

**Why I Want You to Study Economics:
Increasing Diversity, Inclusion, and Opportunity in Economics**



**Loretta J. Mester
President and Chief Executive Officer
Federal Reserve Bank of Cleveland**

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Introduction

I thank the organizers of this year's LEED program and Professor Fidelis Ikem, the dean of the College of Business, for inviting me to speak today. I am proud of the relationship that the Federal Reserve Bank of Cleveland is building with Central State University. It's great to be on campus today, where one feels a real sense of history. At the Federal Reserve, we are proud of the fact that while the first two attempts at central banks in the U.S. lasted only 20 years each, the Fed is in its 105th year. But Central State is even older. Founded in 1887, the university recently celebrated its 131st birthday. Central State's designation as a historically black college and its focus on providing a high-quality academic experience to all students are things to be proud of. They make this university a very good place for me to speak about the benefits of an education in economics and the importance of diversity in the field of economics. Before I continue, I should remind everyone that the views I'll present today are my own and not necessarily those of the Federal Reserve System or my colleagues on the Federal Open Market Committee.

Why Study Economics

I didn't start out to be an economist. I majored in mathematics at Barnard College but also pursued a second major in economics because it seemed interesting and didn't require much additional course work. I applied to graduate school in math but ended up in the economics Ph.D. program at Princeton because two professors there wrote me letters explaining that Princeton's economics program was very mathematical and encouraging me to come there and study economics. I've always thought that I lucked into economics. It has provided me with a fascinating career, and I hope that at least in a small way I've been able to provide some good in return through economic research and policymaking.

Merriam-Webster defines economics as "a social science concerned chiefly with description and analysis of the production, distribution, and consumption of goods and services." Well, that's fine as far as it goes, but it sounds kind of dry. Others think of economics as a path to running a business or working in finance. That's also fine as far as it goes, but it is too limited a view. Instead, I like to think of economics as a social science that helps us think about how people use scarce resources, interact in markets or in

other economic settings, respond to incentives, and make trade-offs. The fact that economics is a *social* science, one that involves people and their choices, makes economics complicated but also very interesting.

Because economics provides a rigorous way of thinking about trade-offs, incentives, and costs and benefits, it has many real-world applications. It can help a company be more profitable but it can also help policymakers formulate better public policies that affect people's lives. It can help us analyze the distribution of income across individuals, regions, and countries, and the causes for those differences. It can help us understand how a small financial shock might be propagated economy-wide or even globally, and what can be done to prevent such contagion. It can help us understand the issues facing people in or entering the workforce and provide evidence on which programs are most effective at helping them finance their education, develop new skills, and manage the changing job landscape driven by technological innovation. Economics can help us understand how people make financial decisions and how simple changes can result in better outcomes. For example, a simple change from making employees have to opt out of a company's savings plan, rather than opt in, can result in higher participation in the plan.¹ One well-formulated study of a Fortune 500 company's 401(k) savings plan found that switching to automatic enrollment increased employee participation from 49 percent to 86 percent. It also found that employees' savings decisions tend to be inert, so the default contribution rate and fund allocation are important features to consider in designing such a plan.

A default rule like this is an example of what behavioral economists call a nudge – something that isn't mandated but points people in the right direction and can change behavior.² Richard Thaler, an economics professor at the University of Chicago, won a Nobel Prize last year for his foundational work in behavioral economics, which combines aspects of psychology with economics. In his Nobel Prize

¹ See Chetty, et al. (2017).

² For accessible descriptions and examples of nudging, see Committee for the Prize in Economic Sciences in Memory of Alfred Nobel (2017), Thaler (2017a), and Sunstein (2017).

lunch lecture, he mentioned that good work is being done around the world to, and I quote: “design and test scientifically informed policies that are working. People are being helped to save more for retirement, more poor kids – especially girls – are going to school, peasant farmers are retrieving more reliable harvests, and we are all being successfully nudged to use less energy.”³ That passage lists just a few of the areas in which economics is having a real-world impact and doing some good. In the policy realm, economics helps guide decisions about the country’s monetary and fiscal policies, but also policies on health care, education, and trade. It helps in the design and evaluation of programs at the local community level too, including workforce development and transportation policy. In a nutshell, I believe that economics helps society.

