Department of Economics

The MIT Department of Economics is committed to preeminence as one of the world's top institutions for economics research and education. The department's faculty members balance substantial commitments to training both undergraduates and doctoral students with active and influential research programs. The department plays a central role as an innovator in economics research and a source of exciting new directions in undergraduate and graduate economics education.

Highlights

MIT faculty are on the leading edge of economic research, as evidenced by their strong publication records, distinguished awards and professional recognition, and roles in leading professional organizations. The highlight of the 2018–2019 academic year was the selection of Daron Acemoglu, the Elizabeth and James Killian Professor of Economics, as an Institute Professor, MIT's highest faculty honor. Professor Acemoglu has been the leading figure in the development of the modern field of political economy and is also known for groundbreaking work on economic growth, innovation, and labor markets. Acemoglu joins only 11 other professors across the Institute with this designation. Peter Diamond and Robert Solow are emeritus Institute Professors.

Among the many other honors and awards of the past year, Daron Acemoglu received both the Global Economy Prize and the Jean-Jacques Laffont Prize, David Autor was awarded a Carnegie Fellowship, Nikhil Agarwal was awarded a Sloan Research Fellowship, Glenn Ellison was named the Distinguished Fellow of the Industrial Organization Society for 2019, Amy Finkelstein was awarded a MacArthur Fellowship, Bengt Holmstrom received an honorary doctorate from the University of Helsinki, Parag Pathak was named by *The Economist* magazine as one of the decade's eight best young economists, Anna Mikusheva was named a fellow of the Econometric Society, and James Poterba received an honorary doctor of laws from the University of Notre Dame.

The department's commitment to advancing path-breaking research is paired with a focus on enhancing the quality of economics education at MIT and beyond. At the graduate level, the department is committed to offering the best doctoral education in economics available anywhere. In 2018, Economics partnered with MIT's Institute for Data, Systems, and Society to create a joint PhD degree in economics and statistics. This will enable students to deepen their exposure to the foundational statistics, theory, and empirical methods at the cutting edge of data science, preparing them to advance theoretical and empirical research frontiers in the use of "big data" in economic analyses. The department, largely through its faculty and staff affiliated with the Abdul Latif Jameel Poverty Action Lab (J-PAL), offers a blended master's program in data, economics, and development policy that combines online instruction through MITx with an opportunity for selected students to complete the degree on campus. The inaugural class will arrive on campus in January 2020.

The department also has built on its investments in transforming undergraduate economics education. Successful collaboration with Course 6 led to the introduction in 2017 of a new undergraduate economics major, 6-14 (computer science, economics, and data science).

The motivation was similar to that for the economics and statistics PhD program. Student interest in this new offering has been immediate and strong, with 109 majors declared at the start of AY2020, 42 of whom are in the class of 2022. Individual faculty also have made substantial contributions to MIT undergraduate education. Of particular note, Joshua Angrist was named a MacVicar Faculty Fellow for excellence in undergraduate teaching.

MIT faculty also strive to improve the access and quality of economics education available to learners well beyond the MIT campus. Department faculty have invested in a set of MITx courses that make MIT-level instruction available to thousands of students online. Faculty members also have recognized that, for many students, exposure to economics may begin at the high school level and in courses that are less technically demanding than those at MIT. The quality of resources and instruction may be quite uneven across schools for students in these pools. Seizing on the opportunities this provides, Jonathan Gruber has partnered with MITx to develop an online advanced placement microeconomics course.

Personnel

Faculty and Teaching Staff

Nancy Rose continued service as department head for her second and penultimate year. Jon Gruber served as associate head through June 2019; Glenn Ellison will replace Gruber in the upcoming academic year. There were 41 Economics faculty members, excluding visitors, in AY2019. This number will increase to 42 in AY2020, reflecting the arrival of one new assistant professor (Clare Balboni) and one new professor (Stephen Morris) and the departure of one associate professor (Heidi Williams).

During AY2019, the department promoted Nikhil Agarwal to the rank of associate professor with tenure and David Atkin and Heidi Williams to the rank of professor. To our great disappointment, Williams decided to accept an offer at Stanford, effective July 2019.

Faculty Searches

All search committees are instructed to identify outstanding women and minority candidates for potential faculty appointments. During AY2019, the MIT Economics faculty included six women: five tenured faculty members (Esther Duflo, Amy Finkelstein, Anna Mikusheva, Nancy Rose, and Heidi Williams) and one senior lecturer (Sara F. Ellison).

