# YALE ECONOMICS

### 03 YEAR IN REVIEW

After settling into our new building at 87 Trumbull, the Department set milestones in research, teaching, and policy impact.

### RESEARCH CENTERS

The Department's three research centers celebrate a year of tremendous impact and growth.

### STUDENT LIFE

With record enrollment in economics courses, the Department's academic programs continue to thrive.





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Read the Magazine Online: economics.yale.edu/ annual-magazine

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## From the Chair

#### Dear Alumni, Friends, and Colleagues,

I am happy to present you with the 2023 Department of Economics Annual Magazine, celebrating a remarkable year for the Department.

In January, we moved into our new building at 87 Trumbull, which connects to our long-standing buildings at 28 and 30 Hillhouse to create a unified structure that puts the entire Department and its affiliated centers under one roof for the first time. The shared space has already enhanced our sense of community and camaraderie throughout the Department, and I've been delighted to see the uptick in collaboration between faculty, staff, and students. The building is alive with connections that will sustain the Department for years to come.

In April, we welcomed Treasury Secretary Janet Yellen (PhD '71) back to campus for an all-day event. Meeting with Tobin Center leaders, senior public officials, economics faculty, and capping the day with a Fireside Chat with Yale President Peter Salovey, the Secretary engaged in rich conversations about research and policymaking at Yale and beyond.

The Department is expanding, and welcomed a number of new faculty and Postdoctoral Associates who will later join as faculty. The new faculty members join as Assistant Professors of Economics: Max Cytrynbaum, an econometrician, and Winnie van Dijk, a public economist. The new Postdoctoral Associates are Mayara Felix, a trade and development economist, and Joel Flynn, a macroeconomist and economic theorist, who both join next year as Assistant Professors.

This year also included the retirement of Naomi Lamoreaux, an expert on business, economic, and financial history who has been at Yale since 2010 and served as Chair of the Department of History from 2013 to 2018. She has helped to continue the Department's strong tradition as a leader in economic history, and the Department will miss her, even as she continues to engage in research.

The Department's undergraduate programs continue to thrive. Economics remains the largest major at Yale, with over 300 seniors majoring either in Economics or one of its joint majors, and this fall all three of Yale College's most popular courses were offered by the Department. It takes a remarkable effort by faculty, graduate students, and staff to run these great and popular courses, and I am especially proud to celebrate Eva Chalioti, recipient of Yale College's 2023 Brodhead Prize for Teaching Excellence. I've been delighted to see sustained enthusiasm from students, majors and non-majors alike, who continue to take our courses and contribute to the economics community! Elsewhere in the Magazine, you can find a full report on undergraduate economics from our Director of Undergraduate Studies, Giovanni Maggi.

Our PhD program continues to attract the best students from around the world, and we continue to place them in positions in the world's leading universities, businesses, and government agencies. On page 19, our Director of Graduate Studies Yuichi Kitamura provides an update on the program.

The Department, in conjunction with the Tobin Center for Economic Policy, runs one of the largest two-year Pre-Doctoral Fellows programs in the country, with over 60 fellows in residence working on over 40 projects. I am proud to celebrate Rebecca Toseland, Senior Lecturer in the Department of Economics, for receiving this year's Faculty of Arts and Sciences Dean's Award for Inclusion and Belonging for her direction of this vibrant program.



66 The 2023 Annual Magazine celebrates a remarkable year for the Yale Department of Economics.

The Department has an unparalleled environment for teaching and research across all subfields of economics at Yale, with many important contributions from its three major affiliated research centers—the Cowles Foundation for Research in Economics, the Economic Growth Center, and the Tobin Center for Economic Policy—as well as the newlycreated Center for Algorithms, Data, and Market Design at Yale. From theory to international development to domestic policy, each of these centers makes important and unique contributions to the Department, and each director has provided an update in this Magazine.

This year marked a new era for the Department, and I'm excited to see continued growth and success across all areas of research and teaching. As always, we welcome you to stop by for a visit when you are next in New Haven.

Sincerely,

**TONY SMITH** 

William K. Lanman, Jr. Professor of Economics

Chair, Department of Economics

## **Banner Year for** the Department

2023 marked a new era for the department. Below we are excited to highlight some of the major milestones from this year.



Members of the Yale community gathered in April to dedicate the building. Cutting the ribbon were (from left) Scott Strobel, provost; Tamar Szabó Gendler, dean of the Faculty of Arts and Sciences; Peter Salovey, president; Steven Berry, the David Swensen Professor of Economics and Jeffrey Talpins Faculty Director of the Tobin Center: Ben Polak, the William C. Brainard Professor of Economics; and David Wilkinson, Tobin Center executive director.

#### **DEDICATING THE NEW BUILDING AND TOBIN CENTER**

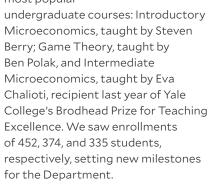
Starting the year in a new building transformed our high-traffic campus corner into a large, interconnected complex devoted to world-class social-science research and teaching. Not only does the new building at 87 Trumbull Street connect Yale's entire economics community and house the Tobin Center for Economic Policy, it is also a major example of the university's commitment to promoting environmental sustainability through its built environment. The new structure is only the second building on campus to use electric heat pumps for both heating and cooling and has earned a "gold" certification in the LEED sustainability rating system.

66 As Yale's newest research enterprise, the Tobin Center advances our most enduring ideal, one dating back to our founding documents: to improve the world for this and future generations.

YALE PRESIDENT PETER SALOVEY PHD '86

#### **ECONOMICS LEADS YALE COLLEGE IN POPULAR COURSES**

The Department of Economics topped the list of Yale's most popular courses in Fall 2023, with the top three most popular







Peter Salovey (PhD '86 ) and Janet Yellen (PhD '71)

#### A VISIT BY TREASURY SECRETARY JANET YELLEN

In April, Secretary of the Treasury and Yale Economics alumna Janet Yellen (PhD '71) visited Yale's Tobin Center for Economic Policy to discuss one of the driving themes of the federal administration's economic agenda: modern supply side economics. She met with Tobin Center leaders, senior public officials, economics faculty, and capped the day with a Fireside Chat with Yale President Peter Salovey.

During the Fireside Chat, Secretary Yellen discussed her time at Yale, her mentor James Tobin, and how the work of the Tobin Center is carrying out his legacy, diversity in economics, and driving themes of the federal administration's economic agenda. Throughout the day, she emphasized the aim of modern supply side economics: "to find strategies that will promote growth while mitigating inequality, and also address environmental damage and harms that can affect the well-being of future generations."

#### **50-YEAR ANNIVERSARY OF SEMINAL PAPER 'IS GROWTH OBSOLETE?'**

Fifty years after a seminal Yale study on economic growth, economists and policymakers gathered on campus in November for a conference on sustainable development. The landmark study—"Is Growth Obsolete?" by Nobel laureates William Nordhaus and James Tobin—introduced a new model for measuring economic growth that, for the first time, accounted for environmental damages. In addition to honoring their work, researchers and policymakers explored how to move beyond gross domestic product and develop economic measurements that better consider environmental sustainability.



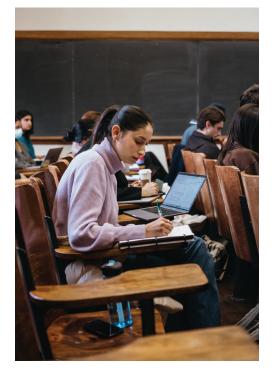
William Nordhaus at the conference, which was organized by the Yale School of the Environment (YSE), the Economic Growth Center (EGC), and the Tobin Center for Economic Policy

#### THE DEPARTMENT LAUNCHES **NEW RESEARCH CENTER: CADMY**

The Department officially launched the Center for Algorithms, Data, and Market Design at Yale (CADMY), which serves as a cutting-edge research hub for faculty and graduate students working at the intersection of economics, computer science, and data science. Directed by Dirk Bergemann, this new center aims to support Yale faculty and students with their research in relevant areas and will serve as a platform to host visiting faculty and postdoctoral fellows, promoting ongoing academic engagement and advancement. 🔇

66 How will algorithms work in the real world when data is noisy and incomplete? How can we guarantee fairness and privacy in the use of personal data? What are the feedback loops between humans and algorithms? These are just a few of the questions CADMY aims to address.

**DIRK BERGEMANN** 



## **Department of Economics Welcomes New Faculty**

The Department of Economics welcomes two new professors to its faculty this fall, and two new Postdoctoral Associates who will later join as faculty.



