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The Unequal Distribution of Economic Education: A Report on the Race, Ethnicity, and Gender of Economics Majors at US Colleges and Universities

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The Unequal Distribution of Economic Education: A Report on the Race, Ethnicity, and Gender of Economics Majors at US Colleges and Universities Amanda Bayer and David Wilcox¹

<u>Abstract</u>: The distribution of economic education among US college graduates is quite unequal: female and underrepresented minority undergraduates, collectively, major in economics at 0.36 the rate that white, non-Hispanic male students do. This paper makes a four-part contribution to address this imbalance. First and foremost, we provide detailed comparative data at the institution level to provoke and inform the attention of economists and senior administrators at colleges and universities, among others. Second, we establish a definition of full inclusion in economic education on college and university campuses and use that definition to evaluate the status quo and to compare institutions. Third, we illuminate the reasons why the need to improve the distribution of economic education is urgent, including the imperative to support economic policymaking. Lastly, we point the way forward, identifying both currently available resources and reasonable next steps for all involved parties to take.

In 2015, 38,947 students graduated with a major in economics from a bachelor's degree program at a US college or university. Fewer than one-third of those students were women or members of racial or ethnic groups historically underrepresented in the US economy, despite those groups collectively representing nearly two-thirds of graduates that year.² In other terms, collectively, female and underrepresented minority students majored in economics at 0.36 the rate that white, non-Hispanic male students did.

Through this paper, we aim to advance a national conversation about who is being trained in economics at the undergraduate level in the United States. Building on the work of Bayer and Rouse (2016) and others who note the disproportionate absence of women, African Americans, Hispanics/Latinos, and Native Americans among PhD economists, we document the stark and pervasive underrepresentation of women and racial/ethnic minority groups among undergraduates majoring in economics. We develop an inclusion metric to compare institutions and track progress and offer motivation and direction for change in undergraduate economics.

The imbalances that we document in the field of economics should concern us all. Certainly, colleges and universities must follow through on their promises to provide all enrolled students with a complete education and a fully inclusive academic experience; we suspect that the current imbalances in undergraduate economics education indicate that institutions are not meeting that standard. Broad representation in economics is also important because it will contribute to individual and collective successes beyond college and university campuses. At the individual level, education in economics assists students in their professional, personal, and civic lives. At the societal level, the identities and experiences of those who study economics affect the creation of economic knowledge and the determination of

¹ Swarthmore College and Federal Reserve Board, and Federal Reserve Board, respectively. The views expressed here are those of the authors, and may not be shared by the members of the Board of Governors of the Federal Reserve System or the other members of its staff. We thank without implicating Steve O'Connell, Lucie Schmidt, Robin Shores, Melynda Wilcox, and the students in Economics 73 at Swarthmore College for helpful comments on an earlier draft, and Morgan Smith for expert research assistance.

² The statistics reported in this paper are authors' calculations using data from the *Integrated Postsecondary Education Data System* (IPEDS) at the U.S. Department of Education's National Center for Education Statistics. Here and in the rest of the paper, we report on US citizens and permanent residents (excluding non-resident aliens except where noted) who graduated with bachelor's degrees from not-for-profit private or public four-year colleges and universities granting majors in economics. Additional details on the data are in Appendix A.

government policy; when those identities and experiences are broadly representative, all of society stands to benefit. We expand on these ideas below.

The first section of the paper provides an overview of the distribution of economic education by examining the gender and race/ethnicity of economics majors in the United States. In section II, we establish a definition of full inclusion and use a corresponding index to summarize the status at each institution. In section III, we argue that the unequal distribution of economic education is a problem that demands the energetic and organized responses of economics departments, college and university administrators, textbook authors, and all others influencing the dissemination of economic education. In the fourth and final section, we point the way forward, making recommendations to stakeholders and identifying promising initiatives and useful resources.

I. THE DISTRIBUTION OF ECONOMIC EDUCATION IS UNEQUAL AND THE IMBALANCES ARE PERVASIVE

This section summarizes the distribution of economic education nationwide and depicts the pervasiveness of the imbalances across institutions. Here and throughout the paper, we report the characteristics of the students who major in economics relative to all students graduating from each college or university, leaving aside crucial but distinct questions about how the campus-wide populations are determined. We focus on demographic groups that have been historically underrepresented in the economy and in the economics profession: women, African Americans, Hispanics/Latinos, and Native Americans. Other types of diversity are of course important, and other groups of students face challenges on college campuses. We hope and expect that all students will benefit as departments learn how to create environments that are more inclusive.

Table 1 presents an overview of the characteristics of undergraduate students earning degrees at fouryear, not-for-profit private and public colleges and universities in the United States during the five-year period from 2011 to 2015.³ As seen in the first row, 57.3 percent of graduates during this period were women and 20.6 percent were "underrepresented minority," or URM, students, an aggregate that includes black or African American, Hispanic or Latino, and Native American students.⁴ In contrast, 31.3 percent of students with first or second majors in economics were women and 11.8 percent were URM students. The remaining entries in Table 1 provide a more detailed breakdown of the race/ethnicity and gender of all students and of those in economics; Figure 1 provides the same information graphically.⁵

³ We use five-year averages to smooth through some of the natural variation in the data and to partially address the fact that representation in some of the groups we examine is very sparse.

⁴ To allow consistent comparisons across time, we use the IPEDS historical race and ethnicity categories, which do not separately identify Native Hawaiian and other Pacific Islanders or individuals identifying two or more races. We also recognize other limitations of the data, which do not allow us to make distinctions among subgroups of the larger race/ethnicity categories. See table notes for more information.

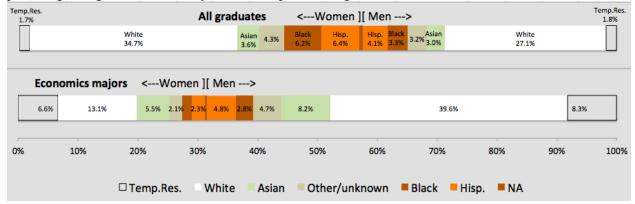
⁵ While this paper focuses on the economic education of US citizens and permanent residents, we note the heavy participation of temporary residents in economics nationally. The institution-level measures reported later in this paper allow consistent comparison across colleges and universities with different proportions of temporary visa holders. We also note that, among US citizens and permanent residents, students categorized as "Asian" have relatively strong participation in economics. We do not explore this grouping more closely given our focus on historically underrepresented groups and the inability of our data to identify subgroups within the "Asian" category, which other research has found to have large economic and education disparities.

	Female	Under- represented minority	White	Black	Hispanic	Native America n	Asian	Other/ Unknown race	Temporar y Resident
Major in any discipline Women Men	57.3	20.6	34.7 27.1	6.2 3.3	6.4 4.1	0.3 0.2	3.6 3.0	4.3 3.2	1.7 1.8
Major in economics Women Men	31.3	11.8	13.1 39.6	1.5 2.8	2.3 4.8	0.1 0.2	5.5 8.2	2.1 4.7	6.6 8.3

Table 1. Composition of students graduating with bachelor's degrees in any discipline and in economics, percentages of graduates of four-year, not-for-profit colleges and universities in the US, 2011-2015

See table notes in Appendix A.

Figure 1. Composition of students graduating with bachelor's degrees in any discipline and in economics, percentages of graduates of four-year, not-for-profit colleges and universities in the US, 2011-2015



When departments evaluate the demographic makeup of their majors, a common approach is to look at the proportions of economics majors from various groups and compare those proportions to a parallel categorization of the overall student body, similar to the analysis in Table 1. However, when tracking multiple groups, share data can be misleading because one group's representation in economics, such as that of Hispanic men, may appear relatively strong due not to that group's high participation in economics but to the extremely low participation of members of another group, such as Hispanic women. To learn about the effectiveness of economics departments in attracting a diverse representation of the campus-wide population, we thus focus on the rates at which different groups of students graduate with a major in economics.⁶

⁶ To see the problem with share data, consider an extreme and simplified situation in which non-Hispanic males at a particular school major in economics at an ideal rate, while there are no women economics majors of any race/ethnicity. A third group, Hispanic males, comprises the remaining student population and majors in economics at a rate in between the two others, say 70 percent of the ideal rate. If the share of Hispanic males on campus were 10 percent, while non-Hispanic males and all females represented 30 percent and 60 percent, respectively, 19 percent of all economics majors would be Hispanic males, creating the impression that they were disproportionately attracted to the major. Ultimately, of course, if a department were to attract majors from each demographic group at equal rates, the composition of students graduating with bachelor's degrees in economics would perfectly reflect the composition of the college graduates of any major.

Table 2 presents the rates at which different groups of students graduate with a major in economics, with each entry in the table representing the percentage of students in a particular demographic category that graduated with a major in economics during the five-year period. Women and students from historically underrepresented race/ethnicity groups graduate with a major in economics at lower rates than do their counterparts. The pattern is observed both in aggregate and within gender and race/ethnicity categories. For example, among whites, and confining our attention to institutions that offer a major in economics (shown in the bottom block of the table), 5.5 percent of men graduate with a major in economics, whereas only 1.7 percent of women do. Among underrepresented minorities, 4.6 percent of men graduate with a major in economics at roughly 3 times the rate of women, and, for both men and women, whites major in economics at higher rates than do URM students.

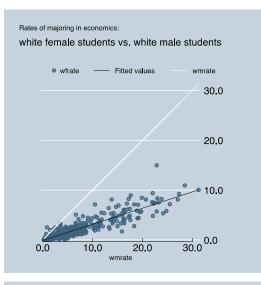
		Under-						Other/	
	Overall	represented	White	Black	Hispanic	Native	Asian	Unknown	Temporary
		minority				American		race	Resident
Major in economics	1.9	1.1							
Women	1.1	0.6	0.7	0.5	0.7	0.5	3.0	1.0	7.3
Men	3.1	2.0	2.8	1.6	2.2	1.8	5.2	2.9	9.0
Major in economics economics major offered at institution	3.9	2.9							
Women	2.2	1.5	1.7	1.5	1.6	1.6	3.1	1.8	10.3
Men	5.8	4.6	5.5	4.5	4.7	4.5	6.1	5.6	13.5

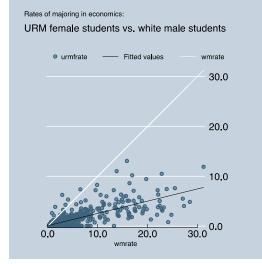
Table 2. Rates at which students in various groups graduate with a major in economics at four-year, not-for-profit colleges and universities in the US, 2011-2015 (percent)

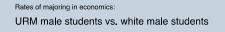
See table notes in Appendix A.

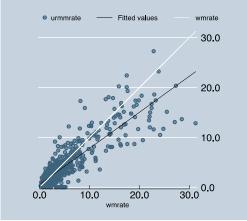
The three panels in Figure 2 tell a similar story at the institution level. These panels plot—institution by institution—the rates at which white women, female URM students, and male URM students graduate with a major in economics against the rate at which white men graduate as economics majors. If students from each group attained majors in economics at equal rates, campus by campus, the points in the figures would lie on the 45-degree line in each figure. In fact, however, the underrepresentation of women and URM students in economics is stunningly pervasive: on most college campuses, economics majors are disproportionately male (546 of 550 institutions) and non-URM (402 of 563 institutions). Simple trend lines drawn through the points have slopes distinctly less than one: 0.32 for white women, 0.25 for URM women, and 0.72 for URM men. At every institution in the nation where more than about 3 percent of white men graduate with a major in economics, white women graduate with a major in economics at a lower rate. URM females are similarly underrepresented at almost every institution. The underrepresentation of URM males is less stark than it is for either white females or URM females, but still notable. These institutional-level plots demonstrate that some schools are more successful than others at drawing women and URM students into the economics major, and we document and describe that variation more extensively in the next section of this paper.

Figure 2. The rate at which students graduate with a major in economics, by institution, gender, and URM status, 2011-2015









Sometimes, economics faculty who teach at schools that do not have business programs respond to data like those shown in Figure 2 with the hypothesis that the underrepresentation of women and URM students in economics is due to the presence of would-be business majors, who are assumed mostly to be white males, leading to a disproportionately white male population in the economics major.⁷ But then we also hear claims in the opposition direction from colleagues at institutions that do offer undergraduate business majors, who argue that the presence of the business major disproportionately draws capable women and URM students away from the economics department, leaving a disproportionately white male population in the economics major.