During AY2019, the department received a total of 355 applications as part of the regular recruitment process for junior faculty. Among these applicants, 243 were identified as male and 112 as female. Eleven applicants self-identified as Asian, 31 as White, two as African American, and five as Hispanic; 146 chose not to supply this information. An additional 160 applicants (45% of the total pool) reported that they were international/non-US residents. The Economics Department hiring committee, consisting of Professors Daron Acemoglu (chair), Nikhil Agarwal, Drew Fudenberg, and Abhijit Banerjee, reviewed all applications, paying special attention to minority candidates. Of the 355 applicants, 28 (20 men and eight women) were selected to be interviewed by hiring committee members and other faculty members. The candidates were interviewed at the 2019 American Economic Association annual meeting in Atlanta. Five candidates (three

men and two women) from the interview pool were invited to the department to present seminars during the Independent Activities Period (IAP). The faculty voted to extend an offer to Clare Balboni to hold the 3M Chair in Environmental Economics. Balboni, who received her PhD in economics from the London School of Economics in 2019, accepted the position and will begin on July 1, 2019.

The department carried out an open rank search in microeconomic theory in AY2018. This search culminated in an offer to Professor Stephen Morris of Princeton University, who accepted and will join the department in AY2020.

Visitors

The MIT Economics Department was host to seven visiting faculty, nine visiting scholars, and two postdoctoral economists for all or part of AY2019. The department's annual visitor, Nobel Laureate Jean Tirole (PhD 1982), continued his active participation, lecturing in our graduate industrial organization courses during a weeklong visit each semester and teaching a well-attended advanced topics course during the month of July. Other visiting faculty members who taught departmental courses in AY2019 included Assistant Professor Brigham Frandsen (Brigham Young University), who taught one semester of 14.32 Econometric Data Science and half of 14.382 Econometrics; Professor Daniel Garrett (Toulouse School of Economics), who taught one semester of 14.281 Graduate Contract Theory; Assistant Professor Kirill Evdovkimov (Princeton University), who taught half of 14.30 Introduction to Statistical Methods in Economics, half of 14.381 Statistical Method in Economics, half of 14.385 Nonlinear Econometric Analysis, and half of 14.386 New Econometric Methods; Associate Professor Casey Rothschild (Wellesley College), who taught 14.01 Principles of Microeconomics; Professor Kristin Butcher (Wellesley College), who taught the undergraduate course 14.41 Public Economics; and Professor Bard Harstad (University of Oslo), who taught Environmental Economics and Climate Change during IAP.

Several scholars visited to work with current MIT faculty members and interact with our doctoral students. They included Assistant Professor Zhen Huo (Yale University), Assistant Professor Melanie Morten (Stanford University), Assistant Professor Philipp Strack (University of California, Berkeley), Professor Felipe Iachan (Brazilian School of Economics and Finance), Associate Professor Monica Martinez Bravo (Center for Monetary and Financial Studies, Madrid, Spain), Professor Eduardo Ferreirra Jordao (Fundação Getulio Vargas Law School, Rio de Janeiro, Brazil), Professor Kevin Lang (Boston University), Associate Professor Stefania Garetto (Boston University), and Professor Ray Fisman (Boston University).

Two postdoctoral fellows also visited the department, David Yang and Kim Ristolainen.

Faculty Honors and Awards

Our faculty were recognized with a wide range of honors and awards over the past academic year. Some highlights are presented below.

Daron Acemoglu received the 2018 Jean-Jacques Laffont Prize and the 2019 Global Economy Prize. He was also named Graduate Economics Association Best Professor for the 2018–2019 school year.

Nikhil Agarwal received a 2019 Sloan Research Fellowship and a National Institutes of Health Developmental Research Grant.

Joshua Angrist was named a 2019 Margaret MacVicar Faculty Fellow for his contributions to MIT's undergraduate education and received the 2018 Eugene Fama Prize for Outstanding Contributions to Doctoral Education for his econometrics textbook.

David Autor received a 2019 Andrew Carnegie Fellowship for a project titled "'Depopulism': How the Inversion of the Rural-Urban Age Gradient Shapes the Diverging Economic and Political Geography of the U.S. and Other Industrialized Countries." He also delivered the Richard T. Ely Lecture at the American Economic Association (AEA) conference in January 2019.

