

PURDUE
UNIVERSITY®

Research Center in Economics



|| We want firms to come to us, and policymakers to come to us, and discerning idea consumers of every stripe to come to Purdue for new ideas, and for fresh thinking on emerging problems. It's why at Krannert we have reorganized our programs around experiential learnings, and our research centers around engagements with external parties. But at the core of that thinking is building a lasting reputation as a source of real and relevant expertise. ||

- David Hummels, the Dr. Samuel R. Allen Dean of the Krannert School of Management

Welcome

I am pleased to share this report on progress the Purdue University Research Center in Economics (PURCE) has made this academic year, my first as director. This report gives me the opportunity to highlight the research accomplishments of our faculty and PhD students and our undergraduate teaching and engagement, as well as our outreach to policymakers, the business community and the public.



During the 2018-19 academic year PURCE:

- Faculty affiliates published 24 research articles and presented at 83 conferences.
- Hired a media relations specialist to distribute our research findings.
- Increased the number of faculty affiliates to 28.
- Funded 11 economics PhD student fellowships.
- Funded the teaching of economics to 306 additional undergraduate students.
- Started the Economic Scholars Program, with 12 students receiving scholarships.
- Launched our Economic Policy Lunch series.
- Welcomed 750 participants to six PURCE events.
- Increased our media audience by 138% over the previous year.

PURCE enjoys strong support from Purdue President Mitch Daniels, the University's central administration and the Krannert School of Management, where we are housed. We have 18 faculty and 16 graduate student offices as well as four conference rooms in our recently remodeled space. PURCE also has attracted funding from 27 donors and foundations, a large and expanding base of supporters. We have outstanding faculty who are excellent researchers, advisors and teachers. And the Research Center in Economics finds itself in a strong position to advance its mission.

Thank you for supporting PURCE.

A handwritten signature in black ink that reads "K. J. Mumford".

Kevin J. Mumford
Kozuch Director

Our Mission

The Purdue University Research Center in Economics (PURCE) is focused on the creation and dissemination of insights into how laws, regulations and government programs affect the market economy and the well-being of individuals and society.

It does this by:

- Providing resources to hire faculty who are trained in empirical economic methodologies and who apply them to policy evaluation.
- Training economics PhD students in these methods with this research focus.
- Supporting the research of faculty and students by helping them distribute research findings in top academic journals and in other media to reach a general audience.

In summary, PURCE faculty and graduate students conduct unbiased and rigorous policy-relevant economic research and share knowledge with academics, policymakers, the business community and the public. We have a reputation for first-rate, academic research demonstrated by our activities and publications over the past year. Moving forward, we are working to develop an increased capacity to communicate the results of our research findings to a general audience.

Research Focus Areas

Our research helps community, business and government leaders address economic challenges by estimating the effects (both intended and unintended) of laws, regulations and government programs in several focus areas:

Crime and the Legal System

Education Policy

Federal Entitlement Programs

Labor Markets and Wages

Merger Policy

Taxation

Trade and Globalization



Our Home



Located in West Lafayette, Indiana, Purdue University is a world-renowned, public research university. Purdue was recently ranked by The Wall Street Journal and Times Higher Education as sixth-best among public institutions in the U.S. and the fourth-best value among all higher education institutions, reflecting the outstanding return on investment that a Purdue education offers. Student enrollment totals 43,400, of which 75% are undergraduates. The one-year retention rate is 92%, and the six-year graduation rate is 81%. Purdue students graduate in over 200 majors with an average post-graduation salary of \$59,515.

PURCE is housed in the Krannert School of Management, one of the top business schools in the country, with 2,500 undergraduate and 750 graduate students. Krannert has been named a top-25 undergraduate business program in 21 consecutive rankings by U.S. News & World Report.

Krannert's strengths in analytical and quantitative analysis reflect Purdue's roots in science, technology and engineering. The curriculum at both the undergraduate and graduate levels emphasizes calculus-based analytics and data analysis. And the presence of the Department of Economics within the business school is another factor that makes Krannert unique and has contributed to the overall focus of teaching students data-dependent empirical methodologies.