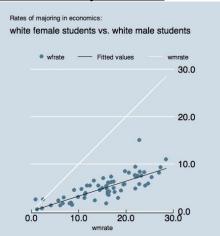
Figure 3 presents modified versions of the graphs shown in Figure 2. In particular, we draw two separate versions of the three original graphs, stratifying by whether schools do or do not offer an undergraduate business major. Comparing the graphs pairwise by row, the relative participation of white females appears unrelated to whether a business major is offered, while that factor may be somewhat correlated with the racial and ethnic composition of economics majors. However, the clearest message that comes out of these graphs is that the pattern of underrepresentation in economics for women and URM students exists in both sets of schools.

Thus, while some of the variation across economics departments may be explained by factors other than conditions within the departments themselves, the institution-specific statics we present next clearly demonstrate that the demographic imbalances are present in economics departments at all types of schools and that all schools need to learn how to distribute economic education more equally.

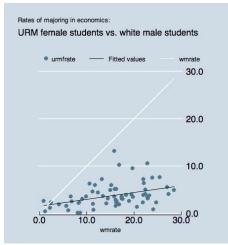
⁷ Note that the undergraduate business major is considerably closer to demographic balance than is the undergraduate economics major. Nationwide, 48 percent of majors in business are earned by females and 22 percent by URM students; by contrast, as was noted in Table 1, 31 percent of economics majors are female and 12 percent are URM.

Figure 3. The rate at which students graduate with a major in economics, by institution, gender, URM status, and presence of business major, 2011-2015

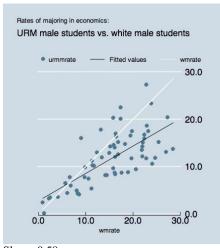
No Business major available





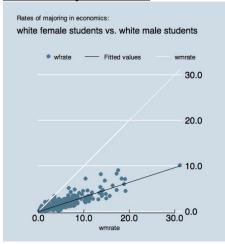




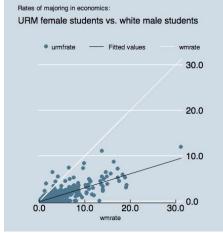


Slope=0.58

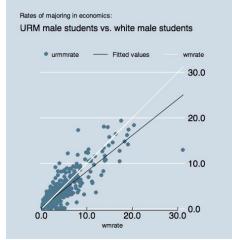
Business major available



Slope=0.32









II. MOST INSTITUTIONS DISTRIBUTE ECONOMIC EDUCATION UNEQUALLY AND THUS DO NOT ACHIEVE FULL ACADEMIC INCLUSION

In this section, we develop and use a metric to gauge the inclusiveness of economics departments and to facilitate comparisons across schools, time, and disciplines. This metric is a mathematical formalization of the definition of inclusive excellence in higher education, as stated by the Board of Directors of the Association of American Colleges and Universities (2013).

To make excellence inclusive, our society must break free of earlier views that an excellent liberal education should be reserved for the few...Increasing college access and degree completion for all is necessary but insufficient to foster the growth of an educated citizenry for our globally engaged democracy. We need to define student success not exclusively as degree attainment, but also as the achievement of the primary goals of liberal education...Seeking inclusive excellence requires reversing the current stratification of higher education and ensuring that all students develop capacities to prosper economically, contribute civically, and flourish personally...Without inclusion, there is no true excellence.

Excellence in higher education demands the full inclusion of members of all groups of students, both across and within campuses. Something far less than excellence occurs when students have been enrolled at an institution but do not feel welcome to participate fully in its offerings. Notably, equitable access to academic majors is at least as important as social and extracurricular inclusion.

We thus define full academic inclusion as being achieved when members of all demographic groups major in a field such as economics at equal rates.⁸ We construct an index that compares the rates at which students in various groups graduate with a major in economics. In particular, our Economic Education Inclusion Index (EEII) is calculated as the unweighted average of underrepresented groups' rates of majoring in economics relative to the rate at which white males major in economics:

EEII = 100 * average (WFrate, BFrate, BMrate, HFrate, HMrate) / WMrate

where WFrate, BFrate, BMrate, HFrate, HMrate, and WMrate are the rates at which white females, black females, black males, Hispanic females, Hispanic males, and white males, respectively, major in economics. We choose (non-Hispanic) white males as the reference group because they make up the largest number of PhD economists in the United States and because their rate offers a consistent measure of the scale of the economics major at each school.⁹ Possible values range from zero, for no inclusion, to our target value of 100, for full inclusion. Index values in excess of 100 are possible and, in a few rare cases, observed.

This formulation, while certainly not the only way to construct a measure of inclusion, has several desirable attributes. It is scale and composition invariant and thus allows us to compare colleges and universities of different sizes and with different mixes of student populations. By isolating the white male rate in the denominator, the index does not impose anonymity, as familiar measures of inequality such as the Gini coefficient do, but rather clearly indicates whether an institution replicates or resists the national pattern on average. In the numerator, it tracks each major race/ethnicity by gender subgroup separately, recognizing the different experiences of members of groups with intersecting race/ethnicity and gender identities, and with equal weight, so that progress towards inclusion of all groups is rewarded.

⁸ As noted earlier, if this ideal were achieved, economics majors would be a representative draw from the population of all students.

⁹ Later, we present modified indices for institutions with few white male students, women's colleges and historically black colleges and universities (HBCUs).

The EEII measure does, however, get noisy when a demographic group has only a small number of members across all BAs/BSs. For this reason the overall index does not include Native American student rates. The noisiness caused by small groups also clouds comparisons across institutions. Thus, we offer the EEII not as a final pronouncement on a department's inclusiveness but as a summary measure designed to provoke closer inspection. That inspection should start with an examination of the rates at which students in each demographic subgroup major in economics, which we also present in the tables that follow.

Of course, the EEII formulation also raises some philosophical questions, which we address briefly here and again in later sections of this paper. First, achieving the goal of full academic inclusion in economics would affect the mix of students elsewhere on campus; students underrepresented in economics are indeed majoring in other departments and are overrepresented in some of them. Extrapolating from evidence we cite in the next section, we speculate that all disciplines would benefit from additional diversity and would be better off with a representative mix of the campus population. We also wish to push back against the argument that preferences drive the observed patterns in choice of major. The variation in the rate at which members of underrepresented groups major in economics across colleges and universities is just one indication that the departmental environment can heavily influence students' decisions.

Table 3 presents inclusion index values in the most recent five-year period for all institutions offering majors in economics and for various subsets of institutions, along with the corresponding rates at which various groups of students graduate with majors in economics.¹⁰ It is striking how ineffective economics departments are in attracting a representative slice of the campus population to the major. The average institution has an EEII value slightly greater than 50, indicating that the typical institution's economics department is operating halfway between full inclusion and the complete exclusion of women and historically underrepresented racial and ethnic groups.¹¹ Universities with top-40 economics PhD programs and top-50 liberal arts colleges are both below average in inclusive excellence. Together, these two groups of otherwise elite institutions account for almost half (43 percent) of all graduating economics majors.

¹⁰ See the appendix for notes on the construction of the data. Online versions of the tables in this paper include rates for Native American and Asian American students and will be available at https://www.newyorkfed.org/data-and-statistics/data-visualization/index.html. A companion working paper uses an inclusion index to track trends over time and to compare economics to other disciplines. It also investigates whether departments that are more inclusive with respect to gender are also more inclusive with respect to underrepresented minority groups.

¹¹ The statistic that opens this paper—that, collectively, female and URM students majored in economics at 0.36 the rate that white, non-Hispanic male students did in 2015—is indeed consistent with the reported mean EEII value of 54.1. Note that, by construction, the EEII overweights URM men, who have higher rates of participation in economics than do women, relative to their representation on campuses. Note, too, that the 2015 figure is lower due to a slight downward trend in the relative rate at which female and URM students major in economics.

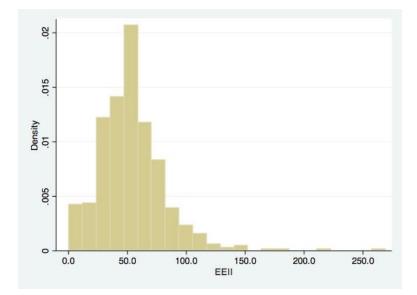
EEII (0=no	Rates	Percentage of US					
inclusion; 100=full	/ White		African American		Hisp	oanic	economics majors
inclusion)	Μ	F	Μ	F	Μ	F	produced
54.1	5.6	1.7	4.7	1.5	4.8	1.5	100
51.7	9.6	3.4	6.7	2.2	8.5	3.2	32.5
58.9	4.5	1.3	4.1	1.5	4.4	1.5	29.1
47.9	16.5	5.4	12.7	4.1	12.2	4.0	10.2
54.1	3.9	1.1	3.6	1.0	3.5	1.0	28.2
	(0=no inclusion; 100=full inclusion) 54.1 51.7 58.9 47.9	(0=no inclusion; 100=full inclusion) M 54.1 54.1 56 51.7 9.6 58.9 47.9 16.5	(0=no White 100=full M F 54.1 5.6 1.7 51.7 9.6 3.4 58.9 4.5 1.3 47.9 16.5 5.4	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	(0=no) (percent) inclusion; $White$ African American 100=full M F M F 54.1 5.6 1.7 4.7 1.5 51.7 9.6 3.4 6.7 2.2 58.9 4.5 1.3 4.1 1.5 47.9 16.5 5.4 12.7 4.1	(0=no) (percent) inclusion; White African American Hisp Hisp 100=full M F M F M 54.1 5.6 1.7 4.7 1.5 4.8 51.7 9.6 3.4 6.7 2.2 8.5 58.9 4.5 1.3 4.1 1.5 4.4 47.9 16.5 5.4 12.7 4.1 12.2	(percent) (0=no (percent) inclusion; White African Hispanic M F M F M F 54.1 5.6 1.7 4.7 1.5 4.8 1.5 51.7 9.6 3.4 6.7 2.2 8.5 3.2 58.9 4.5 1.3 4.1 1.5 4.4 1.5 47.9 16.5 5.4 12.7 4.1 12.2 4.0

Table 3. Economic Education Inclusion Index (EEII) values and corresponding rates at which students in various groups graduate with majors in economics, 2011-2015

*Entries are simple means of the institution-level values. See other table notes in Appendix A.

Appendix Table 1 presents the calculated EEII values for each college and university in the dataset, and Figure 4, below, presents the distribution of those values. The index value along with the corresponding percentile allows us to gauge the effectiveness of individual economics departments in including students from different key demographic groups in the economics major. For most institutions, index values are well below 100, the full inclusion benchmark, signifying that economics departments at most colleges and universities are far from full academic inclusion.

Figure 4. Distribution of institution-level EEII values, 2011-2015



Appendix Tables 2, 3, and 4 provide the institution level data similar to that reported in Appendix Table 1 for three distinct subsets of institutions: women's colleges, men's colleges, and HBCUs, respectively. The tables also report adjusted EEII values, using only race/ethnicity or gender disparities, which, while not fully comparable to the main EEII measure, reveal a wide range of outcomes across institutions in these sets.

It appears that some economics departments are substantially better than others in terms of the inclusiveness of their major. On the other hand, some institutions, even those with diverse student bodies and otherwise excellent economics departments, have economics departments with dramatic underrepresentation of women and minority students. As discussed earlier in this paper, comparisons across institutions do need to be approached carefully, because index values can be affected by factors outside a department's control and by the noise that can occur when there are small numbers of students in subgroups. Nevertheless, the EEII is an informative summary measure that should provoke closer inspection both of the component statistics presented alongside the EEII in the tables and of the myriad factors that are well within the control of departments and administrations.

Table 4 lists the institutions that have EEII values in the top quintile of all colleges and universities and also have graduates in each of the five underrepresented groups—white females, black females, black males, Hispanic females, and Hispanic males—majoring in economics at above average rates, relative to white males.