Dave Donaldson gave the Elmhirst Memorial Lecture at the meeting of the International Association of Agricultural Economists in July 2018.

Esther Duflo gave the Gruber Distinguished Lecture in Global Justice at Yale University in October 2018. She also presented the W.S. Woytinsky Lecture at the University of Michigan in November 2018.

Glenn Ellison won the 2019 Industrial Organization Society Distinguished Fellow Award.

Amy Finkelstein received a 2018 MacArthur Foundation Fellowship for her research into how health care policy affects health, health care, and well-being.

Jerry Hausman was elected to the British Academy in 2018.

Bengt Holmstrom received an honorary doctorate from the University of Helsinki.

Anna Mikusheva was elected a fellow of the Econometric Society in November 2018.

Parag Pathak was named one of the decade's eight best young economists by The Economist magazine in December 2018.

Jim Poterba received an honorary doctorate of laws from the University of Notre Dame and won the MIT Frank E. Perkins Award for Excellence in Graduate Advising in recognition of his service "as an excellent advisor and mentor for graduate students."

Alp Simsek received the 2018–2019 MIT Undergraduate Economics Association Teaching Award.

John Van Reenen won the 2019 National Institute for Health Care Management Foundation Award for his research on health care.

Ivan Werning received the Graduate Economics Association Best Advisor Award.

Professional Service

Numerous MIT faculty members provide leadership and service to the economics profession and beyond.

Department faculty are active among the editorships and editorial boards of leading economics journals. In addition to Esther Duflo serving as editor of the *American Economic Review* and Amy Finkelstein as editor of *American Economic Review*: *Insights,* Arnaud Costinot is co-editor of the *Journal of International Economics*; Dave Donaldson and Ben Olken are co-editors of the *American Economic Journal*: *Applied Economics*; and Anna Mikusheva is co-editor of *Econometric Theory*. Alex Wolitzky is a foreign editor of *The Review of Economic Studies*.

Associate editorships and editorial board positions include the following: Alberto Abadie, Econometrica and American Economic Review: Insights; Arnaud Costinot, American Economic Review and Journal of Economic Literature; Dave Donaldson, Journal of Economic Literature; Sara Ellison, Journal of Economics and Management Strategy; Amy Finkelstein, Journal of Economic Perspectives; Drew Fudenberg, PLoS One and Theoretical Economics; Bengt Holmstrom, Journal of Law, Economics and Organization; Paul Joskow, Energy Journal and Journal of Law, Economics and Organization; Anna Mikusheva, Journal of Business and Economic Statistics, Econometrics Journal, and Journal of Econometric Methods; Ben Olken, Review of Economics and Statistics and Journal of Development Economics; Parag Pathak, Journal of Political Economy; Rob Townsend, Macroeconomic Dynamics; John Van Reenen, American Economic Review; and Alex Wolitzky, American Economic Journal: Microeconomics.

Our faculty also contribute to the leadership of economics professional societies and organizations. Newly hired Stephen Morris is president of the Econometric Society, with Daron Acemoglu and Whitney Newey serving on the executive committee. Abhijit Banerjee, Esther Duflo, and Benjamin Olken serve on the board of directors of the Bureau for Research and Economic Analysis of Development. Robert Gibbons is the president-elect of the Society for Institutional and Organizational Economics.

The National Bureau of Economic Research (NBER), the top academic economic research organization in the country, is led by MIT professor James Poterba. Research program directors at NBER include David Autor (Labor Studies), Amy Finkelstein (Public Economics), Ben Olken (Development Economics), and Jon Gruber (Health Care). Parag Pathak co-directs the Market Design Working Group and Robert Gibbons directs the Organizational Economics Working Group.

Our faculty also continue the department's tradition of broader public service. Abhijit Banerjee serves as a trustee for Save the Children. David Autor and James Poterba are members of the Panel of Economic Advisers of the Congressional Budget Office. Autor also serves on the Opportunity & Inclusive Growth Initiative for the Federal Reserve Bank of Minneapolis. Amy Finkelstein is a member of the Congressional Budget Office's Panel of Health Advisers. George-Marios Angeletos serves on the European Economic Association council, and Bengt Holmstrom provides service to the Finland Ministry of Finance. Benjamin Olken continued engagements with the government of Pakistan on improving the country's anti-poverty program and engagements with the government of Punjab Excise and Taxation Department.