The center's mission of using empirical economic methodologies to analyze the effects of laws, regulations and government programs fits perfectly with Purdue's strengths. Our researchers use data and causal methods to estimate the effects of government policies on household and business decisions and outcomes.



Who We Are

PURCE Leadership and Staff



Kevin J. Mumford
Kozuch Director



Lynne Kiesling
Associate Director



Nicole Brooks
Media Relations
Specialist

PURCE-Affiliated Faculty

Jack Barron	Professor of Economics
Jonathan Black	Assistant Professor of Accounting
Timothy Bond	Associate Professor of Economics
Jillian Carr	Assistant Professor of Economics
Mara Faccio	Duke Realty Chair in Finance and Professor of Finance
Farid Farrokhi	Assistant Professor of Economics
Clifford Fisher	Clinical Professor of Management
Trevor Gallen	Assistant Professor of Economics
Huseyin Gulen	Professor of Finance
David Hummels	Dr. Samuel R. Allen Dean and Distinguished Professor of Economics
Soojin Kim	Assistant Professor of Economics
Jerry Lynch	Emeritus Professor of Economics
Stephen Martin	Professor of Economics
Joe Mazur	Assistant Professor of Economics
William B. McCartney	Assistant Professor of Finance
John McConnell	Burton D. Morgan Distinguished Chair of Private Enterprise and Professor of Finance
Timothy Moore	Associate Professor of Economics
Kevin Mumford	Associate Professor of Economics
Victoria Prowse	Marge Magner Chair and Associate Professor of Economics
Mohammad Rahman	Associate Professor of Management
Brian Roberson	Associate Professor of Economics
Miguel Sarzosa	Assistant Professor of Economics
Ralph Siebert	Professor of Economics
Anson Soderbery	Associate Professor of Economics
Justin Tobias	Loeb Chair and Professor of Economics
John Umbeck	Professor of Economics
Chong Xiang	Professor of Economics
Cathy Zhang	Associate Professor of Economics

New Faculty Affiliates



Jonathan Black, Assistant Professor of Accounting. Professor Black has been with Krannert since 2015 and has been named a distinguished teacher twice. He earned his PhD in accounting from the University of Colorado. Black's research areas include capital markets, disclosure quality, discretion in financial reporting and financial institutions.



Mara Faccio, Duke Realty Chair in Finance and Professor of Finance. Professor Faccio's research interest is in international finance. She earned her PhD in finance from Università Cattolica in Milan, Italy, and has taught at Krannert since 2007. Faccio is a research associate of the National Bureau of Economic Research, a senior fellow of the Asian Bureau of Finance and Economics Research, and a research associate of the European Corporate Governance Institute.



William B. McCartney, Assistant Professor of Finance. Professor McCartney's research interests include household finance, corporate finance and real estate. He earned his PhD in finance at Duke University and joined Krannert in 2018. McCartney earned his BS in actuarial science from Purdue.



John McConnell, Burton D. Morgan Distinguished Chair of Private Enterprise and Professor of Finance. A Krannert faculty member since 1976, Professor McConnell has served as director of doctoral programs and research, area coordinator of finance, and academic director of professional master's programs. He has published more than 100 articles in leading peer-reviewed finance, economics and management journals and has edited books on portfolio management, mergers and acquisitions, corporate restructurings, and more.



Mohammad Rahman, Associate Professor of Management. Professor Rahman's research focuses on three related issues: measuring and quantifying the impact of digital transformations led by the internet; the economic value of digital footprints; and the impact of information technology on a firm's business and operational practices. He was named to Poets and Quants' list of the 40 Best Business Professors Under 40 in 2017. Rahman earned his PhD in management information systems from Krannert.

Faculty Updates

Jack Barron and Kevin Mumford received a research grant from Nationwide Insurance.

Timothy Bond earned tenure and was promoted to the rank of associate professor.

Mara Faccio won the William F. Sharpe Award for Scholarship in Financial Research.

Farid Farrokhi was awarded a Danish Council for Independent Research Grant.

David Hummels was named a Purdue Distinguished Professor of Economics.

Soojin Kim was honored with a Distinguished Teacher Award by Purdue.