		ŀ		which s onomic		# of Econ	Total # of		
	EEII	Wł	nite		ican rican	Hisp	oanic	BAs per	BAs per
		М	F	М	F	М	F	year	year
New Jersey City University	211.2	0.5	0.5	1.9	0.5	1.9	0.5	9	1261
Kean University	143.7	0.6	0.2	2.1	0.3	1.3	0.3	14	2617
Calvin College	133.1	3.6	3.3	6.7	4.3	5.0	4.4	29	823
University of Massachusetts-Lowell	128.9	1.1	0.4	1.3	1.5	3.1	1.0	21	2027
Seattle Pacific University	113	3.5	2.9	9.7	2.5	3.2	1.8	24	807
Xavier University	112.9	1.3	0.5	2.6	0.4	2.8	0.9	9	911
CUNY John Jay College of Criminal Justice	112.8	2.5	2.4	4.2	2.3	2.9	2.2	73	2395
Oakland University	110.9	0.7	0.2	1.4	0.2	1.2	0.6	11	2720
University of Vermont	104.1	4.8	2.3	12.3	2.4	6.9	1.3	85	2429
CUNY Bernard M Baruch College	90.4	2.9	1.0	3.0	2.8	4.8	1.6	62	2925
University of California-Riverside	89.8	3.6	1.8	6.3	2.0	4.2	1.7	175	4214
Farmingdale State College	87.5	0.7	0.4	0.7	0.9	0.7	0.4	9	1109
Washington and Lee University	84.9	13.9	8.0	17.9	3.3	15.0	14.6	53	447
United States Naval Academy	83.9	13.2	6.4	19.3	4.8	16.5	8.6	136	1069
University at Buffalo	83.5	2.5	0.7	3.5	1.9	3.3	1.2	93	4522
DePaul University	79.4	1.1	0.5	1.9	0.4	1.3	0.4	33	3687
Washington & Jefferson College	79.1	9.6	3.6	8.7	5.3	10.0	10.5	21	319
Rhodes College	78.8	8.1	4.7	7.9	3.2	12.0	4.0	29	405
Lafayette College	78.7	22.8	15.0	27.4	7.3	27.4	12.8	116	596
Portland State University	78.2	2.2	0.7	3.2	1.3	2.8	0.8	73	4215
American University	77.3	6.6	3.3	7.4	1.9	9.3	3.6	81	1662
Georgia State University	76.8	3.5	1.3	3.9	1.2	5.4	1.8	109	4523
California State University-East Bay	76.2	1.6	0.6	2.3	0.8	1.8	0.5	34	2836
Florida International University	76.2	1.6	0.5	2.1	0.7	2.3	0.5	95	7637
Northeastern University	75.3	3.0	1.5	3.5	2.1	2.8	1.3	103	3657
Pennsylvania State University-Main Campus	75.1	3.2	1.0	4.5	1.1	4.0	1.6	340	11049
Cornell University	74.3	14.7	6.6	17.4	6.6	18.1	6.1	457	3592
University of Maryland-Baltimore County	73.9	7.0	2.2	9.6	3.2	8.6	2.3	143	2191
University of Maryland-College Park	73.7	7.8	2.2	8.7	3.6	11.3	2.8	443	7144
Southwestern University	73.0	5.6	1.5	8.3	4.0	5.2	1.3	10	308

Table 4. Thirty colleges and universities with high overall economic education inclusion, 2011-2015

Looking at the experience of particular demographic groups, we see a wide range of outcomes across schools, summarized in Table 5. The variation in the rate at which members of particular underrepresented groups major in economics across colleges and universities suggests that the departmental environment may influence outcomes. Appendix Tables 5 and 6 explore this idea further by documenting the range of rates and overall inclusiveness at elite schools—those with top-40 PhD programs or that are top-50 liberal arts colleges—which have students who are fairly similar at the time of admission but who end up with fairly different experiences in economic education.

Rate of majoring in Economics	10 th percentile	Median	90 th percentile
White males	1.0	3.4	14.7
White females	0.2	0.9	4.6
Black males	0.0	2.8	12.2
Black females	0.0	0.7	4.3
Hispanic males	0.0	3.0	12.1
Hispanic females	0.0	0.7	4.3

 Table 5. Variation in rates of majoring in Economics across schools

Whereas most of the evidence we have presented thus far has focused on differences across institutions in the degree to which they attract representative slices of the overall student body into the economics major, Figure 5 shows the disparities in undergraduate economics over time and in comparison to those in mathematics and statistics. There is no meaningful evidence of progress toward improved representation of either women or URM students in economics in recent years. In fact, the rate of majoring in economics among males edged up, on net, from about 2.5 percent in 2001 to about 3.1 percent in 2015. The rate of majoring in economics among females drifted further below 1 percent over the same period, and, overall, the imbalance in the gender composition of economics majors worsened slightly. The rate of majoring in economics among URM male students is closer to, but consistently below, that of white males.

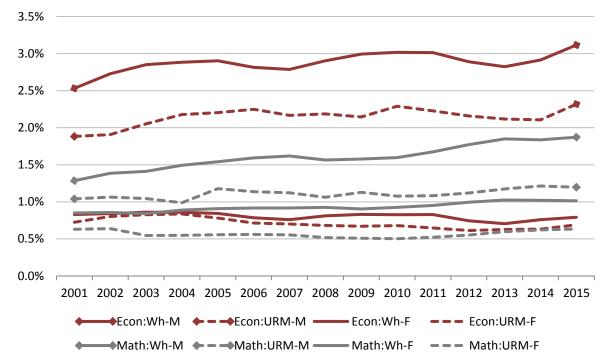


Figure 5. The rates at which students in various groups graduate with majors in Economics or in Mathematics or Statistics, 2001-2015

Rates are calculated from the *Integrated Postsecondary Education Data System* (IPEDS) at the National Center for Education Statistics using graduates from all 4-year, public or private not-for-profit institutions. Appendix A provides additional details.

A common speculation is that the underrepresentation of women and URM students among economics majors might reflect differential rates of math literacy or comfort among males than females. The data summarized in Figure 5 do not support that interpretation. Throughout the period, differences in the rate of majoring in math or statistics across demographic groups are distinctly smaller than in economics. Indeed, white females major in mathematics at higher rates than they do in economics, despite math being a less common major overall. As a result, the gender composition of math and statistics majors is considerably more balanced throughout this period than it is in economics. Indeed, most recently, in 2015, women earned only about 28 percent of undergraduate majors in economics, while earning 43 percent of undergraduate majors in math.

In aggregate, the disparities in undergraduate economics are substantial. The first row of Table 6 presents the average number of economics majors, by gender and race/ethnicity, produced in the U.S. each year (averaging over the five-year period). The second row presents the number of additional students in each group who would have graduated with a major in economics if all groups had majored in economics at the same rate as do white males.

Table 6. The average number of economics majors per year at all 4-year, not-for-profit institutions, by
race/ethnicity and gender, and the number of additional economics majors per year that would have
resulted if each group had majored in economics at the same rate as white males*

	White		African A	American	Hisp	anic	Native American		
	М	F	М	F	М	F	М	F	
Actual economics majors	14,006	4,635	1,004	543	1,699	793	72	29	
Missing economics majors	N.A.	13,267	633	2,503	388	2,462	42	144	

*Annual average based on 2011-2015 data. See other table notes in Appendix A.

Thus, taking as given the existing composition and distribution of undergraduates at US colleges and universities, if women and URM students majored in economics at the same rates as white males, there would be over 18,000 additional female economics majors and, with doublecounting, 6,000 additional URM economics majors graduating every year. Of course, there is no single pathway to achieving full inclusion, and these figures result from one possibly extreme approach to that objective—an approach in which the majoring rates of every other group is brought up to that of white males. As we discuss in section IV.D, other approaches involve drawing more white males into majors dominated by female undergraduates and would not necessarily generate economics departments that are larger than they are now. Later in this paper, we consider the societal implications of current imbalances and help departments and universities think through possible reallocations to achieve full academic inclusion.

Making undergraduate economic education more inclusive would help to narrow the similarly substantial demographic imbalance at the PhD level in economics. For example, in 2014, 42 doctorate degrees in economics were awarded to African Americans, Hispanics, and Native Americans and 157 to women, double-counting 11 minority women. In quick, back of the envelope calculations using data from Table 6, we could quadruple the number of women PhD economists and double the number of URM PhD economists graduating per year if we were to achieve our full inclusion goal, assuming conversion rates from undergraduate majors into PhDs remain the same as at present.

A more balanced composition of undergraduate economics majors could have significant positive implications for society, for the economy, and for the students themselves, as we discuss in the next section.

III. THE DISTRIBUTION OF ECONOMIC EDUCATION MERITS URGENT ATTENTION AND ACTION

The imbalances that we document above impact us all. Broad distribution of economic education is critical to individual and collective success on and beyond college and university campuses. This section briefly notes the benefits that accrue to individuals receiving economic education and then quickly moves to consideration of societal issues.

The large disparities in undergraduate economic education certainly affect the employment outcomes of individual students; careful research shows that the study of economics is good preparation for a variety of careers and that large monetary premiums exist for graduates with business and economics majors even after controlling for selection (Black, Sanders, and Taylor 2003; Arcidiacono 2004). Education also brings significant nonpecuniary returns, in the form of improved health, happiness, civic participation,

and intergenerational benefits (Oreopoulos and Salvanes 2011), and economics education in particular can facilitate better decision making, build understanding of policy issues, enhance intellectual exploration of the world, and prepare students for further study in economics.

At the societal level, the identities and experiences of those who study and practice economics affect the creation of economic knowledge and the determination of government policy; when those identities and experiences are broadly representative, all of society stands to benefit.¹² In economics, to a degree that surely is not unique among academic disciplines but may be unusual, the field itself is endogenous to who is practicing it: the problems that are deemed to be most important, the papers that are published in the most prestigious journals, the individuals who are tenured at the most prestigious institutions, the policy options that are developed and implemented, all plausibly depend on the identity and characteristics of those who are driving each of these actions. In short, the identities of the incumbents matter. If white males—especially ones who come from privileged backgrounds—are disproportionately left in charge of the field, then we as a profession are likely to see one particular set of problems as most demanding our attention, and we are similarly likely to see one particular set of solutions as providing the most compelling remedies to those problems. But change the identity of who is participating in the policy process, and we are likely to change both the problems that are seen as important and the solutions that are seen as most promising.

The view that economics depends on who is practicing it has some empirical grounding. For example, a 2012 survey of members of the American Economic Association (AEA) found that female economists were markedly more likely than male economists to favor requiring that employers provide health insurance to their full-time employees; making the tax system more progressive; and linking the openness of our trade to the labor standards of our trading partners (May, McGarvey, and Whaples 2014). Women were much more likely than men to disagree with the statement that "job opportunities for men and women in the United States are currently approximately equal." Women were also vastly more likely to disagree with the statement that "the gender wage gap is largely explained by differences in human capital and voluntary occupational choices." And women were more likely than men to see "graduate education in economics in the United States currently" as favoring men more than women. Similar influences deriving from the under-representation of blacks, Hispanics, and other important groups are entirely plausible but are not documented in the survey of AEA members. None of this is to say that women's views are better than men's, or the other way around. The point is that they are different and that it is important that all perspectives be heard and carefully considered.

Diversity is also important in policymaking environments. Like many other policymaking organizations, the Federal Reserve strives to create a team-oriented, collaborative environment, often combining professionals with different specialties such as economists, attorneys, and persons with backgrounds in the examination and regulation of financial institutions. However, it is important that the professional environment exhibit diversity and inclusiveness not just in terms of professional training but also in terms of race or ethnicity, gender, sexuality, socioeconomic status, and all the other characteristics that define individuals as who they are.

Ample research documents that diverse teams generate more-robust decisions, higher-quality outcomes.¹³ Diverse teams include members that offer differing points of view; they challenge one another's evidence;

¹² Bayer and Rouse (2016) reviews the research supporting this statement. This section borrows language from "The Sorry State of Diversity in Economics and What You Can Do About It" by David Wilcox, speech given at the Seventh Annual Conference on Teaching and Research in Economic Education, May 31, 2017.

¹³ Again, see Bayer and Rouse (2016) for a review of this research. In addition, Rock, Grant, and Grey (2016) describe a clever experiment in which three members of a Greek-style sorority or fraternity are typically unable to

they bring to bear different perspectives, and so are capable of thinking of possibilities that might escape the imagination of homogenous teams.¹⁴ Interestingly, members of diverse teams may not particularly enjoy being part of such a team¹⁵—it can be annoying to have one's views challenged and one's evidence disputed—but they do a better job advancing the mission of the overall organization.