Education

Undergraduate Education

Enhancing our undergraduate program remains a focal initiative for the department. In fall 2017, the department launched a new undergraduate major in collaboration with the Department of Electrical Engineering and Computer Science (EECS) called computer science, economics, and data science (6-14). This joins our traditional economics major (14-1) and the new mathematical economics major (14-2), introduced in fall 2016. The 6-14 major aims to give students the skills to identify, analyze, and solve real-world challenges in both real and virtual settings. Students will gain foundational knowledge in economic analysis, computing, optimization, and data science as well as hands-on experience with empirical analysis of economic data. A central motivation for the new major is the rise of contemporary electronically mediated platforms for market-level and individual exchanges that combine complex human decisions with intensive computation and data processing, each operating within an engineered economic environment. Our two newest majors provide students with opportunities for deeper grounding in mathematics, statistics, and econometric skills that are increasingly in demand across a wide span of "big data" applications and careers. Applications of these skills are as diverse as online markets, crowdsourcing platforms, spectrum auctions, financial platforms, cryptocurrencies, and large-scale matching/allocation systems such as kidney exchanges and public school choice systems.

Student response has been very positive. In AY2019, 28 students were enrolled in our traditional economics major, 27 were mathematical economic majors, and 81 were 6-14 majors. Undergraduate enrollments in economics increased in AY2019, with the total number of enrolled students in economics courses at 1,896 (relative to the previous year's 1,707).

The department has taken a number of actions to refresh the curriculum, expand undergraduate outreach, and support the three economics majors. We have put considerable effort into improving the quality of students' initial contact with the department. Given that most students' first experience with the department is through our introductory 14.01 Principles of Microeconomics and 14.02 Principles of Macroeconomics courses, we continue to work on the quality of instruction in these classes. We staff these classes with faculty and graduate students we think will be compelling teachers. We have reduced the number of graduate student sections and replaced them with recorded faculty-led lectures, which are available on demand. This maintains consistency in the lecture material across all students enrolled in a given semester and enables the graduate teaching staff to focus on recitations, small group study sessions, and one-on-one help. We also have invested in instructor training and transitions. Assistant Professor Martin Beraja moved into the 14.02 rotation in the fall of 2018. Finally, we continue to allow students with advanced high school training to enroll in our highly regarded 14.03 Applied Microeconomics and Public Policy course rather than in 14.01.

We continue to encourage faculty innovation in the undergraduate curriculum. We have planned a new freshman discovery class, 14.009 Economics and Society's Toughest Problems, for fall 2019, to take advantage of MIT's ongoing curriculum experiments

with the first-year experience. Professor Ben Olken will be in charge and lead the series of faculty lectures. We hope that this class, in addition to 14.01, 14.02, and 14.73 The Challenge of World Poverty, will entice students into the study of economics.

The quality of our undergraduate instruction was recognized this past year with important Institute-wide awards. Josh Angrist, whose innovative 14.32 instruction is consistently acclaimed by students, was named a MacVicar Faculty Fellow, joining Professors David Autor and Nancy L. Rose (current) and Professor Jonathan Gruber (former) in the MacVicar ranks. The MIT Undergraduate Economics Association presented its AY2019 faculty teaching award to Alp Simsek and its graduate student teaching award to teaching assistant Cory Smith.

The Undergraduate Economics Association supports outside-the-classroom economics education through its public economics lecture series. In fall 2018 Hal Varian, chief economist at Google, delivered a talk titled "Economics and Data Science." This well-attended lecture attracted undergraduate majors, faculty members, graduate students, and econ-curious attendees from throughout the MIT community. The spring featured two talks, both on environmental economics: Martin Weitzman of Harvard University presented "Why Is the Economics of Climate Change So Difficult and Controversial?" and Lord Nicholas Stern from the London School of Economics presented "The Inclusive Growth Story of the 21st Century: The Drive to the Zero-Carbon Economy." Both lectures were well publicized and well attended.

Graduate Education

MIT Economics continues to attract the very best students to its doctoral program. In 2019, the department received 673 PhD admission applications. Only 39 prospective students were offered admission, and 23 accepted and enrolled. The group of matriculating students includes eight women and 10 international students.