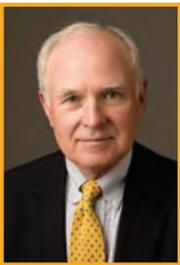
Joe Mazur was awarded a Krannert Research Data Initiative Grant.

Mohammad Rahman was named to Poets and Quants' list of the 40 Best Business Professors Under 40, received the Information Systems Society Sandy Slaughter Early Career Award, and also was awarded a grant from the Trask Innovation Fund.

Cathy Zhang earned tenure and was promoted to the rank of associate professor.



In July, PURCE said goodbye to its associate director, Visiting Associate Professor Lynne Kiesling. We will miss her excellent teaching and engagement with our undergraduate students. Kiesling's efforts, coupled with her enthusiasm for PURCE, turned several good ideas into fully functioning programs. We wish her the best in her new position as director of the Institute for Regulatory Law and Economics at Carnegie Mellon University in Pittsburgh. Her research expertise in energy market regulation and her engagement with government regulators in this area make her the perfect choice to assume this role.



In May, Professor Jerry Lynch retired and was named an emeritus professor of economics. For the Krannert School of Management he served as associate dean of the international outreach MBA programs in Hannover, Germany; director of master's and executive education programs; and interim dean. Professor Lynch received Krannert's Salgo-Noren Teaching Award five times. He is a fellow of the Purdue Teaching Academy and co-authored three economics textbooks. Specializing in macroeconomics and international trade, Lynch's research has been published in the top academic journals, including *The American Economic Review*. His ability to clearly communicate the effects of various economic policies will be greatly missed.

Our Programs



RESEARCH PROGRAMS

Graduate Research Assistantships Program

Funding for PhD students in the Department of Economics is available for those being advised by a PURCE faculty affiliate. This funding covers University tuition and fees as well as a teaching/research assistantship.

Research Grants Program

Research grants are available to PURCE faculty affiliates and to PhD students being advised by a PURCE faculty affiliate. Recipients produce policy-relevant research papers published in top academic journals.

UNDERGRADUATE STUDENT ENGAGEMENT PROGRAMS

Economic Scholars Program

Students who have completed a Principles of Economics course are invited to apply for the program, with a preference for students who are not economics majors. The selected students take a one-credit-hour independent study course in which they complete readings and have a weekly discussion meeting. These students help plan the Economic Ideas Forum. At the conclusion of the course and the forum, each is awarded a \$1,000 scholarship.

Economics Honors Courses

PURCE provides overload teaching payments to fund the teaching of honors courses in economics. With a focus on attracting students from other majors, these courses use interactive teaching methods, including readings, discussions and projects.

OUTREACH PROGRAMS

Annual Economic Ideas Forum

This conference provides an opportunity for PURCE faculty affiliates to share their insights about the effects of government policy with an audience of government, business and community leaders, as well as with the general public. A nationally recognized policy scholar is invited to deliver a keynote address.

Economic Policy Lunch

This monthly lunch brings together community leaders from Greater Lafayette and beyond to hear a PURCE faculty affiliate make a presentation and field questions.

Distinguished Lecture Program

This initiative brings world-renowned scholars to Purdue to give public lectures on government policy topics. PURCE generally partners with the University president, the School of Management or another University entity.

This Year's Events

PURCE

November

Kevin Mumford, "The Effects of the Trump Tax Cuts on Households and Firms"

December

David Hummels, "Reshaping U.S. Higher Education in the Face of Globalization"

January

Tim Moore, "The Opioid Crisis and Declining Life Expectancy in America"

March

Tim Bond, "The Sad Truth About Measuring Happiness and Other Things"

April

Douglas Irwin (Dartmouth), "Clashing Over Commerce, A Look at U.S. Trade Policy"

Economic Policy Lunch

This year, PURCE started a monthly luncheon featuring a faculty affiliate presenting empirical research findings. The Economic Policy Lunch helps us accomplish our mission to share PURCE research. Local business leaders, community members, elected officials and members of the Purdue community attended these events, which averaged 40 participants.





The Economic Ideas

Forum featured a panel discussion with, from left, the Dr. Samuel R. Allen Dean of the Krannert School of Management David Hummels, Douglas Irwin, and Krannert Associate Dean David Schoorman.