Our new faculty members span a diverse set of backgrounds and interests, and have already brought fresh ideas and exciting new research opportunities to the Department, its three research centers, and the larger Yale economics community. We are delighted to welcome them to our faculty!

#### Max Cytrynbaum

Max Cytrynbaum joins the Department as an Assistant Professor, after completing a year-long Cowles Foundation Postdoctoral Associate role from 2022-2023. His research interests lie broadly in econometric theory, with a particular interest in causal inference and experimental design. His recent work shows how to design more efficient experiments

using multi-stage designs and generalized fine stratification methods. Max received a PhD in Economics and Statistics from MIT in 2022.

#### Winnie van Djik

Winnie van Dijk joins us from Harvard University as an Assistant Professor. Her research uses large linked datasets to study issues in labor, public, and urban economics, focusing on the design and empirical evaluation of policies that are relevant to low-income households. Professor van Dijk is especially interested in housing policy, and her recent research

includes work on the causes and consequences of eviction. She is a Faculty Research Fellow at the National Bureau of Economic Research, and received a PhD in economics from the University of Chicago in 2019.

#### Mayara Felix

Mayara Felix is a Cowles Foundation Postdoctoral Associate and will join Yale as an Assistant Professor in Fall 2024. Her research interests include economic development, international trade, and labor economics, with a particular focus on the effects of liberalization-related reforms. Her recent research explores the effects of trade and outsourcing on labor market conditions. Mayara received a PhD in Economics from MIT in June 2021.

#### Joel Flynn

Joel Flynn is a Cowles Foundation Postdoctoral Associate and will join Yale as an Assistant Professor in Fall 2024. His research interests include macroeconomics and economic theory, with a particular interest in business cycles and mechanism design. His recent work includes studies of firm decision-making over the business cycle and nonlinear pricing models. Joel graduated from MIT with a PhD in Economics in June 2023.



## **Economic Historian Naomi** Lamoreaux Retires After 13 **Years with the Department**

A faculty member at Yale since 2010, and chair of the Yale Department of History from 2013 to 2018, Lamoreaux's interdisciplinary research explores the intersections of business, law, technology, history, and economics.

Naomi Lamoreaux joined Yale in 2010, and has helped to continue the Department's strong tradition as a leader in economic history. She's an expert on business, economic, and financial history, and has worked on a wide array of topics including mergers, political economy, patents, and corporate governance. She has written *The Great Merger Movement in American Business, 1895-1904* and Insider Lending: Banks, Personal Connections, and Economic Development in Industrial New England, edited nine other books, and published numerous articles at the intersection of economics and history. Below, Lamoreaux looks back at the questions that have moved her during her career, and what questions she's continuing to work through.

#### What research question has been most important to you throughout your career?

At the start of my research career, I made the decision not to focus on a single, big idea or theory—if I were to constantly work on the same topic, I thought it would be difficult to develop new perspectives. This keeps things fresh and prevents me from becoming stuck in certain frameworks. My dissertation and first book covered the great wave of mergers that swept through the manufacturing sector of the United States around 1900, but for my next book, I wrote about banking: about how what we would today call crony capitalism helped spur American economic development. At the core, I am an institutional historian and see every new project as an opportunity to look at the proverbial elephant that is the role of institutions in economic development from a different angle.

#### What do you see as the most interesting question in economic history right now?

To me, the most important question is something perennial that We are planning to synthesize our research in a book tentatively economists have been working on forever. The answers may titled, "Making Democracy Safe for America: The Role of General get richer and more complex, but the question stays the same: What drives economic development? Why are some countries Laws in American Economic and Political Development." 💱





rich and others not? And why is there so much inequality within societies, and how might inequality relate to the processes that make societies rich? Much of my work looks at this from different perspectives. and looks at the role that institutions play in driving economic outcomes over time.



#### What project are you most excited to continue working on?

What's occupying the center of my intellectual imagination is a project with John Wallis, on the transition societies go through when laws become general and uniform in their application-and in particular how this shapes our understanding of US history. As the US moved away from enacting special bills on behalf of specific individuals and organizations, a more dynamic form of capitalism emerged, with new types of uniform economic regulation, and interest-group politics. As laws became more general, businesses began to organize to oppose the new regulatory initiatives, but they faced new, determined, and increasingly well-organized opposition.

One way to look at this is that throughout history, ruling coalitions have tended to hold themselves together by creating barriers to entry and distributing the resulting rents to members of their coalition and excluding others. The problem is that democracy, at least initially, tends to make that problem far worse. If you define democracy as giving people the right to vote, factions can form and hold up the government for favors on the penalty of throwing their support to another group. Ultimately, this creates democracies where people vote, but there's corruption and candidates who promise that they are not going to be corrupt like those in power. Yet we tend to see that when they get in power, they're corrupt in the same way because they have to be, otherwise they can't stay in power.

## **Under New Direction**, the Cowles Foundation for Research in Economics **Continues to Support** its Research Mission

### In the interview below, hear from newly appointed Director Samuel Kortum.

The Cowles Foundation for Research in Economics continues to push the frontiers of research in many core fields of economics. This year, we increased support for faculty, students, and postdoctoral associates, and hosted flagship conferences where leading academics present new research. Through our Summer Conferences, Conference on General Equilibrium and its Applications, and four Trade Days, we welcomed more than 400 participants to Yale's campus in 2023.

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The Foundation is also excited to announce the appointment of Samuel

Kortum as the new Director for a three-year term. Professor Kortum brings a wealth of research experience to the Foundation, and his connection to Yale goes back decades. He completed his PhD in economics at Yale in 1992, and came to Yale as a Professor in 2012. He is now the James Burrows Moffatt Professor of Economics. Professor Kortum follows a three year appointment by Marina Halac, the Stanley B. Resor Professor of Economics.

In a special edition of our annual update, we interview Kortum about his new role in Cowles.

#### Moving to your new position, what's your vision as Director of the Cowles Foundation?

A lot of what I hope to do is build on the work of my predecessors—who've done a great job positioning Cowles as one of the premier research institutions—as well as to tell the story around all the great work we're doing in our core research areas, which include Econometrics, Economic Theory, Industrial Organization, International



Trade. Labor and Public Economics. Macroeconomics, and most recently the Center for Algorithms, Data, and Market Design at Yale.

While Cowles' research tends to fall into the more abstract, methodological, and theoretical areas of economic thinking, the work is foundational to the tools we use in modern economics. Sometimes this foundational work can get overlooked because it's more challenging to communicate to the public, but that doesn't mean it's not interesting or important. I'd love for our work to be more visible, especially

in our areas of expertise, as these tend to be areas that other research organizations emphasize to a lesser degree. I'm really looking forward to getting more of our work out there into the public.

I'm also incredibly excited to learn more from my colleagues here in the Department and across the university. We have over 80 Research Affiliates, spread throughout the Departments of Economics, Computer Science, and Statistics & Data Science, as well as Yale's School of the Environment and School of Management. We have such a rich network of people affiliated with Cowles, and my goal in the near term is to understand what people may need to push their work to new levels, and to expand our Research Programs in innovative ways.

Yale's Department of Economics has traditionally been heavier on the theoretical and methodological side, but it's been exciting to see that balance out through contributions from the Economic Growth Center and the Tobin Center for Economic Policy—which are doing fantastic policy-relevant



The 2023 Cowles Summer Conference on Economic Theory

work. However, Cowles has really served as a backbone to some of the foundational parts of the department, and so telling the story of Cowles will help better tell the story of the Department, and how it has evolved over the years.

#### What initiatives or programs are you planning or thinking about?

My goal at the moment is to get to know our faculty and programs, yet I'd like to begin exploring how Cowles could play an increasing role in bringing about new research. Our conferences bring hundreds of top economists to campus every year-how can we leverage this to bring about new and innovative research studies in the field? Can we play a role in bringing together leading academics on cutting edge topics?

Similarly for communications, how can we be a leader in areas that aren't covered by other organizations? How can we bring about innovative ways to describe complex economic research? The NBER Reporter does a great job communicating economic research, and I'd love for us to better communicate what we doagain, particularly in areas like theory, econometrics, and industrial organization—as well as in newer areas like those related to algorithms, data, and market design.

#### What are you most excited about in your new role as Director?

I love that Cowles rounds out our Department with research programs that are so instrumental to the field—it sets us apart from other universities and departments—I'm just really excited to direct an organization that has such a strong methodological focus. There's a great opportunity to tell a compelling story around how critical this research is, and I can't wait to work with all our talented researchers and staff. 🕥

66 A lot of what I hope to do is build on the work of my predecessors ... and tell the story around all the great work we're doing in our core research areas.