I hope this piques your interest in studying economics. But if you need more convincing, you might want to know that economics offers a very good return on your education dollar. The ability to think critically, analyze a problem systematically, and deal with ambiguity are all skills developed through the study of economics and they are all skills highly valued in the job market. One recent study found that those with a bachelor’s degree in economics earn about 20 percent more than graduates with degrees in other fields.⁴ Some of the salary differences reflect the fact that economics majors have access to a wide variety of occupations, many of which are higher-paying. You’ll find people with economics degrees employed in many sectors, including education, accounting, law, business, finance, and government. The Federal Reserve System – the 12 Reserve Banks and the Board of Governors – employs about 700 Ph.D. economists and also many others with undergraduate and master’s degrees in economics, and I can tell you from experience that the Fed is a very productive and fascinating place to work.

³ Thaler (2017b).

⁴ Carroll, et al. (2014).

The State of Diversity in Economics

The good news is that economics is a popular major in U.S. colleges and universities. In 2016, U.S. postsecondary schools awarded about 33,500 bachelor's degrees in economics.⁵ While this represents less than 2 percent of all bachelor's degrees awarded by these schools, at the top 100 universities and top 100 liberal arts colleges without an undergraduate business major, about 10 to 20 percent of male undergraduates major in economics.⁶ That's a high number when you consider how many different majors there are. But despite its popularity, the field has had less success in attracting women or historically under-represented racial and ethnic minorities.⁷ While there has been some improvement compared to the 1970s, this under-representation has been going on for many years.

Using U.S. Department of Education data on four-year, non-profit colleges and universities over 2011-2015, Bayer and Wilcox found that while women earned more than half of all bachelor's degrees awarded across all fields, they earned less than a third of the bachelor's degrees in economics.⁸ And the numbers are lower for under-represented minorities, who earned slightly more than 20 percent of bachelor's degrees and about 11 percent of economics degrees awarded. If you think about this in terms of the share of female graduates who choose to major in economics and the share of male graduates who choose to major in economics, according to Bayer and Wilcox's numbers, there is one female economics major for every 100 female bachelor's degrees compared to about three male economics majors for every 100 male bachelor's degrees. That means women are choosing to major in economics at only a third of the rate of

⁵ The data on the number and proportion of bachelor's degrees in economics in U.S. postgraduate institutions are derived from Tables 325.92 and 322.10 from U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

⁶ Goldin (2013, 2015).

⁷ The U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS) classifies as historically under-represented minorities members of the following groups: Hispanic or Latino (non-Hispanic), (non-Hispanic) Black or African American, and American Indian or Native Alaskan. The IPEDS data are used by the American Economic Association's Committee on the Status of Minority Groups in the Economics Profession (CSMGEP) to assess minority representation in the field.

⁸ Bayer and Wilcox (2017).

men.⁹ Similarly, minorities are choosing economics over other majors at only about half the rate of white students.

While you don't need to have majored in economics to enter a Ph.D. program in economics, it is a natural path. So given the under-representation of women and minorities at the undergraduate level, it is probably not surprising they are also under-represented at the Ph.D. level and in academia. The good news is that representation of women among the ranks of academia, from first-year graduate student through full professor, is higher now than in 1970.¹⁰ The bad news is that progress has slowed. In 2017, females made up 32 percent of first-year grad students in economics compared to 30 percent in 1997. Almost a third of the new doctorates in 2017 were awarded to women, but gender diversity falls as one moves up the academic ranks. Women make up less than 30 percent of assistant professors, about 23 percent of tenured associates, and about 14 percent of full professors in economics. Unless there is a pickup in entry into graduate school, it is hard to see how these numbers can increase.

Analysis of minority representation in graduate economics is complicated a bit by the fact that almost 60 percent of doctorates awarded in economics are awarded to nonpermanent resident students. Some of these graduates return to their own countries, while others stay in the U.S. Restricting attention to U.S. citizens and permanent residents, of the 479 economics doctorates awarded in 2016, only 48, that is, 10 percent, were awarded to under-represented minorities: 15 were earned by African Americans and 33 by Hispanics or Latinos.¹¹ In the academic professorial ranks, under-represented minorities make up less than 10 percent of assistant professors and less than 5 percent of full professors.

⁹ Among schools in the top 100 that offer both business and economics degrees, regardless of gender, students prefer the business degree over economics, but women do so to a greater extent. See Goldin (2013, 2015).

¹⁰ The statistics cited in this paragraph are the preliminary statistics for 2017 compiled by the American Economic Association's Committee on the Status of Women in the Economics Profession. See Lundberg (2017).