These research findings underscore the importance of cultivating diversity and inclusion in economic policymaking environments. Economics is a tricky business: Even smart, highly trained people often get it wrong the first time and on their own, so designing the professional environment to ensure that different perspectives are brought to bear can be seen as part of the "quality assurance" process. These considerations seem all the more pertinent for an agency like the Federal Reserve, where the practical consequences of decisions can be profound. Given the importance of the mission, it is imperative that the agency have access to the full energy and talents of all segments of the population. A work environment that is diverse and inclusive will better draw in the full range of perspectives, and allow employees to contribute and perform to their full potential.

Thus, full academic inclusion on college campuses, and in economic education in particular, is important both to the quality of the immediate environment and for the contributions that a more diverse and inclusive environment can make to the construction of knowledge and policy. While we do not deny that more diversity and inclusion might benefit any discipline or occupation, economics is especially in need of urgent attention and action, if for no other reason than the fact that diversity and inclusion have not been accorded the attention and assistance in economics that they have in some other disciplines.

In the professional environments in which we work as individuals—Swarthmore College and the Federal Reserve—we are also driven as individuals by the conviction that fostering diverse and inclusive professional environments is simply the right thing to do. We feel an obligation to welcome and value every individual with all of the characteristics that make them who they are; to invite them to harness their passion and energy and creativity toward our shared goal of accomplishing the missions of our respective institutions; and to make clear to each and every person that they share in the responsibility for making each institution better than it already is, and that their characteristics as individuals will help them do exactly that.

In our discussions with colleagues in the economics profession, we often hear skepticism expressed about whether the demographic imbalances in economics are a social problem warranting countervailing action. The skepticism usually takes one of two forms—and sometimes both. First, many people react with some version of the question "Isn't our loss some other field's gain? If we lose a talented woman or a talented African American or Hispanic to some other field, economics may be poorer as a result, but isn't the other field richer to the same extent?" We argue to the contrary. In part, our view rests on two ideas noted above—that the very definition of the field depends on who is practicing it, and the documented finding that diverse teams perform better. But it also derives from our casting a jaundiced eye toward the claim that the choice of major in college or university and the choice of profession are just examples of consumer sovereignty—and who are we to step in the way of individual choice? If we were totally comfortable that economics was being presented in the classroom in a manner that was equally inviting for all; that students' decisions about which fields to pursue were based on full information about what

solve a puzzle (probability of getting the correct answer equals 29 percent) but when a fourth member is added to the team who comes from a different Greek organization, the probability of getting the right answer doubles, to 60 percent.

¹⁴ Rock and Grant (2016) also discuss mechanisms through which diverse teams perform better; diverse teams focus more on facts and they process those facts more carefully.

¹⁵ Rock, Grant, and Grey (2016) point out, however, that participants routinely overestimate the amount of conflict that will actually be created on a diverse team. See also Lount, Sheldon, Rink, and Phillips (2015).

the field of economics is and what they could do with it; that their decisions were utterly free from social norming effects or other distortions outside the self; if we were absolutely certain that the overwhelming tendency of women to stay away from economics at both the undergraduate and graduate levels reflected only benign factors, then perhaps we would be more open to the argument that the demographic composition of the economics profession should be a matter of social indifference. But the evidence refuting that view of the world is far too pervasive for us to think that anyone should rest easy, free of any impulse to bring the economics profession closer into balance with overall demographic norms.

In fact, the research documenting the productivity dividend generated by diverse teams suggests to us that a different allocation of students across majors should be taken as the default than the one that we perceive to be the starting point for discussion at most institutions. Rather than accepting the *status quo* as the baseline, we suggest that college and university academic departments and administrators adopt the null hypothesis that all departments should draw a representative sample of the campus-wide population into their respective majors.¹⁶ This is not to say that imbalances would not be tolerated, but that they would be interrogated and would become a topic of conversation. If diverse teams are more creative and productive, then a college or university should be approximately as concerned if its biology or psychology major is overweighted toward women as it is if its economics department is overweighted toward men. The argument is less clear with respect to URM students, because even if URM students are concentrated in some majors at the expense of others, they are nonetheless likely to be a distinct minority in most cases except at some minority-serving institutions. Even so, equal representation across departments seems to us to be a better starting place for the campus conversation than an uncritical, though perhaps more convenient, acceptance of the status quo. Just as in portfolio theory in the field of finance, maximum diversification would seem to prevail when each academic department holds a representative slice of "the market" in its corps of majors.

The unequal distribution of economic education is a problem that demands deliberate and immediate responses from all of us. In the next and final section, we point the way forward.

IV. INNOVATORS POINT THE WAY FORWARD

We are far back in the queue of people who have recognized that representation in the field of economics urgently needs to be improved. Many of those ahead of us in line have responded to that recognition by investing enormous time and creativity in devising remedies. In this section, we present a catalogue of such steps. The catalogue is imperfect in at least three respects:

- First, although we have tried to make it reasonably comprehensive, it doubtless inadvertently omits some—perhaps many—creative initiatives already in operation. We invite anyone who knows of such initiatives to contact either one of the authors. We intend to keep a living version of this section updated and available online.
- Second, only a minority of the creative and well-intentioned steps described here have been subjected to any sort of rigorous evaluation—though even fewer of our profession's status quo procedures are based in evidence—therefore, we cannot as of this writing confidently estimate the incremental effect of implementing most of these steps. While STEM faculty have been much more intentional about implementing and testing innovative approaches to teaching, we economists too infrequently applied our research expertise to the tasks of evaluating and

¹⁶ In our companion paper, we explore such an allocation and use dissimilarity indices to assess how far away colleges and universities currently are from full inclusion in this sense.

improving our own effectiveness.

• Third, as creative and important as the steps catalogued here are, they are clearly insufficient because over the past quarter century, representation in the field of economics has barely budged. However—and this point bears stressing—other fields have made meaningful progress toward diversifying their ranks. That progress was the result of intentional effort. We economists should look closely at the steps taken by other fields, and determine whether there are lessons to be learned for our profession.

To make the catalogue as useful as possible, we have organized it according to who might take each step. Thus, for example, we begin with steps that might be taken by individual faculty members and then proceed to introduce steps that might be taken by textbook authors, department chairs, university administrators, and several others.

A. Steps for <u>undergraduate instructors and mentors</u> to consider

A convincing body of evidence suggests that classroom environment and faculty choices contribute heavily to determining whether women and URM students see economics as a field that is relevant to them and whether they see the economics department as a place where they want to devote a substantial portion of their time and energies. Even in the friendliest classrooms, implicit associations can bias instructor behavior without awareness or intent, and seemingly neutral practices and decision rules can systematically disadvantage students who are members of traditionally underrepresented groups, as described by Bayer and Rouse (2016). Therefore, our foremost request of classroom instructors is that they recognize their sway over the situation; they have the ability and the responsibility to create an encouraging environment, to examine the unintended consequences of their own behavior, and to reconsider every aspect of their interactions with students, from textbook selection to class-time usage to office-hours scheduling and advising.¹⁷.

To lead faculty members to understand their influence and to take concrete steps to draw a more diverse group of students to economics, one of us in 2011 founded *Diversifying Economic Quality*, abbreviated Div.E.Q. Now sponsored by the American Economic Association's Committee on the Status of Minority Groups in the Economics Profession, Div.E.Q. is a wiki offering evidence-based approaches to making economics classrooms and departments more welcoming to all.¹⁸ The site, which can be accessed at <u>DiversifyingEcon.org</u>, outlines the steps, and the research behind them, which economists can take to improve practices inside and outside the classroom and in departments overall.¹⁹ Better teaching helps all students but is particularly effective in attracting and retaining students who do not have the benefit of prior training or encouragement in economics.

¹⁷ As a specific example, Bansak and Starr (2010) find that students "widely view economics as a business-oriented field that prioritizes math skills and making money—a combination that is a turnoff for women, but not so much men. Thus, emphasizing uses of economics for social welfare analysis, while de-emphasizing its business applications, may help to rebalance predispositions at the outset of the principles class."

¹⁸ Another source full of diagnoses of what is wrong with economics pedagogy and replete with practical suggestions for what to do about it is Bartlett (1995). Though dated, the diagnoses and suggestions in Bartlett still ring true to us more than 20 years later.

¹⁹ Complementary to this paper, the site also provides suggestions for course content and evidence on the extent of the underrepresentation of women and URMs in the field of economics and discusses why that underrepresentation matters. Comments on or suggestions for the site can be sent to <u>div econ@swarthmore.edu</u>.

Bayer and Rouse (2016) highlight several key evidence-based practices for instructors to adopt: they emphasize the importance of instructors and students holding a growth mentality that values hard work, making mistakes, and perseverance; they provide specific strategies for reducing stereotype threat, a factor that may otherwise debilitate the performance of both women and minorities in economics classrooms; and they note that "active learning increases exam scores and decreases failure rates relative to traditional lecturing, with particular benefit for students from disadvantaged backgrounds and for women in male-dominated fields."²⁰ To counter faculty members' unconscious biases, Bayer and Rouse (2016) recommend crowding out inequities, such as those documented by Milkman, Akinola, and Chugh (2015), with affirmations, listening, and opening doors to opportunity.

Mentorship is one essential part of the educational process. Unfortunately, privileged students almost by definition have easier access to mentorship and role models than do other students. One remedial step is for instructors to think intentionally about the implications for diversity and inclusion of the mentorship that they provide. At New York University's Stern School of Business, Peter Henry implements a particularly far-reaching form of intentional mentorship through his "PhD Excellence Initiative." Established as a post-baccalaureate research fellowship program with support from the Alfred P. Sloan Foundation, the Initiative brings one to two high-achieving underrepresented minority students to New York City annually, where they work closely with Professor Henry for a period of two years to prepare for the rigors of doctoral studies in the field. During their participation in the Initiative, fellows engage in collaborative research, receive intensive one-on-one mentoring including guidance on applications to graduate programs, take courses for credit at NYU (up to two per semester), and network with peers. They also participate in the annual Summer Workshop, which brings together current and past fellows as well as visiting scholars, for a daylong program of research presentations, feedback, and professional development.²¹

Another promising form of mentorship with the objective of promoting inclusivity was recently initiated by Williams College, which hosted a Women in Economic Research Conference in April, 2017. The conference provided a venue for undergraduate women to present their research and receive professionallevel feedback, hear from a keynote speaker, network with peers, and establish mentoring relationships. Eligibility for participation at the conference was intended to be limited to students attending institutions within 2½ hours' driving time from Williamstown. A total of 31 students from 17 distinct institutions responded to the call for bids to present. From those bids, 19 students from nine institutions were invited to participate. Participants remarked on how meaningful they found their experience at the conference; at least one participant said that she had never thought of herself as an economist until this event.²²

Harvard University's Research Scholar Initiative (RSI) is similar in some respects to Peter Henry's PhD Excellence Initiative. Scholars must have completed an undergraduate degree before starting the one- to two-year program. The RSI "strongly encourages applications from underrepresented minorities," and admits three to four Scholars per year for the program in economics. (A similar program admits an additional three to four scholars in life sciences.) Over the course of their engagement with the RSI, Scholars work as part-time research assistants to members of the Harvard faculty, and may take courses at either the undergraduate or graduate level at Harvard. Scholars receive a stipend, tuition for up to two

²⁰ See p. 234.

²¹ Participants in the PhD Excellence Initiative must be US citizens. More information about the Initiative is available at <u>http://www.peterblairhenry.com/phd-excellence-initiative/</u>.

²² The daylong experience was organized by Williams College faculty members Matthew Gibson, Sarah Jacobson, Sara LaLumia, and Lucie Schmidt. This team intends to summarize their model and make it available to other institutions that might be interested in replicating the event.

courses per semester, as well as health insurance, GRE preparation, and a one-time relocation allowance. Like the PhD Excellence Initiative, the RSI in economics is funded by the Alfred P. Sloan Foundation.²³

Mentorship, of course, most often happens in the course of ordinary academic life. Economics faculty should certainly provide students with information about the external programs described in this paper, and they should be intentional about offering research and teaching opportunities to students who may otherwise feel on the margins. The selection of teaching assistants is particularly important because it affects not only the students who are chosen but also those who see them at the front of the classroom.