## Research Center Overview

The Department of Economics is home to three centers that conduct, fund, and promote cutting edge research across multiple fields domestically and internationally. Working across disciplines and policy issue areas, and through meaningful policy partnerships, the centers work to advance a research and data driven policy debate. Each center is led by a Faculty Director, who is supported by a team of faculty affiliates and staff.

#### **THE COWLES FOUNDATION** FOR RESEARCH IN ECONOMICS

Led by Samuel Kortum, The Cowles Foundation for Research in Economics fosters the development and application of rigorous logical, mathematical, and statistical methods of analysis in economics and related fields.

#### **THE ECONOMIC GROWTH CENTER**

Led by Rohini Pande, The Economic Growth Center supports the economic advancement of poor and marginalized people in developing countries through innovative research at Yale and around the world.

#### THE TOBIN CENTER FOR ECONOMIC POLICY

Led by Steven Berry and Zack Cooper, The Tobin Center for Economic Policy plays a vital role in informing data-driven discussions of public policy by supporting Yale's emphasis on using empirical approaches in the social sciences to address the greatest challenges of today.

## **Economic Growth Center: Addressing the Linked Challenges of Climate** Change, Inequality, and Weak Governance

EGC faculty research is illuminating climate change's economic impacts, and how to promote growth and human welfare while staying within planetary boundaries.

The first global progress report since the Paris climate agreement, released in 2023, found that emissions are not decreasing fast enough to keep warming below 2 degrees Celsius over pre-industrialization levels—the agreed-upon target to avert the worst consequences of climate breakdown.

However, this stark headline obscures an important facet of our climate crisis: its inextricable link with international and intra-national inequality. The countries that are least responsible for greenhouse gas emissions are the most vulnerable to their consequences. Within countries, wealthier communities can shield themselves from climate impacts, while vulnerable and marginalized populations are the most exposed. Moreover, climate policies may inadvertently heighten these inequalities, putting undue burden on disadvantaged populations.

The climate crisis will also expose gaps between high- and low-capacity governments. Countries with weak governance, unstable or dysfunctional political systems, or closed civic spaces will struggle more with the huge implementation challenges of the climate transition, worsening inequalities while failing to effectively address climate change.

Addressing the linked challenges of climate change, inequality, and weak governance necessitates addressing them all. At the Economic Growth Center, researchers are avidly exploring these interconnections.

On climate change and inequality, Tony Smith and coauthors are quantifying the inherent uncertainties in future projections of climate change's economic impacts, finding that warmer countries may suffer disproportionately while cooler countries may benefit.



EGC Faculty Affiliate Samuel Kortum (second from right) speaking on a panel titled 'Macroeconomics of Climate Change,' at the Yale Climate, Environment & Economic Growth Conference



The organizers of the Yale Climate, Environment & Economic Growth Conference with Keynote Speaker Esther Duflo (second from right), the 2019 recipient of the Nobel Prize in Economics

### The countries that are least responsible for greenhouse gas emissions are the most vulnerable to their consequences.

EGC faculty research on other shocks—such as Mushfiq Mobarak's study of COVID-19's many adverse effects and Penny Goldberg's recent monograph on the complex linkages between globalization, trade, and inequality-illuminates other channels through which climate change may impact inequality.

As for the role of governance on inequality and the climate transition, Rohini Pande's research with Inclusion Economics Nepal is generating insights on the intersections between local governance, gender equality, and climate-resilient environmental policy. In India, Nicholas Ryan's research finds that solar auctions brokered by state governments increase the costs of green energy by nearly 10% due to states' higher counterparty risks, suggesting that weak governance can stymie the market-led climate transition.

Research by Samuel Kortum explores how climate policy "leakage" (or evasion) can best be addressed through carbon taxes and partial carbon border adjustments. Costas Arkolakis uses cleangrowth spatial theory to assess the global impact of renewable energy growth. Amit Khandelwal finds that daytime satellite imagery can help predict economic activity (e.g., after climate shocks) with three to four times more accuracy than nighttime satellite analyses. Giovanni Maggi constructs an economic model of climate agreements between rich and poor countries.

These interconnected difficulties are also addressed by EGC's organizational activities and events. At the Yale Climate, Environment, and Economic Growth Conference, researchers and policymakers explored how to promote growth and human welfare while staying within planetary boundaries. The Markets and Development Initiative unites approaches from industrial organization, trade, and development economics to study markets in low or middle-income countries (LMICs)-issues also explored at the Firms, Trade, and Development Conference.

Inclusion Economics also continues to support research on how policy can promote inclusive and accountable states, markets, and societies that reflect the needs of vulnerable and marginalized populations—a key challenge amid the climate transition. Finally, the Gender and Growth Gaps project and its research-policy workshops explore the economic dimensions and consequences of gender inequality in LMICs.

This year's Kuznets lecture emphasized that we can't understand growth-or the climate crisis-without recognizing the role of informal institutions like families, communities, and social norms. The Kuznets visitors program continued fostering collaboration between economists from Yale and other institutions, emphasizing participation from groups that are under-represented in the economics profession and scholars from LMICs.

We look forward to continuing and deepening these efforts, collaborations, initiatives, and convenings in the years to come. 🕚





#### THE 32ND ANNUAL KUZNETS MEMORIAL LECTURE

The 32nd Annual Kuznets Memorial Lecture took place on March 2, 2023 and featured Eliana La Ferrara of Harvard University discussing "Changing Harmful Norms." Hosted annually by EGC since 1987, the Simon Kuznets Memorial Lecture features a prominent economist speaking on issues in economic development. Since 2020, the Kuznets Lecture has been combined with a mini-conference that showcases cutting-edge research by younger researchers on topics covered in the lecture. This year's conference, titled "Norms, Gender, and Development," explored a wide range of gender norms, their economic effects, and interventions that may alter them to the benefit of both individuals and economies.



#### THE 2023 FIRMS, TRADE, AND **DEVELOPMENT CONFERENCE**

The 2023 Firms, Trade, and Development conference. co-hosted by EGC and the International Growth Centre (IGC) on October 19-20 took place in-person, simultaneously at Yale University and at London School of Economics. Sessions explored how markets can contribute to economic growth and development. Robin Burgess (LSE) delivered the keynote, and the event included a Policymaker Panel Session on "Fostering Growth in Developing Countries" with Dean Karlan (USAID), Adnan Khan (Foreign, Commonwealth & Development Office), and Liz Lloyd (British International Investment).

## Tobin Center: A Year of Impact, Growth, and Strengthening Foundations for the Future

As the Tobin Center emerges from its inaugural phase, it celebrates a milestone year of enabling more policy-relevant research at Yale.



Tobin Leadership with CT Department of Energy & Environmental Protection Commissioner (front, from left) Katie Scharf Dykes, CT Congresswoman Rosa DeLauro, US Treasury Secretary Janet Yellen, and CT Office of Early Childhood Commissioner Beth Bye

The past 12 months have represented a landmark period of development and growth. The Tobin Center is creating a new model for how higher education can bring value to US Policy, and seeing real-world results: new ideas in the public debate and media, but also in legislation and executive actions that are making lives better.

The Tobin Center is emerging as a pivotal hub for economic discourse, actively shaping policy discussions by engaging renowned scholars on key national economic issues. This year, we were proud to welcome Nobel laureates Bill Nordhaus and Jean Tirole as keynote speakers at our conferences, as well as host US Treasury Secretary Janet Yellen for a full-day event. During Secretary Yellen's visit, Tobin leadership engaged with her on the federal administration's economic policy priorities, which include "boost[ing] economic growth by increasing labor supply, raising productivity, and reducing inequality and environmental damage." As an academic enterprise, the Tobin Center is taking on these issues as a matter of study, and exploring what successful policy outcomes look like for the Administration's recently funded priorities (e.g., infrastructure, climate), as well as for issues that lack major new funding (e.g., laborexpanding human capital programs).

Marking the occasion of her visit, the Tobin Center announced a number of new actions that connect to priority domestic policy issues, in partnership 66 Economics should be about something; it should make a difference to the well-being of our nation and the world. These are really the values that the Tobin Center stands for—the Center has been doing important research, and I think policy will benefit from that kind of datadriven approach that is really focused on real problems.