¹¹ These statistics are from the U.S. Department of Education IPEDS data as reported in Committee on the Status of Minority Groups in the Economics Profession (CSMGEP) (2017).

There has been some progress: the percentages of undergraduate and graduate degrees awarded to minorities have increased over the past two decades. But the rate of change has been slower than the growth of the minority population in the U.S. and slower than the growth of minority representation across all fields and in the STEM fields of science, technology, engineering, and math. Indeed, minorities earn a greater share of the degrees awarded in the STEM fields than they do in economics.¹² Similarly, the representation of women in the STEM fields is also now higher than it is in economics.¹³

Why Isn't Economics Diverse and Why Does It Matter?

An interesting question is why women and minorities are under-represented in economics. One potential explanation is the lack of role models in the field. Seeing someone of the same race or gender being successful in a field can be validating, and having someone like you to run ideas by or get advice from can be very helpful. So, the relative lack of women and minorities in economics could be perpetuating under-representation. This is a plausible explanation but it may be only one piece of the puzzle, as the empirical evidence on role models is somewhat mixed.¹⁴ One study of a selective liberal arts college that essentially involved random assignment of students to instructors found that having an instructor of the same gender didn't increase the probability of a student taking more classes or majoring in the field, regardless of the gender distribution in the department, but it was associated with the student earning a higher grade in fields dominated by the opposite gender.¹⁵ That is, female students received higher average grades from female instructors when taking courses in fields dominated by men (such as economics) – the difference was on the order of moving from a B-minus to a B. And there was a similar effect for males, who received higher average grades from male instructors when taking courses in female-dominated fields (such as education). A separate study in a different setting found evidence that

¹² Committee on the Status of Minority Groups in the Economics Profession (CSMGEP) (2017).

¹³ Goldin (2013, 2015).

¹⁴ Goldin (2013) and Griffith (2013).

¹⁵ Griffith (2014).

such grade differentials reflected achievement differentials and not just inflated grading.¹⁶ So the availability of role models appears to positively affect student achievement, but a lack of role models isn't the whole story about why some students choose not to continue in economics.

What about different preferences at the time students enroll? It is true that males are more likely than females to list economics as their planned major when accepted at college. But this gender difference for incoming students is not the full story because research that looks at the progression of students through the major has found that female students are relatively more likely to drop out of the major and switch to another field compared to male students. For example, one study found that women need to do well in their principles of economics course in order to continue in the major, and that's less true of men.¹⁷

Other hypotheses have to do with the way economics is taught or with the content of the courses. Do large lecture classes, often found in introductory economics programs at large universities, turn off women and minorities more than men? Do the topics incorporated into the intro courses appeal to one group and not another? And, if so, how could the content be amended so that all students, regardless of race, ethnicity, or gender, feel included and take up the opportunity to be an economics major? Could it be that implicit biases come to play at each stage of the academic ladder, as has been shown in other types of settings?

As a college math major, I am happy to say that the theory that women may be more turned off by the heavy mathematical content in economics does not pan out. In fact, women earn over 40 percent of bachelor's degrees in math and statistics, a higher share than in economics;¹⁸ women do well in math at the high school level; women are selecting other fields that are very quantitative, like psychology; and

¹⁶ Carrell, et al. (2010).

¹⁷ Goldin (2013, 2015) and Avilova and Goldin (2018).

¹⁸ Table 325.65, U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS).

studies indicate that math aptitude doesn't explain gender differences in participation in upper-level economics courses.¹⁹

So there are several different theories being explored, and I suspect that, at the end of the day, there are multiple drivers of the under-representation of women and minorities in the field of economics. But you might ask: why should we care? Shouldn't students be able to choose their field of study and career path? The low level of diversity in economics may just reflect people's preferences. That's a possibility, but if that's the case, then it is incumbent upon those of us in the field and upon educators to ensure that students can make informed choices and that they understand the value of an economics degree to the individual and to society.

Moreover, because economics is a field that influences policy, and policy affects all kinds of people, it's important to have diverse views inform that policy. As a public servant and Fed policymaker, I believe that policymakers need to consider the effects of our monetary, regulatory, and payments policies on all our constituents. In addition, I have seen firsthand how having a diversity of views expressed and discussed around the table can actually lead to better policy decisions, and there is actual research to back this up. Group dynamics are different when teams are diverse. Participants don't necessarily find it as comfortable to serve on a diverse team, but the diversity helps to avoid group-think. Diverse teams tend to be more objective and focus on the facts when making decisions; they may process information more carefully because they are forced to confront a different way of thinking and convince those with alternative views; and firms with more diversity tend to be more innovative.²⁰ Research also shows that firms with diverse management tend to have above-average earnings.²¹ Perhaps the better decision-making and innovation associated with diversity is showing up on the bottom line.