B. Steps for textbook authors, publishers, and other curriculum writers to consider

Given the pervasiveness of the demographic imbalances in economics at the undergraduate level, it is natural to look for factors that could exert their influences across many different campuses simultaneously. One such factor is the set of instructional materials that instructors use—particularly at the introductory level. Surely, these materials play a role in shaping the perceptions in the minds of students of what economics is, and whether it might be relevant to their lives. Surprisingly, the issue of inclusion appears to receive little analysis. For example, in a review essay focusing on the set of principles textbooks available circa 2011, Lopus and Paringer (2012) includes a brief reference in passing to two previous essays that investigated "the treatment of women and minorities in principles of economics textbooks (Robson 2001; Feiner 1993)," but otherwise makes no reference to issues of inclusion in instructional materials. It is striking that the two essays referenced in Lopus and Paringer (2012) were already, by that point, quite dated.

Another essay in the same volume, Bartlett (2012), notes the absence of women from introductory textbooks. "In an early study, Feiner and Morgan (1987) found that women were virtually absent from introductory textbooks. In the hundreds of pages reviewed in leading texts, women and minorities were mentioned in 1.3 percent of them. Their qualitative analyses suggest that introductory textbooks are indeed race and gender blind and that white male behavior, both implicitly and explicitly described, is held up as the norm. In later studies, Feiner (1993) and then Robson (2001) found that the inclusion of women and minorities in introductory texts had improved; they could now be found in around 3 percent of the pages."²⁴ As Bartlett concludes, "If economics pedagogies are not more inclusive, we stand a chance of losing those students with the voices and experiences who have the most to contribute to making economics more universally applicable." In other words, making the content of economics courses—especially introductory classes—more inclusive is likely to make the clientele of such courses more inclusive as well.

Thus, our foremost request of textbook authors, publishers, and other curriculum writers such as the College Board is that they design and revise their materials with one central question in mind: Are issues of race, gender, and class integrated into the material in a way that will allow a broader swath of students to see economics as relevant to people like them? We suggest that textbook authors commission critical reviews of their own materials, with an eye toward identifying how those materials can be made more inclusive, along gender, race/ethnicity, and socioeconomic lines. We also suggest that authors and others construct curricula around teaching core competencies in economics (e.g., Allgood and Bayer 2017) to avoid crowding out important economic issues with laundry lists of concepts and content.

C. Steps for department chairs to consider

²³ Participants in the RSI must be either US citizens or permanent residents. More information about the RSI is available at <u>https://gsas.harvard.edu/diversity/research-scholar-initiative</u>.

²⁴ Bartlett (2012) p. 217.

By dint of their leadership positions, department chairs play a disproportionate role in setting the climate in their departments. They can signal by their actions and statements that they recognize diversity and inclusion as important issues. In doing so, they provide critical support to other members of the department, often junior, female, and/or underrepresented faculty, who care deeply about these issues. Chairs also control resources that can be used to support diversity and inclusion initiatives within their departments and to support faculty who wish to participate in external opportunities. Our foremost request of department chairs is that they be proactive in implementing an array of interventions to be more welcoming of diverse students and colleagues. There is no neutral course; the status quo certainly appears not to be serving well students who are not white males, and doing nothing is as much a choice as taking action.

Department chairs should give careful consideration to maximizing demographic balance among instructors, especially at the introductory level. Intuition suggests that the characteristics of the individual at the front of the classroom might matter for whether students see a pathway to success for themselves, and this intuition is supported by evidence. In particular, Carrell, Page, and West (2010) exploit the fact that at the U.S. Air Force Academy, students are randomly assigned to professors for some of their classes. Carrell *et al.* hypothesize a variety of different reasons why the gender of the course instructor might matter for a student's proclivity to pursue further study in a STEM field, including the possible importance of role models, "differences in the academic expectations of teachers, differences in teaching styles, or differences in the extent to which teachers provide advice and encouragement."²⁵ They conclude that "although professor gender has only a limited impact on male students, it has a powerful effect on female students' performance in math and science classes, their likelihood of taking future math and science courses, and their likelihood of graduating with a STEM degree."²⁶ It does not seem like much of a leap to suppose that similar effects might result from the identity of the instructor in an economics classroom. Moreover, Fairlie, Hoffmann, and Oreopoulos (2014) find analogous effects with respect to the race and ethnicity of instructors.

Most departments, of course, are currently severely gender- and race/ethnicity-imbalanced. Accordingly, if done badly, demographic balance in the classroom could come at the expense of overburdening female and URM members of the faculty. However, other approaches that are respectful of fairness seem possible. For example, introductory classes could be team-taught, with white male instructors paired with a female or URM instructor. The relative burden on female instructors could be reduced by more-generously provisioning them with teaching assistants, to free them up for devoting a larger fraction of their time to direct interaction with students in the classroom. Department chairs can also partially compensate for insufficient diversity among the faculty by encouraging selection of a diverse set of student teaching assistants.

Department chairs should also work actively to improve the culture of their departments, expressed both in formal policies and in the everyday practices of faculty and students. A group of economics faculty from liberal arts colleges is working together to enhance the inclusivity of their departments, sharing curricula and strategies and conducting coordinated, randomized evaluations to generate credible evidence on whether specific approaches are effective. Their collaboration began in 2015 with a grant from the Alliance to Advance Liberal Arts Colleges, which funded a workshop attended by economists from fifteen liberal arts colleges (Barnard College, Furman University, Grinnell College, Haverford College, Middlebury College, Oberlin College, Occidental College, Pomona College, Smith College, Swarthmore College, Vassar College, Washington & Lee University, Wesleyan University, Wellesley College, and Williams College). The group continues to meet, and economists from several other colleges

²⁵ Carrell, Page, and West, p. 1103.

²⁶ Ibid, p. 1104.

are joining this year.²⁷ Ultimately, results of their experimentation and evaluation can guide improvement at all institutions.

Interventions may also be identified through the challenge grant program known as "Undergraduate Women in Economics." UWE is designed as a randomized controlled trial that aims to identify interventions that are effective in increasing the representation of women in the economics major. The project was initiated by Claudia Goldin, Professor of Economics at Harvard University, managed by Tatyana Avilova at the NBER, and advised by a group of experts from across the country; funding was provided by the Sloan Foundation.²⁸ Twenty undergraduate institutions from around the country were selected to serve as "treatment" schools, while 35 institutions agreed to provide control data. Treatment schools received \$12,500 each to implement interventions of their choosing and consistent with the goals of the project. Treatment began with the class of students entering in the fall of 2015, thus results are not yet available. However, in a set of notes describing the project, Goldin observes that "the UWE program has been instrumental in giving women in these 20 [treatment] schools more of a voice and giving all potential majors better information about economics as a discipline" (p.2).²⁹ The program has also been instrumental in raising awareness across the profession about the lack of women in the economics major.

D. Steps for university and college administrators to consider

Our foremost request of university and college presidents, deans, provosts, and other university personnel outside the economics department is that they change the starting point of conversations about representation in classrooms on their respective campuses. Our sense is that most such conversations center on the implicit assumption that today's distribution of students across departments optimally reflects fundamental characteristics of students and disciplines. Instead, we think it overwhelmingly likely that stereotypes, information gaps, and an array of social, psychological, and other influences are distorting the choices of both faculty and students. Current departmental and university practices that seek to limit enrollments in economics departments may be exploiting rather than correcting those distortions and thus come at the expense of the students who are deprived of a full academic experience.

A better starting point for conversations about representation, in our view, would be the premise that *every* classroom should attract a proportionate slice of the campus-wide population. We are open to the possibility that, even in the best of all possible worlds, women or URM students might tend toward different academic pursuits than white men, but we think that campus administrators and instructors need to satisfy themselves that the conditions that could justify deviations from proportionate representation actually prevail. Are you comfortable that the atmosphere in economics classrooms is not unwelcoming to women or URM students? Symmetrically, are you confident that subtle cues in sociology or education classrooms are not diverting men to other fields? Are you comfortable with the presumption that math literacy somehow explains the imbalances in economics, computer science, and physics lecture halls, even though the mathematics major is more gender-balanced than the economics major? And yes, to answer a question frequently posed to us, we are approximately as concerned when other majors are disproportionately female as we are by the fact that economics majors are disproportionately male. Full academic inclusion might best be achieved not by generating economics departments that are even larger than they are now, but by asking other departments to broaden their appeal and making changes that draw more white males into majors such as literature, education, and psychology.

 ²⁷ See <u>http://www.aalac.org/archive-of-previously-funded-workshops</u>. Fernando Lozano of Pomona College and Amanda Bayer of Swarthmore College won the initial grant to organize the collaboration.
 ²⁸ https://scholar.harvard.edu/goldin/UWE

²⁹ "Change Starts with UWE: Gender and the Undergraduate Economics Major," by Claudia Goldin 2015 (<u>https://www.aeaweb.org/conference/2016/retrieve.php?pdfid=340</u>).

Many educational institutions have done an admirable job of granting admission in recent years to larger numbers of first-generation students as well as students of color, and students who come from lessprivileged rungs on the socioeconomic ladder. For all of these students, the transition to a highly rigorous academic environment possibly dominated by privileged whites can be extremely challenging. Thus, a critical next step is to ensure that all students are fully supported across every opportunity, once they have reached the campus. Consistent with that objective, some institutions have begun to offer a "bridge program" to selected students during the summer before freshman year. Williams College is one such institution. Their Summer Humanities and Social Sciences (SHSS) bridge program is targeted to URM and first-generation students who will be beginning their first year at the college in the subsequent fall. The five-week program offers participants a first taste of what the academic experience will be like at Williams, in the company of other students like themselves and before the pressure of grades enters the equation. Participants take a set of classes intended to simulate the workload during a regular academic semester at Williams. Early results suggest that participation in SHSS during years when an economics class is included in the curriculum, in place of a mathematics course, increases the probability that participants take economics classes, improves their performance in Principles of Microeconomics, and boosts enrollment in regular mathematics classes.³⁰

E. Steps for employers—both academic and non-academic—to consider

Extensive research shows the pervasive role that discrimination can play in the hiring process.³¹ Even if overt racism plays a smaller role today, much research demonstrates that implicit bias can still influence outcomes materially. Interestingly, the evidence shows that implicit bias is a pervasive phenomenon, and that women and people of color are susceptible to it just as white males are. Surfacing the issue and discussing it openly are important first steps to reducing its impact.

In the economics divisions at the Federal Reserve Board, we have instituted decision-making procedures that limit the opportunity for bias to influence evaluations, and we now require every individual who participates in the economist recruiting process to undergo training for implicit bias awareness before the recruiting process begins. Participants are exposed to research on diversity, disparities, and bias applied to the economics profession in particular, such as that in Bayer and Rouse (2016), and are provided multiple venues to discuss its relevance to their work at the Board.³²

Our foremost request of everyone involved in hiring economists is that they, too, recognize the likely impacts of explicit and implicit biases, and take steps to combat them.

F. Steps for foundations to consider

Incentives matter, and paying for post-secondary education can be a daunting prospect, especially for students who do not come from privileged backgrounds. The Andrew W. Mellon Foundation, through its Mellon-Mays Undergraduate Fellowships, provides funding to 48 institutions, which in turn select fellows, taking into account "race and ethnicity, in relation to their underrepresentation in designated fields of study."³³ Fellows, typically selected in the sophomore year, receive holistic support—faculty

³⁰ See "Teaching Economics in a Summer Bridge Program," by Lucie Schmidt, Williams College, presentation for the AALAC Workshop on Diversifying Economics, February 2016.

³¹ See, for example, Bertrand, Marianne, and Sendhil Mullainathan (2004) "Are **Emily** and **Greg** More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination" *American Economic Review* September 94(4) pp. 991-1013.

³² Recent steps that have been taken at the Federal Reserve Board are discussed in Wilcox (2017).

³³ http://www.mmuf.org/eligibility

mentoring, special programming, stipends for term-time and summer research, and repayment of undergraduate loans up to \$10,000—"provided that fellows pursue doctoral study in <u>eligible fields</u>."³⁴ Unfortunately, economics is not an eligible field of study and is extremely unlikely to become one.

Therefore, beyond continuing and expanding programs like those funded by the Sloan Foundation and described above, our foremost request of foundations is that they consider stepping in at the undergraduate level to fill the void left by Mellon.³⁵ Foundation funds could also be productively used to create incentives for economists, inducing them to attend teaching workshops or to conduct research on diversity and inclusion. Underrepresented minority groups are so underrepresented in economics (with only 40 to 50 PhDs in economics awarded annually to black and Hispanic recipients) that even a relatively modest investment could move the needle meaningfully.