US TREASURY SECRETARY JANET YELLEN

with the State of Connecticut, New Haven Public Schools, the City of New Haven, and several universitybased research centers. These data-driven research initiatives will help policymakers across federal, state, and local governments advance what Secretary Yellen frames as the central goal of US economic policy: promoting growth while protecting the environment and reducing inequality.

The Tobin Center is supporting faculty and engaging students to advance research that informs and defines government policy, on issues from health, education, and economic mobility to climate change, supply chain challenges, and evidence-based policy. We share brief updates on just a few of those accomplishments on the following page.

#### HEALTH ECONOMICS



In recent testimony before the US Senate's Finance Committee, Yale health economist Zack Cooper shared the latest academic research on the effects of hospital mergers on the country's health system

Prof. Zack Cooper has continued his nation-leading work to generate new insights on the functioning of markets in the health sector. Prof. Cooper's expanded team has advised policymakers on antitrust enforcement, strategies to pay health care providers, and approaches to insulate the public from unexpected medical bills and health care costs. This year, Cooper has testified before the Senate Finance Committee, met with officials at the White House and other administration officials, advised legislators and staffers in Congress, and worked with a number of state policymakers.

In collaboration with Profs. Chima Ndumele and Jacob Wallace, the Tobin Center has also expanded its Medicaid initiative. These efforts include embedding a data scientist in CT Medicaid, establishing a richer data collaboration with the state, and supporting a larger research/nudge unit within the state. In June, the Tobin Center hosted CT Medicaid leadership to examine how research partnerships could strengthen the state's public health system—and improve health outcomes for the approximately 1 million Connecticut residents (and 40% of the state's children) who rely on it. This visit marked the launch of a new effort to identify priority research questions that could be answered with randomized controlled trials (RCTs).

Earlier this year, the Tobin Center convened Connecticut government leaders to mark the third year of the Governor's Fellowship Program. A state-run initiative, the Fellows Program brings together talented earlycareer professionals and senior state leaders to solve Connecticut's most pressing policy problems. Pictured here are this year's Fellows, with Connecticut Governor Ned Lamont



#### CLIMATE

This year, The Tobin Center increased its support of work on electric vehicles (EV), climate-resilient infrastructure, biofuel policy, carbon taxation, energy transmission, and more.

When Secretary Yellen visited, she emphasized the need "to include the environment in measures of economic growth," and cited Tobin faculty affiliate Eli Fenichel's work at the White House as a path forward to more robust national policy on valuing natural resources. Fenichel recently returned to Yale after serving in the White Office of Science and Technology Policy (OSTP) for 18 months, where they announced the federal government's first-ever guidance to agencies on how to account for the environment's contributions to national welfare, productivity, and wellbeing. This guidance will advance and strengthen analyses of regulations and government investments by incorporating the value of natural resources.

With Tobin Center support, Prof. Ken Gillingham is leading research on EV production by collecting and modeling data on every new US vehicle purchased over the last four years. The White House Council of Economic Advisers recently invited him to present early findings of this work. To address the complex challenges facing energy transmission, the Tobin Center is supporting Prof. Costas Arkolakis' work to develop what is likely the most detailed and accurate projection of the pace of renewable energy adoption. The advanced grid model examines aggregate and spatial implications of clean growth and renewables through 2040.

#### ECONOMICS OF EDUCATION AND EARLY CHILDHOOD SYSTEMS

Our strong relationship with New Haven Public Schools (NHPS) is advancing important gains for research and generating value for children and families in Yale's home city. Profs. Seth Zimmerman, John Eric Humphries, and Chris Neilson are leading research on pre-K access and parental workforce participation, linking 20 years of school choice assignment lottery data with key state data on educational, labor market, and social outcomes for both parents and kids. While results are pending, the research will offer important new insights on both the long term effects of pre-K access as well as its effect on parental workforce participation areas where the the policy community has long called for updated research.

NHPS also recently extended the NHPS Explorer—a dashboard that provides information on admission chances, proximity, routes, program characteristics, and parent/teacher testimonials. Led by Prof. Neilson in collaboration with Prof. Zimmerman, the Explorer simplifies the search process to reduce parental burden and improve program quality—with the goal of helping parents access their preferred education options. It also serves as a powerful research platform providing unique insight on parental priorities and decision making. **(\*)** 



## New Research Sheds Light on the Economic Consequences of Evictions

Yale researchers use big data to study the link between evictions and poverty in Chicago and New York City.

### QUARTERLY JOURNAL OF ECONOMICS

Forthcoming in *The Quarterly Journal of Economics,* this groundbreaking new research was conducted by Yale economists John Eric Humphries and Winnie van Dijk, together with co-

authors Robert Collinson (Notre Dame), Nicholas Mader (UChicago), Davin Reed (Spotify, previously Federal Reserve Bank of Philadelphia), and Daniel Tannenbaum (UNebraska).

## WHAT ARE THE ECONOMIC CONSEQUENCES OF EVICTIONS?

For the first time, researchers have combined eviction court records with detailed longitudinal data on socio-economic outcomes such as employment, hospital visits, and stays at emergency homeless shelters. Using a quasi-experimental design based on random assignment to judges, they find that evictions increase homelessness, reduce tenants' earnings, and impede their access to credit. The results also suggest that Black and female tenants are more likely to face negative housing and employment outcomes.

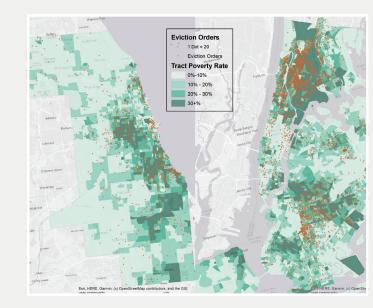
While the negative consequences of evictions have been explored through anthropological and sociological case studies—one notable example is Matthew Desmond's work, *Evicted*—there has been little rigorous quantitative analysis that sheds light on tenants' economic outcomes. In most eviction studies to date, it has been difficult to track tenant outcomes following an eviction because eviction court data and administrative data are not linked. It is also difficult to distinguish between the effects of an eviction and the effects of correlated crises such as unemployment or declining health that commonly precede an eviction.

Among OECD countries, the US has the highest number of evictions per renting household. However, both the circumstances under which tenants end up in eviction court and the financial, employment, and health outcomes of evictions remain poorly understood. Using a newlyconstructed data set that links eviction court case filings to other administrative data sets, the researchers tracked tenant outcomes in the years before and after an appearance in court. Their findings may be informative as policymakers design prevention and intervention strategies for vulnerable tenants. Moreover, the database that they created for Chicago and New York may serve as a model for efforts to create similar data at the national level. For example, a recent Department of Housing and Urban Development report to Congress calls to "support research to explore the feasibility of linking eviction records to Census Bureau and administrative databases."

#### WHAT WERE THE RESULTS?

Evictions led to multiple—and often compounding negative outcomes. Evictions led to short-run increases in homelessness and residential mobility. They also led to declines in financial health and credit scores, as well as increases in the number of hospital visits. Eviction orders often leave tenants with little time to find new housing arrangements and prior eviction orders can also make it harder to find new housing since many landlords screen potential tenants' rental history. The study showed that an eviction order increased the probability of using an emergency shelter by 3.4 percentage points in the year following the eviction, representing a more than 300% increase relative to those who are not evicted. The effects on tenants' interactions with homelessness services even persisted into the second year after eviction. These estimates are substantially larger for Black and female tenants, for which the probability of interacting with the

Evictions led to short-run increases in homelessness and residential mobility. They also led to declines in financial health and credit scores, as well as increases in the number of hospital visits.



## From the Authors: John Eric Humphries and Winnie van Dijk



#### What was the primary motivation behind this research?

We first started thinking about this topic after one of us attended a pre-release talk by Matthew Desmond about his book, *Evicted*. The book reports on his detailed ethnographic research in Milwaukee, and we thought there was an opportunity to complement his findings with quantitative evidence on the central thesis of the book: that eviction is not just a consequence, but also a cause of poverty and hardship. However, a key challenge in quantifying the causal impacts of evictions is that they are anything but random, making it difficult to separate out causation from correlation. Many people face personal crises before they are evicted, such as job loss or health declines. Disentangling how much of the decline in wages, health, and other outcomes is caused by the eviction and how much is simply a continuation of the prior shockmeaning that we would have observed it even if the tenant had not been evicted—is a tricky problem.

homelessness system up to two years after eviction was 5.7 and 6.8 percentage points, respectively. Relative to those who are not evicted, this represents a 467% increase for Black tenants and a 307% increase for female tenants.