Commensurate with the selectivity of our admissions process and the quality of MIT training, the department's graduating PhD students do exceptionally well in placement. In 2019, newly minted MIT PhDs joined the faculties at Harvard, the University of Chicago, the University of Pennsylvania, Northwestern University, New York University, University College London, and the University of California, Berkeley, among many other excellent universities. Others accepted positions at leading Internet firms and private-sector finance and consulting organizations. Two MIT students again were selected this spring to participate in *The Review of Economic Studies* tour, which honors the top seven US job market candidates each year with a European speaking tour. No other department matches the historical record of MIT Economics in terms of students selected for this prestigious recognition.

The department does not take these outcomes for granted, recognizing that sustaining this record requires quality and depth in our curriculum and investment of significant time and effort in doctoral advising. This includes commitments at the department level, for example through support of advanced topic courses and reading groups and institution of weekly student-faculty advising lunches at which students can present research in progress for feedback from faculty and other students in their field. Individual faculty also make substantial investments of their time and energy. Several faculty

members and students were recognized during the past year for their contributions to the graduate program. Daron Acemoglu won the Graduate Economic Association (GEA) Award for Best Professor, and Professor Iván Werning received the GEA Course 14 Best Advisor Award. Graduate student David Hughes was honored as an outstanding teaching assistant by GEA, and Sophie Sun received a 2019 School of Humanities, Arts, and Social Sciences (SHASS) Levitan Teaching Award. The department's highest honor for doctoral students, the Robert M. Solow Prize for Graduate Student Excellence in Teaching and Research, was awarded to graduating student Sydnee Caldwell.

The department and the Abdul Latif Jameel Poverty Action Lab have partnered to create the MITx MicroMasters Program in Data, Economics, and Development Policy (DEDP). The DEDP MicroMasters consists of five online courses that allow learners from all over the world to gain a strong foundation in economics and data analysis. The MicroMasters incorporates a unique personalized pricing method whereby students pay according to their income. More than 25,000 learners from over 200 countries have enrolled in at least one of the DEDP courses, and more than 200 students have completed all five courses and hold the full MicroMasters credential. From this selection of MicroMaster credential holders, students who have excelled in their courses have the opportunity to apply for the blended master's program. Students admitted to the blended program gain credit for their online coursework, enabling them to earn an MIT master of applied science in data, economics, and development policy in just eight months. The first cohort of 23 master's students will arrive on campus in spring 2020; the students are diverse in terms of both country of origin (coming from 14 countries, more than half of which are middle and low income) and background (e.g., they range in age from 16 to 34).

Research Initiatives

J-PAL

The Abdul Latif Jameel Poverty Action Lab, directed by Economics faculty members Abhijit Banerjee, Esther Duflo, and Benjamin Olken, seeks to reduce poverty by ensuring that policy is based on scientific evidence. J-PAL aims to set a new standard of rigorous evaluations to identify effective programs across various sectors including agriculture, education, energy and environment, finance, governance, health, gender, firms, and labor markets. J-PAL continues to expand the scope and influence of its research. Since its launch in 2003, the lab has grown into a network of 181 affiliated professors from around the world, six regional offices worldwide, and a partnership with American University in Cairo to support work in the Middle East. To date, J-PAL's affiliated research faculty have led or completed over 800 randomized evaluations in 69 countries to find the most effective approaches to critical development issues. Examples include helping people leave extreme poverty, reducing the spread of AIDS, increasing student attendance, decreasing industrial pollution, and reducing corruption in government projects. Eleven programs evaluated by J-PAL affiliates and found to be effective have been scaled up, and these programs are currently reaching 300 million people worldwide. J-PAL is working with governments in 11 countries to institutionalize the use of evidence in decision making.

New grants are allowing J-PAL to increase its efforts to improve research transparency and reproducibility in the field of experimental economics. With this funding, J-PAL is

supporting data publication and regression replications, strengthening the credibility of social science research. This builds on J-PAL's joint work with the American Economic Association in the development, promotion, and management of the AEA Experimental Registry, which currently has 1,763 registered projects. J-PAL also received a \$22 million grant this year to support innovative, evidence-based methods in remedial education across Africa, bringing lessons from long-term research in India to this topic and building on successful testing at scale in Zambia.