G. Steps for the AEA to consider

Nearly fifty years ago, the AEA established two committees to address disparities in the profession.

- The AEA's Committee on the Status of Minority Groups in the Economics Profession (CSMGEP) "was established by the American Economic Association (AEA) in 1968 to increase the representation of minorities in the economics profession, primarily by broadening opportunities for the training of underrepresented minorities. CSMGEP... also works to ensure that issues related to the representation of minorities are considered in the work of the AEA, and engages in other efforts to promote the advancement of minorities in the economics profession."³⁶
- Similarly, the Committee on the Status of Women in the Economics Profession "was founded in 1971 to eliminate discrimination against women, and to redress the low representation of women, in the economics profession. CSWEP is based on the principle that economics is a woman's field as much as it is a man's field... CSWEP works to assure that women's issues are considered in the committee work of the American Economic Association (AEA), makes an annual report to the AEA on the status of women in the economics profession, and engages in other efforts to promote the advancement of women in the economics profession."³⁷

Other professional organizations, such as those described below, also represent long-standing institutional efforts to broaden representation in the field of economics.

- "The National Economic Association (NEA) was founded in 1969 as the Caucus of Black Economists to promote the professional lives of minorities within the profession. In addition to continuing its founding mission, the organization is particularly interested in producing and distributing knowledge of economic issues that are of exceptional interest to promoting economic growth among native and immigrant African Americans, Latinos, and other people of color."³⁸
- "The American Society of Hispanic Economists (ASHE) is a professional association of economists who are concerned with the under-representation of Hispanic Americans in the economics profession

³⁴ http://www.mmuf.org/program-glance-0

³⁵ Alternative approaches are possible. For example, Williams College, under the auspices of the Allison Davis Research Fellowship, partners with Mellon-Mays to provide support to students in economics and other fields that are not eligible for funding under Mellon-Mays alone. See <u>https://osap.williams.edu/fellowships/</u>.

³⁶ <u>https://www.aeaweb.org/about-aea/committees/csmgep</u>

³⁷ <u>https://www.aeaweb.org/about-aea/committees/cswep/about/mission</u>

³⁸ <u>http://www.neaecon.org/about</u>

at a time when Hispanics represent over 16 percent of the United States' population. [The primary goals of ASHE] include: promoting the vitality of Hispanics in the economics profession through education, service, and excellence; promoting rigorous research on economic and policy issues affecting U.S. Hispanic communities and the nation as a whole; and engaging more Hispanic Americans to effectively participate in the economics profession.³⁹

These groups oversee critically important initiatives. Most relevant to the focus of this paper, the AEA Summer Program, currently hosted by Michigan State University in collaboration with Western Michigan University, trains undergraduate representatives of groups that have historically been underrepresented in economics, giving them two months of intensive instruction in the technical skills needed to succeed at the PhD level in economics. The program is provided free of charge to participants, and participants "receive a \$3,250 stipend upon successful program completion."⁴⁰ Becker, Rouse, and Chen (2016) estimate that the program may directly account for 17 to 21 percent of the PhDs awarded to minorities in economics over the past 20 years.

But these groups alone cannot bring about the kinds of change the profession needs to correct the large disparities in undergraduate economic education and to achieve diversity and inclusion more broadly. In fact, the very existence of CSMGEP and CSWEP may create the impression within the profession that women and URM economists have the responsibility and power to fix the problems they identify. Therefore, our foremost request of AEA leadership is that it communicate through statements and initiatives that the underrepresentation of women and minority economists is a problem that belongs to every member of the association, both in terms of causes and consequences. The AEA can complement existing pipeline initiatives with interventions that provide guidance and training to all its members. The association can coordinate and fund workshops, pilot programs, and research projects and can lead economists and university departments to take concrete steps such as those outlined above. More generally, the association can borrow proven strategies from other professions, such as business and some of the STEM fields, which have successfully improved representation.

H. Steps for students to consider

As the rest of us learn more about how to improve the culture and curriculum of economics, we ask students to be persistent. Try not to let the current environment, which often imposes an additional tax on women and URM students, limit your future; neither the choices made by other students nor the guidance offered by faculty are necessarily right for you. Know you can develop ability in economics just like you learned to read, write, or walk, through practice, mistakes, and perseverance. Know also that economics is a more powerful and relevant subject of study than many assume. Keep seeking knowledge and people to help you succeed. The marginal social benefit to your majoring in economics is large.

V. CONCLUSION

Economic education is distributed extremely unequally, which harms students, the discipline, and the economy. We call on all involved parties to adopt a new mindset in which full academic inclusion is the benchmark they use to evaluate current conditions and to take action to achieve that standard.

³⁹ <u>http://asheweb.net/</u>

⁴⁰ <u>https://www.aeaweb.org/about-aea/committees/aeasp/finances-scholorship</u>

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APPENDIX A. Table Notes

- i. The tables report authors' calculations from the *Integrated Postsecondary Education Data System* (IPEDS) at the National Center for Education Statistics, using data on bachelor's degrees from four-year, public or private not-for-profit, Title-IV participating colleges and universities that awarded at least 25 majors in economics to US citizens or permanent residents (i.e., excluding non-resident aliens) in the five-year period from 2011 through 2015. The resulting dataset includes 566 institutions and accounts for over 98 percent of all economics degrees granted to US citizens or permanent residents. Economics degrees are defined as first or second majors with IPEDS Classification of Instructional Program codes for "Economics, General," "Agricultural Economics," "Applied Economics," "International Economics" and "Economics, Other." Student counts sum across first majors only to avoid double counting.
- ii. The tables use IPEDS historical race and ethnicity, and citizenship, classifications. "White" indicates non-Hispanic white individuals. URM denotes underrepresented minority groups— Hispanic or Latino, (non-Hispanic) American Indian or Alaska Native, and (non-Hispanic) Black or African American. Individuals whose ethnicity is unknown and non-Hispanic individuals whose race is unknown or with more than one racial designation are reported in a separate catchall group and are not included in these counts. Tables 1 and 2 report information on temporary residents, defined as individuals who are not citizens or nationals of the United States and who are in the country on a visa or temporary basis only. Temporary residents are not included in any of the racial/ethnic categories.
- iii. The top-40 economics PhD programs as ranked by <u>U.S.News</u> in 2017—but closely aligned with other rankings including NRC (1995) and <u>McPherson</u> (2012)—account for 58.9 percent of PhDs in economics produced since 2000. The 41 institutions are: Boston College, Boston University, Brown University, California Institute of Technology, Carnegie Mellon University, Columbia University, Cornell University, Duke University, Harvard University, Johns Hopkins University, Massachusetts Institute of Technology, Michigan State University, New York University, Northwestern University, Ohio State University, Pennsylvania State University of California—Davis, University of California—Los Angeles, University of California—San Diego, University of Chicago, University of Illinois—Urbana-Champaign, University of Maryland, University of Michigan, University of Minnesota, University of North Carolina, University of Virginia, University of Pennsylvania, University of Washington, University of Wisconsin—Madison, Vanderbilt University, Washington University in St. Louis, and Yale University.
- iv. The other economics PhD programs account for 36.8 percent of PhDs in economics produced since 2000. The 82 institutions, each averaging at least one graduate per year, are: American University, Arizona State University, Auburn University, Brandeis University, Clark University, Clemson University, Colorado School of Mines, Colorado State University, CUNY Graduate Center, Drexel University, Emory University, Florida International University, Florida State University, Fordham University, George Mason University, George Washington University, Georgetown University, Georgia State University, Howard University, Iowa State University, Kansas State University, Middle Tennessee State University, Mississippi State University, Northeastern University, Rutgers University, Southern Illinois University, Southern Illinois University, Southern Illinois University, Suthern Illinois University, Suthern Methodist University, Stony Brook University, Suffolk University, SUNY at Albany, SUNY at Binghamton, Syracuse University, Temple University, Texas Tech University, The

New School, The University of Tennessee, The University of Texas at Dallas, Tulane University, University at Buffalo, University of Arizona, University of California-Irvine, University of California-Riverside, University of California-Santa Cruz, University of Colorado Boulder, University of Connecticut, University of Delaware, University of Florida, University of Georgia, University of Hawaii at Manoa, University of Houston, University of Illinois at Chicago, University of Iowa, University of Kansas, University of Kentucky, University of Massachusetts-Amherst, University of Memphis, University of Miami, University of Mississippi, University of Missouri-Columbia, University of Missouri-Kansas City, University of Nebraska, University of New Hampshire, University of New Mexico, University of Notre Dame, University of Oklahoma-Norman, University of Oregon, University of Rhode Island, University of South Carolina, University, Virginia Polytechnic Institute and State University, Washington State University, Wayne State University, West Virginia University, and Western Michigan University.

The top liberal arts group includes institutions ranked in U.S. News & World Report's National v. Liberal Arts Colleges in 2017, excluding military academies, plus five other highly selective institutions classified as top national or regional universities in the rankings but which have few graduate programs (noted in italics below). The top-50 group of coeducational institutions is: Amherst College, Bates College, Bowdoin College, Bucknell University, Carleton College, Centre College, Claremont McKenna College, Colby College, Colgate University, College of the Holy Cross, College of William and Mary, Colorado College, Connecticut College, Dartmouth College, Davidson College, Denison University, DePauw University, Dickinson College, Franklin and Marshall College, Furman University, Gettysburg College, Grinnell College, Hamilton College, Haverford College, Kenyon College, Lafayette College, Macalester College, Miami University-Oxford, Middlebury College, Oberlin College, Occidental College, Pitzer College, Pomona College, Reed College, Rhodes College, Sewanee-The University of the South, Skidmore College, St. Lawrence University, St. Olaf College, Swarthmore College, Trinity College, Trinity University, Tufts University, Union College, University of Richmond, Vassar College, Washington and Lee University, Wesleyan University, Whitman College, and Williams College. Six highly ranked women's colleges, included in analyses where noted, are: Barnard College, Bryn Mawr College, Mount Holyoke College, Scripps College, Smith College, and Wellesley College.

APPENDIX B. Institution-Level Tables

Appendix Table 1 reports data on all institutions in our data set. Appendix Tables 2-4 present data on women's colleges, men's colleges, and HBCUs, respectively. Appendix Tables 5 and 6 retabulate data on universities with top PhD programs and top liberal arts colleges (LACs). While the institution-level data may be subject to random variation when the number of students in a given group is small, we choose to report index values and rates for all institutions in the data set to facilitate examination of economics departments of all sizes.