Annual earnings following an eviction decreased by an average of roughly \$1,300 in the first year, and \$2,400 in the second year, amounting to a nearly 15 percent drop in income (from a sample baseline of \$17,200 per year). These effects are more pronounced in Cook County than in New York, and also stronger for Black and female tenants in both locations.

Individuals and families going through the eviction court process are often facing additional adversities, and this research shows that evictions are typically precipitated by job loss or declining health up to two years prior. Future research could evaluate both eviction-preventive policies, such as emergency financial assistance and free legal aid, as well as eviction-responsive policies, such as homelessness diversion programs and subsidized housing.

We now have statistical tools to deal with this problem, but they require linking high-quality data on the court cases to subsequent outcomes. Through working with the US Census Bureau and several agencies in both New York and Chicago, the research team was able to construct such a data set and conduct a first-of-its-kind analysis.

#### Where does this research lead you? What are some additional areas for exploration?

There are three big questions which this paper leaves unanswered and which we are now working on. The first centers on pre-court intervention. We have to identify methods to target these programs to families at risk of housing instability for the interventions to be effective. We currently do not have a clear method of doing that. The second centers on how effective the court-level policies actually are. A few states and many cities now have a right to counsel in eviction court: programs under which tenants are provided with legal assistance from a lawyer. The costs of providing a lawyer are steep for governments, so we have to assess how much these policies are helping tenants, especially relative to costequivalent policies that provide financial assistance to tenants. We also have to look at how housing markets respond to these new tenant protections. If we make it too difficult to evict a tenant, we might make it more difficult for tenants seen as highrisk by landlords to find any housing at all. The third question centers on the children of those evicted, because eviction often disrupts a child's living situation and their educational progress. Answering these three questions would go a long way to determining the right level and place for policy intervention.

## Welfare and the Macroeconomy

Eduardo Dávila's research explores how financial and macroeconomic policies make individuals better or worse off.



How should financial institutions be regulated? How do these decisions affect individuals?

Professor Eduardo Dávila's body of research focuses on "normative" questions, or what economists call welfare assessments: How are people better or worse off as a result of an economic or policy change?

Spanning a wide range of topics within macroeconomics and finance—including monetary policy, trading, household finance, insurance, and optimal taxation—his work looks at the policy environment to see what is desirable or optimal given that setting.

66 The heart of what I'm trying to do as a researcher is lay the foundations for the optimal design of policy in a way that incorporates all the welfare implications of what a policy is actually doing and how it affects people.

In 2023, he published in several of the top economics journals-including American Economic Review, Journal of Political Economy, and The Review of Economic Studies and earned a highly competitive five-year grant from the U.S. National Science Foundation's Faculty Early Career Development (CAREER) Program. The award will advance his work in evaluating potential macro-financial policies through the lens of how they might affect individuals. In the Q&A below, Professor Dávila discusses the origins of his research interests, and how he is applying research to policy.

#### What motivated you to start working on normative questions?

I started my PhD in economics in 2008, right in the heart of the global financial crisis—September 2008 was the month the US government took over Fannie Mae and Freddie Mac, and Lehman Brothers filed for bankruptcyand I had always been interested in financial markets. I was also interested in welfare questions, and when I looked around at the big questions in finance that people were working on then, most of them were not normative, and not centered around questions of welfare. It felt like most of the field of finance was just not ready to provide answers to normative questions: How should you regulate institutions? How should you regulate trading? What are the welfare implications of these decisions?

Especially at the time of my PhD, everyone wanted to answer these questions, and talk about optimal policies, but there was a lack of research about how macro-financial policy should actually operate. Traditionally, the field looked more at questions around uncertainty, time, financial contracting, and the like, but I was more interested in bringing tools from public economics and adapting them to the context of macro-finance. My goal has been to combine insights from welfare economics and public finance, and apply them to macro-financial policy, so that we're better able to understand how major decisions affect people's experience of the economy.

#### You've worked on a lot of different policy issuesdo you see your research as having a broad goal?

The heart of what I'm trying to do as a researcher is to lay the foundations for the optimal design of policy in a way that incorporates all the welfare implications of what a policy is actually doing and how it affects people.

I like to use the term 'welfare primacy,' meaning that my research starts from the perspective that all of economics is really about the welfare of people-with welfare meaning whether things are good or bad for individuals. In other

words, when you think about a policy, who is better off, and who is worse off? Optimal policy should aim to make as many people better off as possible, and to the highest degree. My work takes a rigorous look at these types of questions, and does so with a mix of theory and measurement. In order to make welfare assessmentsto convey whether people are better or worse off when a policy takes place—you need a theoretical framework. It's impossible to do welfare analysis without this. So a lot of the work is really about building this framework, and then doing rigorous measurement, in a way that's useful to policymakers.

While a lot of the work in macro-finance is not focused on normative questions, Yale's Department of Economics has established a strong research position, with people like James Tobin, Robert Shiller, and John Geanakoplos, that takes issues like general equilibrium and welfare economics seriously. I'm thrilled to be in a place that carries on this tradition. 🕐

## 2023 Selected Publications by Dávila and Coauthors

#### **OPTIMAL CORPORATE TAXATION UNDER FINANCIAL FRICTIONS**

Written with Benjamin Hébert in The Review of Economic Studies (July 2023). This paper looks at the taxation of financially constrained corporations and shows that a corporate payout tax is the optimal revenue-raising tax, a result with the potential to impact future tax reforms.

#### ECONOMIC STUDIES

#### **PRUDENTIAL POLICY WITH DISTORTED BELIEFS**

Written with Ansgar Walther, in American Economic Review (July 2023). How do you design regulation in the presence of belief distortions? This paper tackles a central question in normative macrofinance, exploring leverage regulation and monetary policy when equity investors and/or creditors have distorted beliefs relative to a planner, and characterizes optimal policy in practical scenarios.

The American Economic Review
ARTICLES
00E CULLEN AND RECARDO PEREZ/TRUGLIA The Old Bees' Chile Schemender and the Gender Gan
USHANT ACHARYA, EDOUARD CHALLE, AND KENHAV DOGRA Optimal Monetary Policy According to HANK
ODNITANTIN EGOBOY AND DMITHY MUKHEN Optimal Policy under Dellar Pricing
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ILLA CAGÉ, ANNA DAGORRET, PAULINE GROSJEAN, AND SAUMITRA JILA Horses and Villaine: The Effects of Horsium on Autocratic Values and Nazi Collaboration in France
ENJAMIN ENKE, THOMAS GRAEBER, AND REAN OPREA Confidence, Self-Selection, and Bias in the Aggregate
DUARDO DÁVILA AND ANNGAR WALTHER Prodestial Policy with Distorted Beliefs
SECULE MARSTAS, KATHELIEN J. MILLIEN, DAVID POWELL, TELL VON WACHTER, AND JEDTREY B. WENGER The Value of Working Conditions in the United States and Implications for the Structure of Wages
AN RENT BACH, ANTOINE BORIO, ARTHUR GUILLOUZOUK, AND CLÉMENT MALGOUTRES
Dividend Taxas and the Allocation of Capital: Comment
ADRIEN MATRAY AND CHARLES BOBSEL Extraction of "Dividend Trans and the Allocation of Capital"
JULY 2023

**66** Some economists start by looking for measurements of reality. But it is difficult to know what is important to study. Taking a normative approach, you first look at the environment in a general way to see what can happen and what is desirable or optimal given that framework. Then you will have a guide for what aspects of reality you should measure.



#### **OPTIMAL DEPOSIT INSURANCE**

Written with Itay Goldstein, in Journal of Political Economy (July 2023). This project explores the determinants of the level of deposit insurance coverage, developing new theoretical insights and connecting them with the direct measurement of the relevant variables for policy-making.

## Journal of

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#### THE VALUE OF ARBITRAGE

Written with Daniel Graves and Cecilia Parlatore, in Journal of Political *Economy* (Forthcoming, 2024). This study provides a framework to identify and measure the welfare



costs associated with the existence of arbitrage opportunities, highlighting that such costs are likely to be higher in liquid markets in which it is easy to trade.

## Nicholas Ryan Sees New Possibilities for Environmental Regulation in Emerging Markets

Professor Ryan explores the challenges low- and middle-income countries face in expanding access to energy while also reducing the health and environmental costs of energy production.





change affect the future of economic development? What role does economics play in energy markets? In the interview below, Associate Professor of Economics Nick Ryan discusses his recent research on energy and environmental about the trade-

How does climate

policy in emerging markets. Ryan talks about the tradeoffs low- and middle-income countries face between expanding access to energy, while also reducing the health and environmental costs of energy production. Nick and colleagues have worked directly with policymakers to improve environmental regulation, and their work could offer a model for expanding energy access and lowering pollution around the globe.