J-PAL North America, led by Amy Finkelstein and Harvard professor Lawrence Katz PhD '85, brings randomized program evaluation methods to policy in North America across a wide variety of areas. Among its major efforts are studies of how the use of health care services affects patient outcomes and costs (through the Health Care Delivery Initiative), analyses of how technology can be used to improve learning outcomes among students from low-income communities (through the Education, Technology, and Opportunity Initiative), and evaluations of innovative practices that can address the changing nature of work (through the Work of the Future Initiative). Through the State & Local Innovation Initiative, the organization works closely with leaders in government to provide funding, technical support, and collaboration with preeminent researchers in order to answer high-priority policy questions. J-PAL North America is also leading efforts to improve how high-quality research is conducted. The organization recently developed an evaluation toolkit that provides research teams with concrete guidance on how to run randomized evaluations.

Since its launch, J-PAL North America has catalyzed over 100 new projects to study major policy issues related to poverty, ranging from innovations in health care delivery to programs in homelessness. Its studies have received widespread coverage from major media outlets such as the *New York Times*, the *Washington Post*, and *The Economist*, among many others.

SEII

Under the direction of Professors Joshua Angrist, David Autor, and Parag Pathak, the School Effectiveness and Inequality Initiative continues to shift the education policy debate from guesswork and ideology to scientific insights. Founded in 2011, SEII has grown to include 14 faculty, six graduate students, and eight full-time research support staff members. Over the past academic year, SEII researchers have not only published topical research findings related to education and the workforce but have also made significant efforts to bridge the gap between research and informed policy-making.

In 2018–2019, MIT SEII researchers contributed to a deeper understanding of important topics in education. Their work both advances economic methodologies used to assess educational programs and makes substantive contributions to improving policies in specific jurisdictions. Recent research has developed techniques to compare historic New York City accountability systems with traditional value-added estimates for individual schools, explored the effects of charter schools in Massachusetts on student achievement and district finances, and evaluated the impact of a science, technology, engineering, and mathematics (STEM) summer program for high-achieving underserved high school students on higher education outcomes. All published research findings are detailed on the SEII website.

SEII also expanded its outreach to school districts and policymakers by hosting the first MIT School Access and Quality Summit on November 13, 2018. The daylong event brought together 16 school districts, 24 research institutions, and eight philanthropic organizations to discuss research on school quality and enrollment systems.

In the upcoming year, SEII researchers will continue their research on college scholarships, school quality measures, affirmative action, and other K–12 diversity plans. SEII will also host the second MIT School Access and Quality Summit and launch a professional network for K–12 school district leaders.

Task Force on the Work of the Future

MIT's Task Force on the Work of the Future, launched by MIT president Rafael Reif in February 2018, studies the effects that new developments in technology could have on traditional jobs and the future of the workplace and seeks to address three broad questions: How are emerging technologies transforming the nature of human work and the skills that enable people to thrive in the digital economy? How can we shape and catalyze technological innovation to complement and augment human potential? How can civic institutions—existing and new—act to ensure that the gains from technology innovation contribute to equality of opportunity, social inclusion, and shared prosperity? The task force is co-directed by faculty members David Autor and David Mindell (Aeronautics and Astronautics), with Elisabeth Reynolds serving as executive director.

Technology and the Future of Labor Initiative

Professors Daron Acemoglu, David Autor, and John Van Reenen launched the MIT Technology and the Future of Labor Initiative, housed in the Economics Department. This initiative will catalyze and support frontier theoretical and empirical research on the microeconomic and macroeconomic implications of changing technologies and expanding global integration for labor market operations, earnings and employment stability, skill and training demands, and worker productivity. Supported by Accenture, the IBM Global Universities Program, the Schmidt Sciences Foundation, and the Smith Richardson Foundation, the initiative will advance economic understanding and aid policy formation to maximize the opportunities and minimize the adverse consequences related to the advance of automation and globalization. The initiative provides financial support for economics students' doctoral dissertation work.

Selected Publications

Faculty members have carried out research on a broad array of frontier topics in economics and attracted notice within the academic sphere and, in many cases, from the national and international press. A selection of publications during the academic year illustrates the scope of the department's research activities.