Institution Name	Econ Educ Inclusio (EE	n Index			which students conomics (percer African American		nt)	n oanic
	Value	Percen tile	м	F	Μ	F	М	F
Adelphi University	27.3	15	1.4	0.2	1.6	0.2	0	0.0
Agnes Scott College				5		9.3		6.7
Albion College	66.3	75	16.4	5.6	20.7	7.7	10.5	10
Alcorn State University			0	0	3.7	1.1	0	0
Allegheny College	62.4	70	17.4	4.8	34.4	3.3	8.3	3.6
American University	77.3	85	6.6	3.3	7.4	1.9	9.3	3.6
Amherst College	35.6	25	21.9	7.5	15.7	1.4	11.3	3.2
Appalachian State University	43.1	35	2.2	0.4	1.8	0	2.2	0.3
Arizona State University-Tempe	48.5	44	3	0.7	3.2	0.6	2.3	0.4
Arkansas State University-Main Campus	29.8	17	0.5	0.2	0.3	0.3	0	0
Armstrong State University	43	35	6.2	1.2	3.6	0.4	6.5	1.7
Assumption College	23	9	8	1.2	0	0	6.7	1.4
Auburn University	34.7	23	2.6	0.7	1.1	0.6	1.8	0.4
Augsburg College	72.3	80	5.4	0.7	8.9	1.5	5.6	2.9
Augustana College	45.3	38	3.3	0.4	0	0	4.4	2.5
Augustana University	4.6	2	3.5	0.8	0	0	0	0
Austin College	64.1	71	7.9	1.8	7.1	5.3	8.3	2.6
Ave Maria University	72.2	80	9.9	4.3	7.7	0	13.6	10.2
Baldwin Wallace University	47.1	41	2.2	0.6	2.6	0	2	0
Barnard College				6.7		8.6	•	6.1
Bates College	32.2	20	17.6	4	9.8	1.6	8.7	4.3
Bellarmine University	8.3	4	5.2	2.2	0	0	0	0
Beloit College	69.3	78	8.6	2	25	0	0	2.7
Benedict College			0	0	1.9	2.1	0	0
Benedictine College	6.2	3	3.3	1	0	0	0	0
Bethel University	0.9	1	4.1	0.2	0	0	0	0
Birmingham Southern College	30.7	18	6.2	1.1	6.5	1.9	0	0

Appendix Table 1. Rating the inclusiveness of economics departments, Economic Education Inclusion Index values and percentiles, 2011-2015

⁴¹ Higher value and higher percentile indicate more inclusion. Inclusion Index=100*average(wfrate, bmrate, bfrate, hmrate, hfrate)/wmrate

Institution Name	Eduo Inclusio	omic cation on Index	F	major i nt) Hisn	or in Iispanic			
Institution Panie		(II) ⁴¹ Percen			Ame			
	Value	tile	М	F	Μ	F	Μ	F
Bloomsburg University of Pennsylvania	69.3	77	2.7	0.6	4.6	0.4	2.4	1.3
Boise State University	40.1	31	0.8	0.2	0.8	0	0.6	0
Boston College	50.3	48	18.4	7.1	11.8	5.1	16.2	6
Boston University	58	63	4.7	1.6	2.4	1.5	5.8	2.3
Bowdoin College	24.8	12	22.8	5.7	2.7	1.5	14.2	4.3
Bowling Green State University-Main Campus	67.5	75	1.4	0.3	2.5	0.6	1	0.4
Brandeis University	39.7	30	17.2	4.6	5.6	5.3	14.3	4.4
Bridgewater State University	52.4	53	2.5	0.6	2.4	1.7	1.4	0.5
Brigham Young University-Idaho	89.8	92	1	0.1	0	2.7	1.3	0.3
Brigham Young University-Provo	56.9	61	4.5	0.6	7.6	0	3.6	1
Brown University	55.2	58	17.3	8.2	13.3	7.4	12.1	6.7
Bryant University	77.9	86	1.7	0.5	1.3	0	2.4	2.2
Bryn Mawr College				1.8	•	3.7	•	0
Bucknell University	65.9	74	17.6	8.9	23.3	6.2	16.2	3.3
Butler University	89	91	3.7	0.5	8.7	1.3	6.2	0
CUNY Bernard M Baruch College	90.4	92	2.9	1	3	2.8	4.8	1.6
CUNY Brooklyn College	70.3	79	1.1	0.4	1.2	0.2	1.5	0.6
CUNY City College	66.2	74	5.4	1.7	7.9	1.9	5.2	1.2
CUNY Hunter College	44.9	37	7.4	1.9	5.3	1.6	5.8	1.9
CUNY John Jay College of Criminal Justice	112.8	97	2.5	2.4	4.2	2.3	2.9	2.2
CUNY Lehman College	47.4	42	5.1	0.8	3.6	1.9	4.5	1.4
CUNY Queens College	61.1	69	13.8	4	14.8	5	12.7	5.6
CUNY York College	50.9	49	2.6	0.8	1.3	0.7	3.3	0.6
California Polytechnic State University-San Luis Obispo	63.4	71	2.4	0.7	1.2	3.2	1.8	0.6
California State Polytechnic University-Pomona	64.3	71	0.8	0.2	0.7	0.3	0.8	0.3
California State University-Bakersfield	35.4	24	1.6	0.5	0	0.8	1.4	0.3
California State University-Channel Islands	48.4	44	3.1	0.6	2.8	0	3.4	0.8
California State University-Chico	33.4	22	2	0.3	0.8	0	1.5	0.7
California State University-East Bay	76.2	84	1.6	0.6	2.3	0.8	1.8	0.5
California State University-Fresno	36.6	26	1.5	0.2	1.2	0	1.1	0.2
California State University-Fullerton	43.8	36	1.5	0.3	1.2	0.4	1.2	0.2
California State University-Long Beach	56	59	1.6	0.4	0.9	0.7	2.1	0.5
California State University-Los Angeles	23.9	10	2.1	0.3	1	0.2	0.8	0.1
California State University-Northridge	41.8	33	2	0.4	1.7	0.2	1.6	0.3
California State University-Sacramento	55.2	58	3.9	0.7	5.1	0.7	3.4	0.9
California State University-San Bernardino	74.2	83	1.6	0.6	2.7	0.6	1.7	0.3
California State University-San Marcos	40.5	31	3.8	0.5	3.7	0	3	0.5
California State University-Stanislaus	39	28	2	0.7	1.4	0	1.5	0.3

In Ald Alors No.	Educ	nomic cation on Index	F		which s onomics Afri	s (perce	major i nt)	n
Institution Name		2II) ⁴¹	WI	hite	Ame		Hisp	anic
	Value	Percen tile	М	F	Μ	F	Μ	F
Calvin College	133.1	99	3.6	3.3	6.7	4.3	5	4.4
Canisius College	97.7	94	2.5	1.1	4.3	1	5.7	0
Carleton College	38	27	11.2	2.7	4.4	2.6	5.9	5.7
Carnegie Mellon University	71.2	79	3.2	2	2.3	2.6	1.5	3.1
Carthage College	109.7	97	2.9	1.1	0	3.8	3.8	7.4
Case Western Reserve University	81.3	89	4.6	1.9	5.2	0.8	5.2	5.6
Catholic University of America	31	19	1.1	0.4	0	0	0.7	0.6
Central Connecticut State University	45	38	1.6	0.6	1.5	0.5	0.6	0.5
Central Michigan University	52.2	53	1	0.1	0.3	0	1.5	0.8
Central Washington University	25.3	12	1.5	0.3	0	0	1.5	0.2
Centre College	58.7	65	29.4	6.1	42.9	4	33.3	0
Christopher Newport University	69.8	78	2.4	0.6	5.1	0.5	2.4	0
Claremont McKenna College	35	23	31.2	10	13	5	13	13.7
Clark University	54.4	57	5.7	2.3	0	3.8	4.4	5
Clemson University	52.5	53	3.6	1.2	1.6	1.5	5.1	0
Cleveland State University	91.8	93	1	0.3	1.6	0.4	2.4	0
Coe College	53.6	55	4	0.8	0	0	10	0
Colby College	24.6	11	24.8	5.8	10.8	0	10.3	3.6
Colgate University	28.9	15	20.7	8	9	1.4	10.1	1.3
College of Charleston	31	19	4.9	0.7	2.1	0.3	4.6	0
College of Staten Island CUNY	65.4	73	11	3.2	14.5	6.2	8.1	3.8
College of William and Mary	55.3	59	11.9	4.1	14.9	2.6	8.6	2.6
College of the Holy Cross	30.7	18	28.5	10.9	7.1	2.1	17.2	6.3
Colorado College	63.2	71	22.1	9.3	27.3	13.6	13	6.4
Colorado School of Mines	269.3	100	0.9	2.5	5.6	0	2	2.1
Colorado State University-Fort Collins	56.5	60	5.1	0.9	4.3	1.5	6.7	1
Columbia University in the City of New York	59.8	67	15.3	6.9	12.4	4.5	15	6.8
Concordia College at Moorhead	4	2	4.5	0.9	0	0	0	0
Connecticut College	58.7	65	23.9	8.2	28.1	4	20.4	9.4
Cornell College	54.7	57	11.4	3.4	12.5	0	11.4	3.7
Cornell University	74.3	83	14.7	6.6	17.4	6.6	18.1	6.1
Covenant College	73.6	82	6.5	1.7	5.6	4.3	0	12.5
Creighton University	44.7	37	6.9	1.9	4.7	0	6.8	2.1
Dartmouth College	53.1	54	19.9	8.4	13.2	2.2	23.1	5.8
Davidson College	35.4	24	14.2	5.4	7.9	0	8.9	2.9
DePaul University	79.4	87	1.1	0.5	1.9	0.4	1.3	0.4
DePauw University	26.6	14	19	4.3	10.8	3	5.4	1.8
Denison University	42.9	35	27.3	9.2	17.6	6.5	24.1	1.3

	Edu	nomic cation on Index	Rates at which students major in economics (percent)							
Institution Name		CII) ⁴¹	WI	nite	AIR		Hisp	anic		
	Value	Percen tile	М	F	Μ	F	Μ	F		
Dickinson College	48	43	11.6	3.3	15.7	4.1	4.8	0		
Drake University	19.2	7	2.5	0.8	1.6	0	0	0		
Drew University	60.1	68	15.7	3.3	20	5.4	12.2	6.3		
Drexel University	29.5	16	1.4	0.3	0.6	0.3	0.6	0.3		
Duke University	40	30	14.5	4.4	5.6	1.4	11.8	5.8		
East Carolina University	50.3	48	4.2	0.7	5.1	1.1	2.3	1.2		
East Stroudsburg University of Pennsylvania	73.3	81	2.4	0.3	3.4	1.1	3.8	0.4		
East Tennessee State University	42.8	35	0.4	0.2	0.6	0	0	0		
Eastern Connecticut State University	46.1	39	3.4	0.8	4.7	1.6	0.7	0		
Eastern Illinois University	38.5	28	1.1	0.1	0.9	0.4	0.6	0		
Eastern Kentucky University	70.2	79	0.6	0.2	0	0	0	2		
Eastern Michigan University	65	73	0.8	0.2	0.8	0.1	1.1	0.4		
Eastern Washington University	102.6	95	1.3	0.5	3.9	0.7	0.8	0.9		
Eckerd College	50.2	48	3	1	1.7	0	4.9	0		
Elmhurst College	23.6	10	3.7	1	2.1	1.3	0	0		
Elmira College	10.9	5	3.4	1.8	0	0	0	0		
Elon University	24.2	11	3.8	1.4	1.2	0	1.3	0.8		
Emory & Henry College	20.9	8	6.4	1.3	5.4	0	0	0		
Emory University	49.2	46	14.3	4.6	8.9	5.1	12.8	3.7		
Fairfield University	48.1	43	7.1	1.3	5.5	1.2	7.5	1.7		
Farmingdale State College	87.5	91	0.7	0.4	0.7	0.9	0.7	0.4		
Fitchburg State University	76.6	85	1.3	0.1	1.3	2.2	1.3	0		
Flagler College-St Augustine	101.8	95	2.6	0.5	5.6	0	6.5	0.8		
Florida Agricultural and Mechanical University	95.5	94	1	0	1.9	0.5	2.6	0		
Florida Atlantic University	50.2	48	2.9	0.4	2.5	0.6	2.7	1.1		
Florida Gulf Coast University	39.1	29	1.3	0.3	1.6	0	0.5	0.2		
Florida International University	76.2	84	1.6	0.5	2.1	0.7	2.3	0.5		
Florida Southern College	32.4	21	2.8	0.3	1.9	0	0	2.4		
Florida State University	49.4	46	5.4	1.1	3.6	1.1	6.2	1.3		
Fordham University	73.4	81	7.6	2.8	4.9	4.6	10.5	5.2		
Fort Lewis College	25.2	12	2.9	1.1	0	0	1.9	0.7		
Fort Valley State University		•	0	0	2.1	1.7	0	0		
Framingham State University	113.1	98	2	0.9	4.7	0	4.7	1.3		
Francis Marion University	82.3	89	2.7	0.3	1.6	0	9.1	0		
Franklin College	7.1	3	4.1	1.5	0	0	0	0		
Franklin University	89.8	92	0.6	0.1	1	0.2	1.6	0		
Franklin and Marshall College	58.5	64	8.7	1.6	13.3	2.3	6	2.3		
Frostburg State University	10.9	5	1.8	0.5	0.2	0.2	0	0		