Professor Douglas Irwin, center, with six of the 12 undergraduate participants in the Economic Scholars Program, PURCE Director Kevin Mumford, PURCE Associate Director Lynne Kiesling, and two members of the Hugh and Judy Pence Family.



Case and Deaton Lecture

In partnership with University President Mitch Daniels' office, PURCE hosted Princeton economists Anne Case and Nobel Laureate Sir Angus Deaton on March 26. The husband-and-wife team participated in two question-and-answer sessions moderated by Tim Moore, associate professor of economics and PURCE faculty affiliate.



The first session attracted 75 undergraduate students, and the second had 60 faculty members and PhD students in attendance. PURCE also hosted a lunch with Professors Case and Deaton for faculty and PhD students from the departments of Sociology, Nutrition Science, and Health and Kinesiology. President Daniels hosted the distinguished lecture that evening in Fowler Hall and a dinner that evening at his home. Over 300 attended the lecture. Case and Deaton discussed the connections between economic status and poor physical and mental health in America.

This Year's Events



Joe Mazur

Economic Ideas Forum

Thanks to generous support from the Hugh and Judy Pence Family, PURCE held its second annual Economic Ideas Forum on April 18. The daylong event featured nine PURCE faculty affiliates presenting hourlong synopses of their latest research. Attendees could choose from these speakers and topics:

- Tim Bond** - Labor Market Discrimination
- Jillian Carr** - Crime and Poverty
- Trevor Gallen** - Inequality in the United States
- Huseyin Gulen** - Effects of Policy Uncertainty
- Lynne Kiesling** - Energy Market Regulation
- Joe Mazur** - Economics of Antitrust Policy
- Tim Moore** - The Opioid Crisis
- Victoria Prowse** - Science of Motivation
- John Umbeck** - Unintended Effects of Regulation

The afternoon faculty symposia were open to the public, with nearly 100 in attendance, including community and business leaders. The day began with a private lunch with 40 in attendance and a talk by the forum's keynote speaker, Douglas Irwin, who is the John French Professor of Economics at Dartmouth College and the preeminent economic historian of U.S. trade policy.

Irwin started his visit with PURCE by assessing the United States' current trade policy through the lens of historical data. He spent the afternoon in small-group discussions with undergraduate students in the Economic Scholars Program. Each student had read Professor Irwin's book "Clashing Over Commerce" and had participated in eight evening discussions with PURCE Associate Director Lynne Kiesling in preparation for this event.

The Economic Ideas Forum concluded with an evening fireside chat in Fowler Hall, featuring Professor Irwin, Dean David Hummels and Associate Dean David Schoorman. The three discussed trade policy and trade negotiation strategy.



Tim Moore



John Umbeck



Victoria Prowse



Tim Bond

Other Events

PURCE co-sponsored the annual Institute for Regulatory Law and Economics Workshop, Oct. 12-16. A group of 20 state energy regulators and commission staff attended the event led by Lynne Kiesling.

PURCE Director Kevin Mumford served as keynote speaker at the Greater Lafayette Chamber of Commerce lunch on Nov. 15.



Publications and Research Highlights

Academic Publications

In the 2018-19 academic year, PURCE-affiliated faculty published 24 peer-reviewed articles in top academic journals, including:

- The Accounting Review
- American Economic Journal: Policy
- American Economic Review
- Economic Inquiry
- Journal of Economic Behavior and Organization
- Journal of Economic Literature
- Journal of Human Resources
- Journal of International Economics
- Journal of Labor Economics
- Journal of Macroeconomics
- Journal of Political Economy
- Journal of Public Economics
- National Tax Journal
- Review of Economics and Statistics
- Review of Economics Studies

Research Highlights

Jillian Carr, “SNAP Benefits and Crime: Evidence From Changing Disbursement Schedules,” with Analisa Packham of Miami University and published in *The Review of Economics and Statistics*. Carr and her co-author study the effects of the timing of nutritional-aid disbursement on crime and find that staggering the Supplemental Nutrition Assistance Program (SNAP) benefits leads to large reductions in crime and theft at grocery stores by 17.5% and 20.9%, respectively.