Alberto Abadie published "Endogenous Stratification in Randomized Experiments" (with Matthew Chingos and Martin West) in the *Review of Economics and Statistics* and "Econometric Methods for Program Evaluation" (with Matias Cattaneo) in the *Annual Review of Economics*.

Daron Acemoglu published "Automation and New Tasks: How Technology Displaces and Reinstates Labor" (with Pascual Restrepo) in the *Journal of Economic Perspectives*; "Weak States: Causes and Consequences of the Sicilian Mafia" (with Giuseppe De Feo and Giacomo De Luca) in *The Review of Economic Studies*; "Democracy Does Cause Growth" (with Suresh Naidu, Pascual Restrepo, and James A. Robinson) in the *Journal of Political Economy*; and "Innovation, Reallocation and Growth" (with Ufuk Akcigit, Nicholas Bloom, and William Kerr) in the *American Economic Review*.

George-Marios Angeletos published "Forward Guidance without Common Knowledge" (with Chen Lian) in the *American Economic Review* and "Quantifying Confidence" (with Fabrice Collard and Harris Dellas) in *Econometrica*.

David Atkin published "Measuring Productivity: Lessons from Tailored Surveys and Productivity Benchmarking" (with Amit Khandelwal and Adam Osman) in *AEA Papers and Proceedings*.

David Autor published his Ely Lecture on "Work of the Past, Work of the Future" in *AEA Papers and Proceedings*; "Toward Understanding the Impact of Artificial Intelligence on Labor" (with Morgan Frank, James Bessen, Erik Brynjolfsson, Manuel Cebrian, David Deming, Maryann Feldman, Matthew Groh, José Lobo, Esteban Moro, Dashun Wang, Hyejin Youn, and Iyad Rahwan) in the *Proceedings of the National Academy of Sciences*; and "Ending Rent Control Reduced Crime in Cambridge" (with Christopher Palmer and Parag Pathak) in the *American Economic Review*.

Abhijit Banerjee published "Using Gossips to Spread Information: Theory and Evidence from Two Randomized Controlled Trials" (with Arun Chandrasekhar, Esther Duflo, and Matthew Jackson) in *The Review of Economic Studies* and "Private Outsourcing and Competition: Subsidized Food Distribution in Indonesia" (with Jordan Kyle, Rema Hanna, Benjamin Olken, and Sudarno Sumarto) in the *Journal of Political Economy*.

Martin Beraja published "Regional Heterogeneity and the Refinancing Channel of Monetary Policy" (with Andreas Fuster, Erik Hurst, and Joseph Vavra) in the *Quarterly Journal of Economics* and "From Hyperinflation to Stable Prices: Argentina's Evidence on Menu Cost Models" (with Fernando Alvarez, Martín Gonzalez-Rozada, and Pablo Andrés Neumeyer) in the *Quarterly Journal of Economics*.

Arnaud Costinot published "The Elusive Pro-Competitive Effects of Trade" (with Costas Arkolakis, Dave Donaldson, and Andres Rodriguez-Clare) in *The Review of Economic Studies*; "The More We Die, The More We Sell? A Simple Test of the Home-Market Effect" (with Dave Donaldson, Margaret Kyle, and Heidi Williams) in the *Quarterly Journal of Economics*; and "Lerner Symmetry: A Modern Treatment" (with Ivan Werning) in *American Economic Review: Insights*.

Esther Duflo published "The Value of Regulatory Discretion: Estimates from Environmental Inspections in India" (with Michael Greenstone, Rohini Pande, and Nicholas Ryan) in *Econometrica*.

Amy Finkelstein published "Healthcare Spending and Utilization in Public and Private Medicare" in the *American Economic Journal: Applied Economics*; "Subsidizing Health Insurance for Low-Income Adults: Evidence from Massachusetts" in the *American Economic Review*; "Provider Incentives and Healthcare Costs—Evidence from Long-Term Care Hospitals" (with Liran Einav and Neale Mahoney) in *Econometrica*; "Mandatory Medicare Bundled Payment Program for Lower Extremity Joint Replacement and Discharge to Institutional Postacute Care: Interim Analysis of the First Year of a 5-Year Randomized Trial" (with Yunan Ji, Neale Mahoney, and Jonathan Skinner) in the *Journal of the American Medical Association*; and "Private Provision of Social Insurance: Drug-Specific Price Elasticities and Cost Sharing in Medicare Part D" in the *American Economic Journal: Economic Policy*.