#### You have a pretty unique focus on energy markets and environmental regulation. How did you end up on this path?

I went into grad school knowing that I was really interested in economic development for a lot of the reasons many people are. Why are developing countries so much poorer? What are the obstacles to growing rich and adopting technology from rich countries? I was also interested in studying firms, because when you look at many highly developed countries, you have a lot of big firms that organize a huge amount of economic activity. These kinds of firms are also hugely important in energy markets, so I saw an opportunity to fuse these things.

#### What does your current research look like in this area?

My research primarily concerns energy markets and how those markets can be designed to operate at a very low cost—that is, to get energy of any kind, but particularly renewable energy, into a position where everybody can use it, especially people in poor countries. So, for example, that could be microgrids for solar in rural Bihar, in India, where people don't have access to electricity. That could be designing new contracts to get solar plants onto the grid at a lower price, so electricity suppliers are offering power as cheaply as they can, that is competitive with existing plants. Or that could be just changing the rules of the power market so that the most efficient existing sources of energy are used as much as they can be.

Absent technological change or absent pushing a new regulation, there are opportunities to lower costs and use less energy to accomplish the same work in the economy part of my research is pointing out opportunities to do that by changing the design of electricity markets.

### What role does economics play at this current moment of energy transition?

There's been huge technological progress for renewable energy generation, for solar and for wind especially, and to an extent battery storage. These things continue to become much, much cheaper, and are starting to ripple out through the economy in developed and developing economies. That opens a huge possibility to roll out these technologies at a huge scale to countries that are concerned about costs.



However, you can't just swap out a coal plant for a bunch of solar panels, one for one, and expect everything to work as it did before. You need changes in markets, in prices, in regulatory institutions to try to absorb and best use these new sources of energy. That's where energy, economics and the study of these energy markets is very important to build up the kinds of institutions that will allow countries to adopt renewable energy cheaply and at a massive scale. Understanding how markets respond to energy transitions, to the incentives and opportunities created by cheaper renewable power, is the focus of a whole new wave of economic research.

#### One of your recent papers looks at how households in different contexts choose between sources of electricity—what did you find there?

That paper is "Demand for Electricity on the Global Electrification Frontier," with Robin Burgess (LSE), Michael Greenstone (UChicago), and Anant Sudarshan (Warwick). What we study is the choice households have between different kinds of electricity: what do they pick and why? And to say kinds of electricity is weird because electricity is the same. It's the same wherever it is. It's just electrons being



pushed through a wire. But now in many poor countries, people do have a choice in how that's delivered and where they get their electricity from.

For example, you might plug into a government-built electricity grid, or you might buy a solar system on your own. What we see now is that in many of the places where people don't have electricity from the grid, solar has taken off as a really popular option. In Mali, around 60% of households have a solar system. In Uganda, in Tanzania, it's above 40%. We wanted to understand how and why households make that decision, so in Bihar, India, we looked at what households did as the grid arrived and as solar got cheaper. We also looked at how sensitive they are to the costs and reliability of these options.

What we find is that households are actually glad to get solar power because it's pretty cheap, so it makes them much better off than they were before when they were sitting waiting in their village with no grid connectivity. But when the grid does arrive, that tends to push the solar systems out. The reason for that in part is that the government is subsidizing grid energy so that It's even cheaper than these small-scale solar systems that many households could buy for themselves. **③** 



66 Development economists play a critical role in supporting environmentally sustainable economic growth by generating evidence on the impact of different policy changes to inform decision-making.

## **Graduate Life: An Update From the DGS**

It is my pleasure to report exciting new developments in our PhD program as we begin the 2023-24 academic year at our new building at 87 Trumbull Street.

The incoming class consists of 30 energetic students with diverse backgrounds who joined our program in September. This brings the size of our PhD program, a dynamic community that continues to engage in cutting-edge research, to 138. By uniting us under one roof, the new building facilitates and enhances interactions and collaborations among students and faculty members.

At the Commencement held in May, 18

students from our program received their

PhDs, followed by a departmental reception

held in an open space in our new building. The graduates were joined by their advisors, friends, and family members to celebrate the special occasion. I am happy to report that, reflecting the high quality of the theses submitted this year, the department granted four Trimmis awards. The recipients were: Haoge Chang for his thesis on design-based inference, a technique attracting significant attention in modern econometrics; Lucas Finamor for his analysis of the role of informal employment using a rich Chile data set; Michael Sullivan for his structural modeling of two-sided digital markets concerning platforms such as Doordash; and, Diana Zhu for her highly policy-relevant study of comparative advantages of primary physicians and the potential gains



YUICHI KITAMURA Director of **Graduate Studies** 

in health outcomes from optimal matching using such information. The commencement was a great occasion to recognize the superb work conducted by our students, culminating in these 18 dissertations that push the frontier of research.

We had yet another successful year in terms of placement outcomes in last Spring's job market, reflective of the continuing high demand for our graduating class. Their work is wide-ranging, including innovative research with field experiments, rigorous empirical investigations using structural models, and state-of-the-art theoretical analysis. Our placement efforts, with Johannes Hörner

and Giuseppe Moscarini at the helm, provided highly effective guidance and support to our students on the market, resulting in a strong placement record that includes tenure track appointments at universities such as Columbia, University College London, and University of Western Ontario, as well as top industry positions.

Five of our students were selected for the Anderson Fellowship: Tianyu Fan (macro/trade), Daniel Graves (finance/behavioral), Jack Liang (macro/trade), Dana Scott (labor) and Nick Wu (theory). The Anderson fellowship prize is awarded annually to pre-doctoral or post-doctoral



Students in Microeconomic Theory I



Graduate student class with John Geanakoplos

students who are selected by a committee of Cowles professors in the Department of Economics with the approval of the Dean of the Graduate School. I am also happy to report that Tianyu Fan, Miho Hong, Ryungha Oh, Sabrina Peng, Christina Qiu, Matthew Schwartzman, and Roberto Simonelli Lee were selected for the 2023-24 Sylff Fellowships, which recognize outstanding economics PhD students in development economics and trade at Yale. I am happy to note that our students, following the tradition, announced this year's faculty award winners at the Economics Department Holiday Party. Charles Hodgson was named "Teacher of the Year," and Katja Seim and Fabrizio Zilibotti were named "Advisors of the Year."

Finally, I would like to take this opportunity to thank Scott Runner for the highly effective and dedicated support he provided for our program during his tenure at our department. Scott started his position as the graduate registrar in February 2022 and quickly became an indispensable part of our program. Our students continue to thrive today in no small measure due to his superb efforts. To acknowledge his contributions and to express their deep gratitude, our grad students, with support from the department, hosted a farewell event in October for Scott. Attended by students and faculty members, the event was a testament to our community's appreciation for Scott's work as registrar and to the friendship and camaraderie he offered to us. As he embarks on a new position at the University Registrar's office, we are incredibly fortunate and grateful that Pam O'Donnell, the beloved member of our community who held the graduate registrar position for 31 years prior to Scott, has agreed to step in as registrar. I am fully confident that with Pam's wisdom and expertise, our program will continue to be administered flawlessly. Thank you, Scott and Pam! 🕚





Graduate Registrar Scott Runner



Graduate Registra Pam O'Donnell



The Economics PhD Class of 2023

#### THE INTERNATIONAL AND DEVELOPMENT ECONOMICS ONE-YEAR MASTER'S PROGRAM

The IDE one-year Master's program welcomed 34 students for the 2023-24 academic year. Housed within the Economic Growth Center and the Department of Economics, the IDE program equips students from around the world with the necessary skills in applied economics to prepare them for a variety of career paths in the policy and academic spheres. As of this year, the program is co-directed by Michael Boozer and Ana Cecilia Fieler.

## **Undergraduate Life: An Update From the DUS**

### In 2023, the Undergraduate Program set a number of new milestones.

#### **Graduating Seniors**

2023 was an exciting year for the Undergraduate Program. Economics continues to be Yale's largest major, and this fall, all three of Yale College's most popular courses were economics classes. In Fall 2023, we have over 2900 students enrolled across all undergrad courses—a nearly 300 student increase from Fall 2022. We should all be proud of this, and I'm thankful to all the faculty and staff who make it happen.