Timothy Moore, “The Mortality Effects of Retirement: Evidence From Social Security Eligibility at Age 62,” with Maria Fitzpatrick of Cornell University and published in the *Journal of Public Economics*. Moore and Fitzpatrick examine whether age 62 — the Social Security eligibility age and the age at which approximately one-third of Americans claim the benefit — is as-

sociated with a discontinuous change in aggregate mortality. Their research indicates a robust 2% increase in male mortality immediately after age 62. The change in female mortality is smaller and imprecisely estimated.

Kevin Mumford and Timothy Bond, “Teacher Performance Pay in the United States: Incidence and Adult Outcomes,” working paper. Mumford and Bond’s paper estimates the effect of exposure to teacher pay-for-performance programs on adult outcomes. They find that cohorts with greater exposure are more likely to graduate from high school and earn higher wages as adults. Just one year of exposure to a teacher pay-for-performance program in the U.S. leads to an increase in adult wages of 1.9%, a 0.5 percentage point reduction in unemployment, and a 0.6 percentage point increase in labor force participation.



Jillian Carr

Research Presentations

PURCE-affiliated faculty presented their research at 83 conferences and university research seminars including:

American Economic Association Annual Conference	New York University
Asian Meeting of the Econometric Society	Northwestern University
College of William & Mary	Ohio State University
DePaul University	Pacific Trade and Development Conference
Econometric Society	Population Association of America Annual Meeting
Federal Reserve Bank of Philadelphia	Queens University
Federal Reserve Board	Rice University
Florida State University	SAET Meetings
George Mason University	Southern Economic Association
Indiana University	Stanford Institute for Economic Policy
Industrial Organization Society	Syracuse University
Institute for Labor Research	University College London
Inter-America Development Bank	University of Adelaide
International Conference on Information Systems	University of Bonn
International Industrial Organization	University of California – Davis
IUPUI	University of Chicago
IZA Returns to Skills Conference	University of Connecticut
KAEA-KEA annual meeting and international conference	University of Essex
Midwest Economics Association	University of Louisville
Midwest Macroeconomics Group Conference	University of Michigan
MiSoC workshop on the Economics of Higher Education	University of Western Ontario
National Bureau of Economic Research Summer Institute	Urban Economics Association Conference
National Bureau of Economic Research Workshop on Aging and Health	Western Economic Association International
National Tax Association Annual Conference	York University

Media Impact

PURCE uses a media monitoring service to measure news mentions of PURCE-affiliated faculty in newspapers, magazines, radio, television and online news sites. In the 2018-19 fiscal year, our research was widely covered in our local media market, including the Lafayette Journal and Courier, WLFI, WBAA (NPR) and the Indianapolis Star.

Several stories were picked up by national and international media including The New York Times, Los Angeles Times, The Washington Post, Times of San Diego, Inside Higher Ed, MarketWatch, NBC News Online, The Globe and Mail, and Nikkei Asian Review.

Top Media Placements

Jack Barron and Kevin Mumford: “Pets Are Like Family but Are Not Insured That Way”

David Hummels: “Tariffs and Implications”

Mara Faccio: “Unlimited Data Draining Your Wallet?”

Miguel Sarzosa: “Impact of Access to the Pill on Fertility and Newborn Health”

Tim Bond: “Do Students Update the Colleges to Which They Consider Applying in Response to Information Shocks Generated by the Release of SAT Scores?”

Value of Media Placements

We track the news advertisement value (the cost to purchase an equivalent amount of advertising space) and the size of the news audience for each media placement.

Fiscal Year	Advertisement Value	Audience Reach
2016-17	\$67,078	81,496,306
2017-18	\$199,287	249,304,020
2018-19	\$491,760	593,459,557



Graduate Fellowships

Since the center's founding, approximately 20% of PURCE expenditures, from all sources, have funded fellowships for economics PhD students. In the 2018-19 academic year, PURCE provided full fellowships to 11 PhD students listed here who are trained in empirical methodologies and are pursuing a research agenda primarily focused on evaluating government regulations and programs:

Mary Kate Batistich
Svetlana Beilfuss
Daniel Bonin
Mouli Modak

Mason Reasner
Marcus Richards
Amrita Sanyal
Lu Wang

Yifei Xu
Wumian Zhao
Junya Zhou

A cornerstone of PURCE's mission is the support and training of talented Krannert PhD students as they study empirical economic methodologies and apply them to policy evaluation.