Drew Fudenberg published "Learning and Type-Compatibility in Signaling Games" (with Kevin He) in *Econometrica*; "Speed, Accuracy, and the Optimal Timing of Choices" (with Philipp Strack and Tomasz Strzalecki) in the *American Economic Review*; and "Learning Dynamics with Social Comparisons and Limited Memory" (with Juan Block and David Levine) in *Theoretical Economics*.

Simon Jaeger published "Learning About Job Search: Field Experiment with Job Seekers in Germany" (with Steffen Altmann, Armin Falk, and Florian Zimmerman) in the *Journal of Public Economics*.

Paul Joskow published "Challenges for Wholesale Market with Intermittent Renewable Energy at Scale" in the *Oxford Review of Economic Policy*.

Whitney Newey published "Inference in Linear Regression Models with Many Covariates and Heteroskedasticity" (with Matias Cattaneo and Michael Jansson) in the *Journal of the American Statistical Association*.

Benjamin Olken published "Universal Basic Incomes vs. Targeted Transfers: Anti-Poverty Programs in Developing Countries" (with Rema Hanna) in the *Journal of Economic Perspectives*; "Making Moves Matter: Experimental Evidence on Incentivizing Bureaucrats through Performance-Based Postings" (with Adnan Khan and Asim Khwaja) in the *American Economic Review*; and "Firm Growth and Corruption: Empirical Evidence from Vietnam" (with Jie Bai, Seema Jayachandran, and Edmund Malesky) in *The Economic Journal*.

Parag Pathak published "Reserve Design: Unintended Consequences and the Demise of Boston's Walk Zones" (with Umut Dur, Scott Duke Kominers, and Tayfun Sonmez) in the *Journal of Political Economy*.

Frank Schilbach published "Alcohol and Self-Control: A Field Experiment in India" in the *American Economic Review*.

Alp Simsek published "Should Retail Investors' Leverage Be Limited?" (with Rawley Heimer) in the *Journal of Financial Economics*.

Robert Townsend published "Family Firms, Bank Relationships and Financial Constraints: A Comprehensive Score Card" (with Alexander Karaivanov and Jesús Saurina) in the *International Economic Review*.

John Van Reenen published two articles in the *Quarterly Journal of Economics*: "The Price Ain't Right? Hospital Prices and Health Spending on the Privately Insured" (with Zack Cooper, Stuart Craig, and Marty Gaynor) and "Who Becomes an Inventor in America? The Importance of Exposure to Innovation" (with Alex Bell, Raj Chetty, Xavier Jaravel, and Neviana Petkova). He also published a pair of articles in the *American Economic Review*: "Some Causal Effects of an Industrial Policy" (with Chiara Criscuolo, Ralf Martin, and Henry Overman) and "What Drives Differences in Management?" (with Nick Bloom, Erik Brynjolfsson, Lucia Foster, Ron Jarmin, Megha Patnaik, and Itay Saporta-Eksten). In addition, he published "The Economic Impact of Universities: Evidence from Across the Globe" (with Anna Valero) in *Economics of Education* and "The Incentives of a Monopolist to Degrade Interoperability" (with Christos Genakos and Kai Uwe Kuhn) in *Econometrica*.

Ivan Werning published "Take the Short Route: Equilibrium Default and Debt Maturity" (with Mark Aguiar, Manuel Amador, and Hugo Hopenhayn) in *Econometrica*.

Alexander Wolitzky published "Maintaining Privacy in Cartels" (with Takuo Sugaya) in the *Journal of Political Economy* and "Learning from Others' Outcomes" in the *American Economic Review*.

Future Plans and Development Initiatives

The department continues to build on its record as a leading research and teaching institution with the highest caliber senior and junior faculty, graduate students, and undergraduates. A new generation of faculty, many of whom came to MIT as assistant professors and have built their careers here, is taking growing responsibility for department leadership. The faculty is committed to expanding the presence of economics in the undergraduate experience at MIT and supporting new initiatives in cross-disciplinary offerings.

The Economics Department relies on gifts from alumni and other supporters to advance its research and educational mission. Top priorities include securing additional funds for graduate student support, endowing professorships, and raising funds that can be used for faculty research support. The faculty and staff will continue to work with development team members to strengthen the department's financial base.

Nancy L. Rose
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