022). Breaking Down the 2020 Homicide Spike. Manhattan Institute.

Shackelford, Scott, Anne Boustead, and Christos A. Makridis. (2022). Defining “Reasonable” Cybersecurity: Lessons from the States. *Council on Foreign Relations*.

Makridis, Christos A., and Soula Parassidis. (2021). Reclaiming Arts and Culture in Education: The Fundamental Importance of the Fine Arts. *American Enterprise Institute*.

Desai, Deven, and Christos A. Makridis. (2020). We Should Have Known SolarWinds Would Be a Target. *Council on Foreign Relations*.

Makridis, Christos A., Ian Utile and Ted Hahs. (2020). Decentralized Voice Tech Will Disrupt Centralized Interfaces. *attn.live*.

Makridis, Christos A., and Alberto Rossi. (2020). Rise of the "Quants" in Financial Services: Regulation and Crowding Out of Routine Jobs. *Mercatus COVID-19 Policy Brief Series*, Mercatus Center at George Mason University, Arlington, VA

Makridis, Christos A., and Robert M. McNab. (2020). The Fiscal Cost of COVID-19: Evidence from the States. *Mercatus COVID-19 Policy Brief Series*.

Makridis, Christos. (2020). Any Publicity is Good Publicity? Data Breaches and Firm Reputation. *Foundation for Defense of Democracies and Council on Foreign Relations*.

Zhong, Weifeng, Christos A. Makridis, and James Diddams. (2020). Emergency Executive Powers: Not Needed Indefinitely. *Mercatus COVID-19 Policy Brief Series*.

Makridis, Christos and Jonathan Hartley. (2020). The Cost of COVID-19: A Rough Estimate of the 2020 US GDP Impact. *Mercatus COVID-19 Policy Brief Series*.

Makridis, Christos and Michael Ohlrogge. (2019). Tracking Individuals Pre- and Post-Foreclosure. *Cityscape: A Journal of Policy Development and Research*, 21(2): 163-174.

TEACHING AND SERVICE EXPERIENCE

2024-PRESENT Professor | Vienna University of Economics & Business, Advanced Data Analytics

2022-PRESENT Professor | University of Nicosia, Token Economics

2013-PRESENT Economics Editor | Global Water Forum (GWF), jointly sponsored by Australia National University and the United Nations Educational, Science and Cultural Organization

2018 Teaching Assistant and Section Leader for Christine Pal Chee | Stanford, Empirical Methods in Public Policy (Spring)

2018 Teaching Assistant and Section Leader for Christine Pal Chee | Stanford, Empirical Methods in Public Policy (Spring)

2017 Teaching Assistant and Section Leader for Raj Chetty | Stanford, Using Big Data to Solve Economic and Social Problems (Spring)

2012 Teaching Assistant & Grader for Dr. Michael Hanemann | ASU, Environmental and Resource Economics (Spring)

GRANTS, SCHOLARSHIPS, HONORS, AND AWARDS

2021-2022 Smith Richardson Foundation (\$234,000)

2017-2018 SIEPR Shultz Fellowship for doctoral dissertation (\$25,000)

2013-2018 Institute of Humane Studies (~\$5,000/year)

2016-2017 Carnegie Foundation through Columbia SIPA for cybersecurity (\$10,000)

2016-2017 Rutgers SMLR Beyster Fellowship for research on equity compensation (\$25,000)

2014-2017 Rexel Foundation for research on environmental policy and housing (\$25,000)

2014-2017 National Science Foundation Graduate Research Fellowship (full tuition/stipend)

2014-2015 Lincoln Institute of Land Policy for research on housing (\$10,000)

2011-2012 Outstanding Graduating Senior, W. P. Carey School of Business

2011-2012 Edward Rondthaler Scholarship as the annual outstanding student majoring in economics

2010-2012 McCord Scholarship one of ten students in the W. P. Carey School