It is this rigor — and Purdue's "wide recognition as a premier research institution" — that drew Department of Economics PhD candidate Mary Kate Batistich to Krannert. Batistich is in her final year, having completed five years, all funded by PURCE. The center also has funded some special opportunities, including attendance at a weeklong conference in Boston, Batistich said.

Another PURCE-perk that can't be overlooked, she noted, is the center's suite, which brings together a variety of researchers interested in policy-relevant questions, facilitating collaboration between faculty and graduate students. "I have been impressed during my time here with the way faculty take the graduate students seriously and work with us on real projects," she said. "The students are also very supportive of each other."

PURCE's mission is to share research insights with the public in an impactful way, and the importance of this, of bridging economic research and policy, is apparent to Batistich. She has attended many PURCE events, including policy luncheons and the annual Economic Ideas Forum.

"These events are enriching in that they solidify the connection between what we do as economists on a daily basis and what is being discussed more broadly in policy circles and the world at large," Batistich said. "They are also a great way to interact with donors and the local community."



“I have been impressed during my time here with the way faculty take the graduate students seriously and work with us on real projects.”

— Mary Kate Batistich, PhD Student

PURCE Faculty Lines

Since the center's founding, approximately 75% of PURCE expenditures, from all sources, have funded the academic-year salary, summer salary and benefits for several Department of Economics faculty members. During the 2018-19 academic year, PURCE funded seven faculty members. (Lynne Kiesling, among the seven, left Krannert in July 2019.) Without PURCE funds, these faculty lines would not exist.

PURCE-Funded Faculty Teaching

PURCE-funded faculty also contribute by teaching economics to both undergraduate and graduate students at Purdue. Without PURCE-funded faculty lines, the Department of Economics would not be able to offer as many courses, meaning fewer students would have the opportunity to learn empirical policy analysis methodologies.

Number of Students Taught by PURCE-Funded Faculty

	Undergraduate	MS or MBA	PhD
Fall 2018	51	-	14
Spring 2019	185	9	44
Summer 2019	70	13	9
Total	306	22	67

In the 2018-19 academic year, PURCE-funded faculty taught the following courses:



Jillian Carr

Public Finance and Taxation (undergraduate), Public Economics (PhD)



Farid Farrokhi

International Economics (undergraduate), International Economics (MS), International Trade (PhD)



Trevor Gallen

Intermediate Macroeconomics (undergraduate), Computational Economics (PhD)



Lynne Kiesling

History of Economic Thought (undergraduate), Marketplace for Economic Ideas (first-year undergraduate honors students)



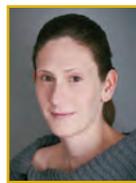
Joe Mazur

Industrial Organization (undergraduate), Estimating Games (PhD)



Timothy Moore

Health Economics (undergraduate)