We had an impressive group of graduating

seniors in 2023, with 229 total economics

degrees granted: 183 in Economics, 18 in

Economics and Math, and 28 in Economics



**GIOVANNI MAGGI** Director of **Undergraduate Studies** 

The Dickerman Prize for the Best Senior Essay went to two recipients: Sarah Moon ("Partial Identification of Individual-Level Parameters Using Aggregate Data in a Nonparametric Binary Outcome Model") and Bruno Moscarini ("Skewed Uninsurable Income Risk in Incomplete Market Economies"). The Meltzer/ Awdziewicz Prize went to Rosa Kleinman ("Transaction Costs and the Take-up of Social Safety Net Programs: Evidence from the Combined Application Project"). The Ellington Prize for the best essay in finance went to Aaron Dickstein ("The Impact of Economic Conditions on Decision-Making:

Evidence from Retail Stock Trading"). Aaron also received one of Yale College's top prizes: he was awarded the Arthur Twining Hadley Prize, which goes to the graduating senior majoring in the social sciences who ranks highest in scholarship. Congratulations to all of these seniors for their exceptional accomplishments!

#### **Research Programs**

Our research programs and student groups continue to provide space outside of formal economics coursework for students to get hands-on experience and contribute to the wider economics community.

We run two programs designed to give Yale students an opportunity to immerse themselves in ongoing economics research. In the summer of 2023, we had 35 participants in the Herb Scarf Summer Research Opportunities program, which also runs workshops on programming, research, and the economics profession. In the past three academic vears, we've also had over 270 students participate in the Tobin Research Assistantships program, which runs during the school year. Through these programs, RAs work directly with faculty on projects related to climate change adaptation, discrimination in higher education, electric transportation, hiring algorithms, housing instability, income inequality, migration policy, renewable energy, student loans, and much more. We're excited to continue these programs and expand offerings in future years.

#### **Peer Mentor Program**

For the sixth year, the department is participating in the Peer Mentor program, made up of juniors and seniors selected and trained to convey advice and information to their peers, as a way of increasing and diversifying mentoring resources within the major. This year, we have an outstanding group of economics peer mentors: Nastaran Moghimi (Class of 2025), Amre Proman (Class of 2024), Nick Trenholm (Class of 2024), and Rock Zhou (Class of 2024).

#### Women in Economics (WiE) Student Organization

The Yale Undergraduate Women in Economics group is now in its seventh academic year of existence. The group continues to work towards its goal of empowering women and gender minorities in economics. In the past year, Women in Economics has organized a peer mentoring program between older and younger students. Additionally, it continues to host speaker events and panels with academic scholars, industry professionals, and leaders across many careers and interest areas.

In addition to formal events featuring invited speakers, Women in Economics also seeks to foster a stronger community of economics students of diverse backgrounds here at Yale through social events and opportunities to connect on levels beyond a shared interest of Economics. Planned for this semester are movie nights and study halls. This year's board members are Maggie Cao, Eleri Phillips, Michelle Arguello, Logan George, Julia Wotjkowski, Aiwen Desai, Aleena Gul, Tione Hoeckner, Lydia Choi, Lauren Kim, Emma Lazo, Emma Bucaj, Teddy Horangic, and Nina Gaither.

Yale Women in Economics continues to maintain a strong partnership with Seeds of Fortune, a non-profit organization which seeks to financially empower young women of color from underserved backgrounds by helping them to apply for college scholarships and by teaching them career and financial management skills. Scholars are paired with Yale students who mentor them over the course of the program, culminating in a gathering on Yale's campus in which scholars deliver their capstone presentations. 🕅



Members of Women in Economics (WiE) with US Treasury Secretary Janet Yellen

Courses

#### This fall, we offered 35 courses, and will offer 44 more courses in the spring. I'm delighted to see continued enthusiasm about our courses by students inside and outside of the economics major.

and Computer Science. We had an additional 42 seniors

graduate with degrees in Ethics, Politics, and Economics.

I'm also excited to share that we've added course offerings to match current interests and trends, including topics like Economics of Artificial Intelligence, Machine Learning for Economic Analysis, Economic Crises in History, and Global Economic History.

We've also continued to encourage and support students to pursue their own research through the Senior Essay. In the 2022-23 academic year, 30 seniors completed Senior Essays. This year, these essays spanned topics across all fields of economics, including the analysis and evaluation of programs related to food security, environmental cleanups, remote schooling, and childcare, as well as topics in macroeconomics, finance, spatial economics, and theoretical econometrics.

This year, 12 seniors were nominated for prizes for their essays: Raphael Berz, Tilden Chao, Aaron Dickstein, Noah Friedlander, Rosa Kleinman, Sarah Moon, Bruno Moscarini, Michael Ning, Ayumi Sudo, Sasha Thomas, Crystal Wang, and Justin Ye.



## 2023 Senior Degrees Awarded

TOTAL ECONOMICS **DEGRESS GRANTED** 

> 183 IN ECONOMICS

IN ECONOMICS

& MATH



IN ECONOMICS & COMPUTER SCIENCE



IN ETHICS, POLITICS, AND ECONOMICS



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## **Another Impressive** Year for Department of **Economics Faculty Awards**

In 2023, many economics faculty members received significant recognition for their work, marking them as leaders in their field.

#### Joseph Altonji Receives Jacob Mincer Award for Lifetime Contributions to Labor Economics

Awarded annually at the conference of the Society of Labor Economists (SOLE), the honor is named after Jacob Mincer. who helped develop the empirical foundations of human capital theory, and revolutionized the field of labor economics.

#### Orazio Attanasio elected to the American Academy of Arts and Sciences (AAAS)

Each year, the academy elects new members in recognition of their notable achievements in academia, industry, policy, research, and science. Attanasio was one of nine members of the Yale faculty elected in 2023, and his election followed that of Rohini Pande in 2022.

#### Evangelia (Eva) Chalioti Receives the Richard H. Brodhead Prize for Teaching Excellence

Chalioti, a senior lecturer and associate chair in the Department of Economics, received the award for her "meticulous approach to teaching difficult economics courses with remarkable clarity." She teaches newer courses, including 'Economics of Artificial Intelligence and Innovation,' as well as larger core lectures

such as 'Intermediate Microeconomics,' foundational to the hundreds of students completing the economics major. In the prize citation, students called Eva's teaching 'flawless,' 'organized,' 'engaging,' 'incredible,' and 'wise.'

#### Eduardo Dávila Wins Early Career Award to Advance Economics

Professors Dávila earned a highly competitive five-year grant from the US National Science Foundation's Faculty Early Career Development (CAREER) Program. Read more about his work on page 15.



#### Ross Prize Awarded to Ana Fostel and John Geanakoplos for Research on Leverage Cycles

The Foundation for Advancement of Research in Financial Economics (FARFE) awarded its eighth Stephen A. Ross Prize



in Financial Economics to the paper "Leverage Cycles and the Anxious Economy," published in the American Economic *Review* in 2008. Written by University of Virginia's Ana Fostel (PhD '05) and Yale's John Geanakoplos, the paper improved our understanding of the effect of leverage on asset prices and the dynamics of collateralized borrowing against financial assets.

#### Philipp Strack Receives 2023 Bodossaki Foundation Distinguished Young Scientist Award

The Young Scientist Awards acknowledge and promote the work of young Greek (by nationality or descent) scientists who lead worldclass pioneering research, and whose outstanding performance has already significantly contributed to the advancement of science. The prize



committee noted that Professor Strack has distinguished himself through contributions to research in economics and for promoting the Greek creative spirit in the international scientific community.

#### Rebecca Toseland received the FAS Dean's Award for Inclusion and Belonging

Toseland's nominators noted that she has "advanced inclusivity through her leadership and service: She made critical contributions to the FAS's Diversity, Equity, Inclusion, and Belonging unit planning process, and was a thoughtful champion of inclusion and belonging on FAS's Communications Advisory Committee." Read more about her work on page 25. 🕅

## **Yale Welcomes Leading Economists to Campus**

#### **VARIAN DELIVERS OKUN LECTURE ON WHETHER GOOGLE DATA CAN PREDICT THE ECONOMY**

Google Chief Economist Hal Varian visited Yale in April to deliver the Arthur M. Okun Memorial Lecture. In a talk titled "Nowcasting with Google Trends," he explored how Google search queries can be used to forecast economic activity in real time. Varian's talk provided an overview, and several examples, of



how search data correlates with economic activity in given industries, and how it can predict the more infrequent and periodic government data, such as GDP and unemployment.