¹⁹ See Goldin (2013), and Bayer and Rouse (2016).

²⁰ See Rock and Grant (2016).

²¹ Rock and Grant (2016) cite a Credit Suisse analysis of 2,400 companies worldwide that found that organizations with at least one female board member had higher return on equity and higher net income growth than firms with no female board members. In addition, Hunt, et al. (2015) report on a McKinsey & Company analysis of 366

Beyond current policy and business outcomes, another reason I'd like to see more diversity in the field of economics is so the field itself doesn't get stymied by group-think. To expand our knowledge, economics needs to continually take on new research questions and develop innovative techniques and ways of analysis to arrive at answers to these questions. Broader representation in economics means a broader set of issues will be tackled and a broader set of research disseminated, resulting in better policy outcomes that will improve the economic well being of a greater share of the population.

Some Things Are Being Done

The American Economic Association, through its Committees on the Status of Women and the Status of Minority Groups in the Economics Profession, is taking a close look at diversity in the economics profession and is offering programs and resources aimed at increasing diversity at all levels. The association provides information to students who want to pursue careers or a graduate degree in economics, and also provides lesson plans to teachers. It offers a summer training and scholarship program to help prepare students for graduate school and, with the National Science Foundation, offers a Summer Economics Fellows Program, which is designed to increase the participation and advancement of women and under-represented minorities in economics.

I serve on the board of the Council for Economic Education. This nonprofit organization's mission is to educate students in kindergarten through high school about economics and personal finance so they can make better decisions for themselves, their families, and their communities. The council provides many materials to teachers and also runs the National Economics Challenge, a quiz bowl competition, which reaches a wide population of students in terms of gender, race, and income. Last year, over 11,000 high school students participated in the challenge; of these, 42 percent were girls and 22 percent were under-

companies that found that those in the top quartile in terms of management's ethnic and racial diversity were 35 percent more likely to have financial returns above their industry mean, while those in the top quartile in terms of management's gender diversity were 15 percent more likely to have financial returns above their industry mean.

represented minorities, and participation from these groups has been increasing over time. A recent survey found that participants' performance on advanced placement exams exceeds the national average, with especially strong gains shown by female and minority students, and that participants are more likely than nonparticipants to choose to major in economics.

At the Cleveland Fed, we strive for excellence in all that we do. And that means we are taking actions to foster a culture that champions diversity, inclusion, and opportunity throughout the organization. To increase our ability to recruit high-quality talent in a variety of positions, including banking, computer programming, data science, accounting, as well as economics, we are developing relationships with schools in our District, including Central State. Last June, we hosted a number of Central State students and several faculty members as part of your school's eight-week summer Banking Institute program, and we will host another group of CSU students again next month. You may have attended one of the guest lectures that some of our economists have given in your economics and business classes, and representatives are here today to tell you about paid internships and other employment opportunities at the Cleveland Fed. As a contribution to strengthening the pipeline of future economists, the Cleveland Fed will be hosting a workshop this summer for the research assistants across the Federal Reserve System to help them prepare for graduate school. The Cleveland Fed has also been promoting pre- and post-college education. Our Learning Center distributes lesson plans on economics and financial literacy to teachers in kindergarten through high school, and our Money Museum, which is open to the public, offers interactive exhibits on the financial system and the economy. These may be small steps, but economics can help solve many real-world problems while providing individuals with a rewarding career, and we want to ensure that the widest group of people enter the field.

Conclusion

Fifty years ago today, this country lost a great leader, Dr. Martin Luther King, Jr. The tragedy of his death must not overshadow his many accomplishments and the lessons conveyed by his words and deeds. As I've discussed, there has been some progress over the past 50 years in increasing diversity,

inclusiveness, and opportunity within the economics profession, but that progress has been slow. It is easy to get discouraged and accept the status quo. But we all must remember a key lesson from Dr. King's legacy: changing institutions is hard work and takes time. It must be met by perseverance and endurance. As a member of the economics profession, I will continue to seek ways to increase diversity, inclusion, and opportunity because I believe it will strengthen economic research and policymaking, and thereby help promote a healthier economy for a wider group of people. I encourage the students of Central State University to enter the field of economics and to join me in that mission.

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