Victoria Prowse

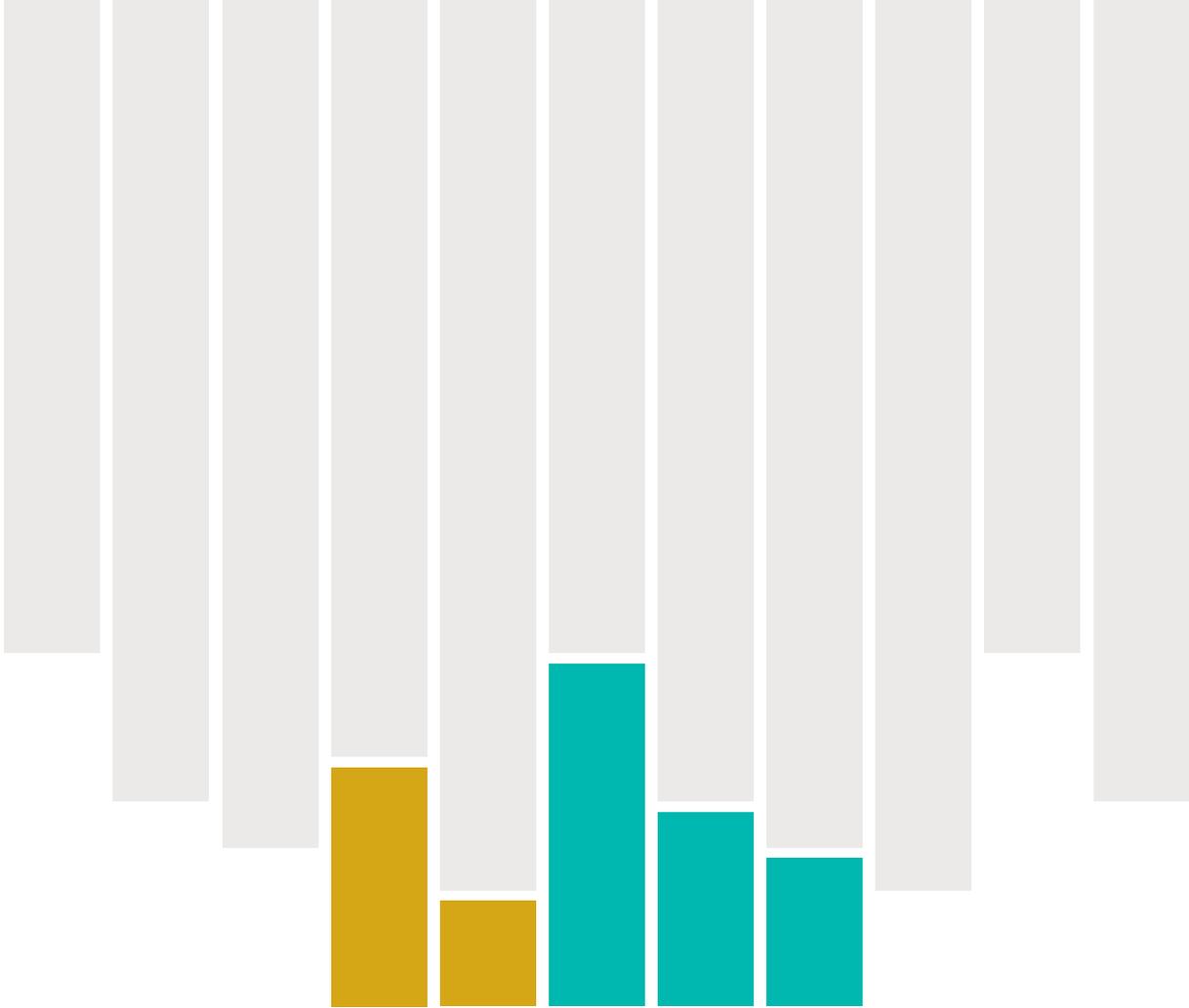
Econometrics (undergraduate), Public Economics (PhD)

Future Vision

PURCE dramatically increased its reach this year. By hosting events, we provided our faculty affiliates opportunities to present their research to government, business and community leaders. Hosting events also is building our reputation at Purdue. Hiring a media relations specialist was an important step toward increasing media coverage of our research, and we more than doubled our media placements as compared to last year. Over the next several years, PURCE will expand its ability to host events, maximize media placements, create a more robust online presence, and communicate directly with key government and business leaders.

To expand our ability to produce policy-relevant empirical research, we will continue to hire outstanding economics professors as we are able to attract the necessary funding. PURCE will create a small number of research programs that will define our future research-area focus and will provide incentives for our faculty to organize workshops, invite visiting scholars and promote external communication of our research.

The next few years will be a period of rapid growth as PURCE builds its reputation with media outlets and directs faculty affiliates to increase their engagement through policy briefs, writing op-eds, speaking at events and giving interviews. We will use our expanded influence to accomplish our mission of disseminating empirical estimates of the effects of laws, regulations and government programs on social well-being.



PURDUE
UNIVERSITY.

Krannert School of Management
RESEARCH CENTER IN ECONOMICS