For example, Varian detailed how the behavior of people who are recently unemployed can be used to forecast labor outcomes. In the immediate aftermath of a layoff, many people use Google to look for information about unemployment benefits. On the Monday after a Friday layoff, many people search for: "Where is the unemployment office?" or "What do I have to bring to the unemployment office?" These searches correlate with actual unemployment benefits given days or weeks later, and thus could be used as one input to assess the overall health of the labor market, in real time.

#### YALE CLIMATE, ENVIRONMENT, AND **ECONOMIC GROWTH CONFERENCE**

In November, the Economic Growth Center (EGC), Tobin Center for Economic Policy, and Yale School of the Environment brought together researchers and practitioners to discuss the economic impacts and policy implications of climate and environmental change. On the conference's first day, hosted by the EGC, researchers and policymakers discussed whether it is possible to have global economic growth as currently measured while drastically reducing greenhouse gas emissions. It also featured a keynote address by Esther Duflo, the 2019 recipient of the Nobel Prize in Economics. On its second day, attendees honored the 50th anniversary of William Nordhaus and James Tobin's paper "/s *Growth Obsolete?*," which launched new research programs and policy actions to improve national accounting. 🔇



### Each year, the Department hosts top academics from around the world to present their latest research at conferences and lectures.





Mark Armstrong (UCL), Susan Athey (Stanford and DOJ), Jacques Cremer (TSE), Joshua Gans (University of Toronto), and Jean Tirole (TSE) at the Regulating the Digital Economy conference.

#### LEADING ECONOMISTS MEET TO DISCUSS **TACKLE DIGITAL MARKET REGULATION**

As part of its Digital Markets initiative, the Tobin Center, together with the Toulouse School of Economics, gathered more than 60 top economists for the "Regulating the Digital Economy" conference. Speakers included Nobel Laureate Jean Tirole and Chief Economist for the DOJ Antitrust Division Susan Athey, and the conference was led by Yale faculty members Dirk Bergemann Fiona Scott Morton, and Katja Seim. Tobin Director Steven Berry highlighted how growth of the digital economy has, to date, outpaced economists' ability to understand these markets or conduct the research necessary to support appropriate responses. To address this gap, participants presented cutting edge research on topics including media consolidation, competition in digital advertising, how competition regulators can use economic modeling, how to apply research to policy, markets for personal data, artificial intelligence, algorithmic recommendations, and the impact of enhanced privacy measures.

66 Competition and antitrust law alone are not well suited to address the range of challenges presented by platforms. Our collaboration with the Tobin Center mobilizes leading economists to take on essential research and brings it to policymakers, enabling better, more effective policy.

**NOBEL LAUREATE JEAN TIROLE** 

## **Pre-Doctoral Fellows Program Supports Policy-Relevant Research**

Led by Rebecca Toseland, who received this year's Faculty of Arts and Sciences (FAS) Dean's Award for Inclusion and Belonging, the Predoc Program is a vibrant and diverse community of scholars from around the world.

With 62 current Fellows supporting more than 60 faculty members, the Predoc Program continues to see increasing levels of interest and growth. Across five years of recruitment, the program has onboarded over 150 predocs who have supported 70+ faculty members. The Predoc Program advances several key goals:

- Support Yale economics faculty working on policyrelevant research.
- Create a high value-add education and training experience for fellows, helping to prepare them with the skills they will need to pursue graduate study and engage in data-intensive, policy-relevant economics research.
- Recruit diverse cohorts of fellows and promote a culture of inclusion and belonging, increasing the presence of members of underrepresented groups in economics, who bring vital new perspectives to the profession stemming from different backgrounds and experiences.

The program currently includes 36 predocs who identify as a member of an underrepresented group in economics, including women, underrepresented minorities, and first-generation lowincome college students.

In recognition of her efforts to create opportunities for a diverse community of emerging scholars, Tobin

Director of Research Support Rebecca Toseland received the FAS Dean's Award for Inclusion and Belonging. In the prize citation, the nominators celebrated Toseland for her mentorship of pre-doctoral fellows, and for her development of programs and resources that help them succeed as researchers.

### Below, Toseland reflects on the award and her work with the Predoc Program

I've been really excited by the enthusiasm in the program, and by the efforts of the Department of Economics and the Tobin Center to train the next generation of economics scholars and foster diversity and inclusion in the discipline. In the first five years of the program, we have focused on building three main pillars: to be an important vehicle to support economics research at Yale, especially evidence-based, policy-relevant research; to help the program's fellows prepare and be successful in what they do after; and to help expand the pipeline into a career in economics research.

We have always had the goal to recruit a diverse cohort for the Predoc Program. Diversity in this context is, of course, multidimensional. It means bringing together predocs from different countries of origin, especially from less resourced countries. It means bringing in racial and ethnic diversity, especially underrepresented minorities in economics. And it means bringing in gender and socioeconomic diversity. In

recent years, over 50% of our cohorts have identified as a member of an underrepresented group in economics.

Inclusion and belonging are just as important. We strive to create an environment in which each predoc is able to thrive, and cultivate positive relationships with their peers, faculty mentors, and others they encounter in the Yale Economics community. This kind of environment helps everyone do the best work they can, and helps them develop their academic and career aspirations during their time at Yale. 🕅



Members of the 2023-24 Predoc Program

## Our Programs by the Numbers

Economics is Yale's largest major, with over **300** seniors majoring either in Economics or one of its joint majors.



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# FALL 2023 COURSES

GRAD

UNDERGRAD

ΤΟΤΑΙ

## The Tobin Center / **Economics Predoc Program**

Predoc Alumni



GRADUATE PROGRAMS

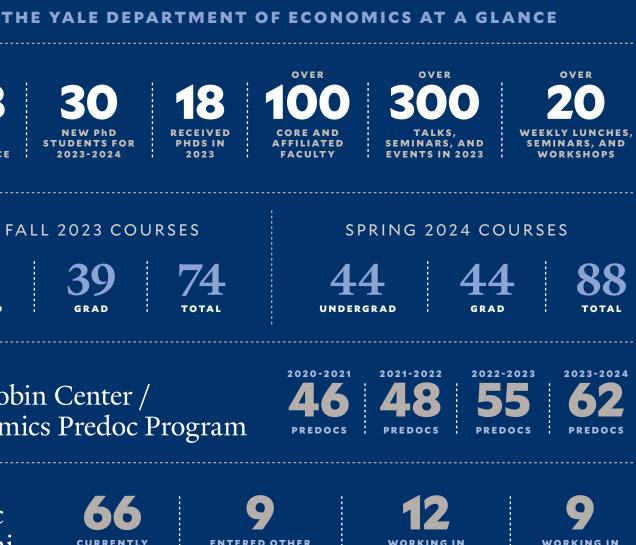
Tobin Undergraduate **Research Assistantship** Program



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Herb Scarf Summer Research **Opportunities** Program

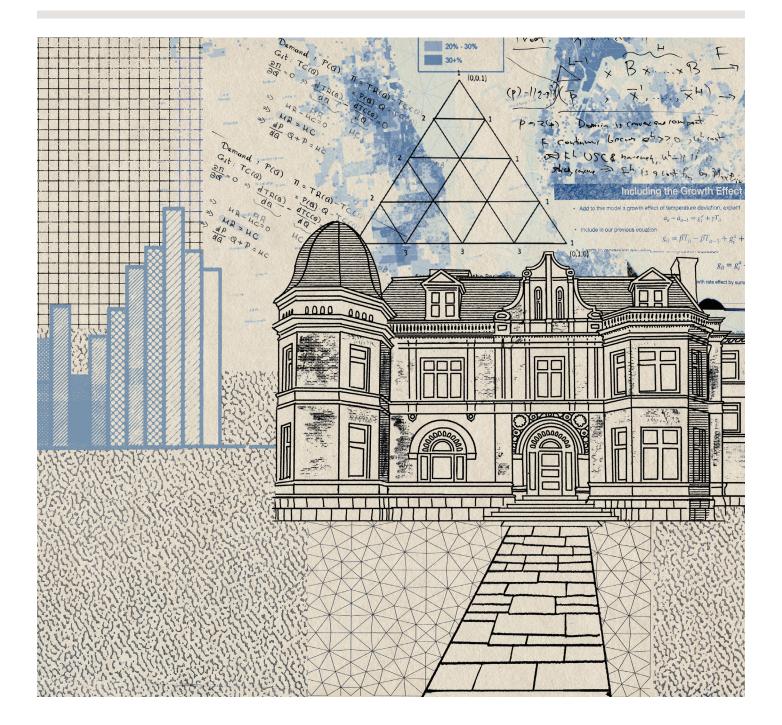
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