Institution Name	Educ Inclusio	nomic cation on Index			onomics Afri	s (perce ican	major in nt) Hispanic	
		(II) ⁴¹ Percen			Ame		-	
	tile		М	F	Μ	F	Μ	F
Furman University			6.3	2.6	8.2	1.1	10.3	2
George Mason University	44.2	36	5.6	1.5	3.8	1.2	4.5	1.5
George Washington University	49.5	46	8.7	3.1	4.1	3.8	7.7	2.9
Georgetown University	48.9	45	10.9	4.5	4.1	2.8	10.9	4.3
Georgia Southern University	73.8	82	0.4	0	0.6	0.3	0.4	0
Georgia State University	76.8	85	3.5	1.3	3.9	1.2	5.4	1.8
Gettysburg College	25.4	13	13.3	2.5	4.3	0	10	0
Gonzaga University	55.3	59	3.9	1.3	5.4	0	1.8	2.3
Gordon College	70.4	79	3.2	0.8	7.1	0	3.4	0
Goucher College	26	14	4.8	1.6	0	4.6	0	0
Grand Valley State University	38.9	28	0.6	0.2	0.3	0	0.7	0
Grinnell College	51.1	50	13.4	2.2	14	4	10.5	3.6
Guilford College	58.5	64	3.9	0.5	3.9	0.5	6.4	0
Gustavus Adolphus College	8.2	4	7.8	1.1	2.1	0	0	0
Hamilton College	22.2	9	24.2	5.3	7.3	0	12.9	1.2
Hamline University	31.6	19	6.4	1.7	3.8	0	4.5	0
Hampden-Sydney College			20.5	•	22.4	•	9.5	•
Hanover College	17.5	6	8.6	1.3	6.2	0	0	0
Hardin-Simmons University	30.5	18	6.3	1.3	0	0	8.3	0
Hartwick College	61.9	69	4.4	0.3	10	0	3.2	0
Harvard University	52.9	54	15.1	4.8	12.7	4.4	12.9	5.1
Hastings College	47	41	3.8	1.1	0	0	7.7	0
Haverford College	28.3	15	16.2	3.6	2.5	1.6	13.7	1.5
Hendrix College	69.2	77	10.4	2.9	13.3	7.1	12.5	0
Hobart William Smith Colleges	33.8	22	16.3	6	3.8	2.3	12.8	2.6
Hofstra University	35.3	24	1.7	0.3	2.2	0	0	0.5
Hope College	6.3	3	1.8	0.6	0	0	0	0
Howard University			0	0	3.4	1.1	0	0
Humboldt State University	46.3	39	1.3	0.8	0	0	1.9	0.3
Idaho State University	48.4	44	1.2	0.3	0	0	2.7	0
Illinois College	123.5	98	4.1	2.1	10	0	0	13.3
Illinois State University	59.3	66	2	0.2	2.4	0.5	2.5	0.3
Illinois Wesleyan University	35.3	24	5.8	1.8	4.3	4.1	0	0
Indiana University of Pennsylvania-Main Campus	50.7	49	2	0.7	1.1	1.3	1.2	0.7
Indiana University-Bloomington	29.6	16	3.5	0.5	0.8	0.4	3.2	0.3
Indiana University-Purdue University-Indianapolis	55.1	58	1.3	0.1	2.1	0.1	0.8	0.2
Indiana Wesleyan University-Marion	1.7	1	0.6	0.1	0	0	0	0
Iona College	68.7	76	1.3	0.7	1.2	1.2	1.1	0

	Edu	nomic cation	Rates at which students ma economics (percent)							
Institution Name		on Index CII) ⁴¹	WI	nite	Afri Ame		Hisp	oanic		
	Value	Percen tile	М	F	Μ	F	М	F		
Iowa State University	62.3	70	0.8	0.3	1.1	0.4	0.8	0		
Ithaca College	90.5	92	1.4	0.3	2.8	2.2	0.7	0.5		
Jacksonville State University	19.2	7	1.7	0.3	1.2	0.1	0	0		
Jacksonville University	20.1	8	2.5	0.7	0.5	0.2	1.2	0		
James Madison University	55	58	1.7	0.3	1.1	0.2	2.9	0		
John Carroll University	56.3	60	2.5	0.9	0	1.2	3.5	1.5		
Johns Hopkins University	19.4	7	12.1	2.6	2.5	0.7	4.1	1.7		
Kalamazoo College	35.9	25	14.1	3.7	3.6	3	13.2	1.9		
Kansas State University	19	7	3.4	1	0.8	0	0.9	0.6		
Kean University	143.7	99	0.6	0.2	2.1	0.3	1.3	0.3		
Keene State College	29.9	17	3.3	0.3	0	0	4.7	0		
Kenyon College	49.6	46	16.5	4.1	23.3	2.9	8.8	1.7		
Knox College	58.2	63	10.6	4.6	6.9	2.1	7.5	9.7		
LIU Post	124.6	98	0.8	0.2	2.3	0	2.6	0		
La Salle University	24.1	11	1.9	0.7	0	0.4	1.2	0		
Lafayette College	78.7	87	22.8	15	27.4	7.3	27.4	12.8		
Lake Forest College	68.2	76	10.5	7	11.8	0	14.3	2.6		
Lawrence University	29.1	16	8.2	1.6	4.8	0	5.6	0		
Le Moyne College	5.3	3	2.3	0.6	0	0	0	0		
Lebanon Valley College	8.8	4	4.5	2	0	0	0	0		
Lewis & Clark College	77.5	86	5.7	2.3	8	4	6.8	1.1		
Linfield College-McMinnville Campus	47.7	42	8.1	3.4	7.1	0	5.7	3.1		
Longwood University	69.3	77	2.8	0.4	0	0.6	8.7	0		
Louisiana State University and Agricultural & Mechanical College	52.5	53	0.5	0.1	0.7	0	0.3	0.2		
Loyola Marymount University	75.2	83	3.8	1.7	5.4	0.4	5.6	1.3		
Loyola University Maryland	59.5	66	2.6	0.4	2	0.8	4.5	0		
Luther College	55.1	58	3.3	0.8	0	8.3	0	0		
Lycoming College	79	87	5.9	2	4.8	5.3	11.1	0		
Lynchburg College	47	40	4.4	1.4	4.3	1.6	0	3		
Macalester College	49.9	47	11.4	3.8	13.6	0	10	1.1		
Manhattan College	52.1	52	1.7	0.9	0	0	2.8	0.8		
Marist College	24.4	11	1.8	0.3	0	0.9	0.6	0.4		
Marquette University	30.7	18	2.3	0.4	0.9	0.5	0.8	0.9		
Massachusetts Institute of Technology	80.7	88	3.1	2.2	4.6	1.6	2.6	1.6		
McDaniel College	1	1	5	0.3	0	0	0	0		
McKendree University	27.2	14	4.1	1.6	3.4	0.7	0	0		
Mercer University	25.1	12	3.2	0.9	1	0.2	1.9	0		
Meredith College		•	·	1.2		1.1	•	1.9		

	Edu	nomic cation	Rates at which students major in economics (percent) African						
Institution Name		on Index CII) ⁴¹	Wł	nite	Afri Ame		Hisp	anic	
	Value	Percen tile	М	F	М	F	М	F	
Merrimack College	38.4	27	3.3	0.9	2.5	0	1.6	1.3	
Metropolitan State University	47.8	42	1	0.2	1.4	0.2	0.6	0	
Metropolitan State University of Denver	28.9	15	1.1	0.2	0	0.5	0.6	0.2	
Miami University-Oxford	42.3	34	2.3	0.3	0.3	0.2	4	0	
Michigan State University	57.8	62	3.4	0.5	3.8	0.9	4.4	0.3	
Michigan Technological University	20.4	8	0.6	0.6	0	0	0	0	
Middle Tennessee State University	35.6	25	0.8	0.2	0.6	0.1	0.4	0.3	
Middlebury College	41.4	32	22.2	7.3	11.8	3	16.5	7.3	
Millersville University of Pennsylvania	99.4	94	2.1	0.5	4	0	5.4	0.5	
Mills College				5.1		6.7		4.6	
Millsaps College	42	33	4.7	1.7	8.1	0	0	0	
Minnesota State University Moorhead	58.7	65	1.4	0.2	1.4	2.3	0	0	
Minnesota State University-Mankato	39.9	30	2.5	0.3	2.2	0.7	1.7	0	
Mississippi State University	62.6	70	0.5	0.1	0.4	0.1	0.9	0	
Missouri State University-Springfield	46.9	40	1.1	0.3	0.6	0	0	1.7	
Missouri University of Science and Technology	122.1	98	1.2	0.7	1.3	3.1	2.3	0	
Missouri Western State University	25.3	13	3	0.7	2.1	1	0	0	
Monmouth College	30.2	17	4.6	2.6	0	1.9	0	2.5	
Montana State University	62.2	69	1.1	0.8	0	0	1	1.7	
Montclair State University	70.2	78	0.7	0.2	0.9	0.5	0.6	0.4	
Moravian College	30.6	18	5.6	1.3	0	0	5	2.2	
Morehouse College			16.7		5.7		0	•	
Mount Holyoke College				2.8		2.2		1.4	
Mount St Mary's University	54.6	57	4.5	0.7	3.6	0	5.9	2.1	
Muhlenberg College	53.8	56	6.3	1.4	6.1	2.1	5.7	1.0	
Murray State University	48.1	44	0.7	0.2	0	0	0	1.6	
Nazareth College	59.4	66	3.3	0.9	0	0	9.1	0	
Nebraska Wesleyan University	70.7	79	3.4	0.1	0	0	11.8	0	
New Jersey City University	211.2	100	0.5	0.5	1.9	0.5	1.9	0.5	
New Mexico State University-Main Campus	65.2	73	1.2	0.4	0.6	1.8	0.8	0.4	
New York University	60.5	68	7.6	3.4	5.8	2	7.7	4.2	
North Carolina A & T State University	41.2	32	4.5	0	2.5	1.2	1.8	3.9	
North Central College	42.1	34	7.7	1.8	2.1	4.8	5.7	1.8	
North Dakota State University-Main Campus	17.4	6	4.3	0.9	2.8	0	0	0	
Northeastern Illinois University	51.8	52	4.9	1.6	4.7	1.2	4.1	1.2	
Northeastern University	75.3	84	3	1.5	3.5	2.1	2.8	1.3	
Northern Arizona University	24.3	11	0.2	0	0	0	0.2	0	
Northern Illinois University	60.6	68	2.9	0.5	3.3	1.1	3.1	0.8	

	Educ	nomic cation on Index	Rates at which students maj economics (percent)					-		
Institution Name		II) ⁴¹	WI	nite	Ame		Hisp	anic		
	Value	Percen tile	М	F	Μ	F	Μ	F		
Northern Michigan University	24.7	12	2.3	0.5	0	0	2.4	0		
Northwestern University	39	29	19.1	7	8.7	1.7	16.4	3.4		
Oakland University	110.9	97	0.7	0.2	1.4	0.2	1.2	0.6		
Oberlin College	32.3	20	8.4	1.7	2.7	1.9	5.6	1.6		
Occidental College	49.1	46	22.5	7.4	19.5	10.2	14.4	3.7		
Oglethorpe University	38.7	28	7.1	1.7	9.3	2.7	0	0		
Ohio State University-Main Campus	67.8	76	4.5	1.2	7.1	1.5	4.7	0.7		
Ohio University-Main Campus	41.3	32	1	0.1	0.3	0.2	1.5	0		
Ohio Wesleyan University	42	33	5.3	1.5	6.5	0	0	3.2		
Oklahoma State University-Main Campus	43.5	36	1.9	0.9	1.9	0	0.3	1.1		
Olivet Nazarene University	7.7	4	4.4	0.5	1.2	0	0	0		
Oregon State University	92.8	93	1.9	0.7	2.7	0	3.5	1.9		
Otterbein University	54.3	57	2	0.4	0	0	5	0		
Pace University-New York	70.5	79	1.3	0.7	1.3	0.2	1	1.4		
Pacific Lutheran University	56.1	60	4.5	1.3	3.4	2.1	5.1	0.8		
Pennsylvania State University-Main Campus	75.1	83	3.2	1	4.5	1.1	4	1.6		
Pepperdine University	39.1	29	10.5	1.9	8.1	3.1	6.5	0.9		
Pitzer College	35.1	23	11.2	2	0	6.1	7.5	4		
Point Loma Nazarene University	84	90	1.1	0.6	0	0	3	0.8		
Pomona College	51.5	51	16.9	7.2	18.6	2.4	13.9	1.4		
Portland State University	78.2	86	2.2	0.7	3.2	1.3	2.8	0.8		
Princeton University	60.5	68	12.4	5.3	6.5	2.7	16.7	6.2		
Providence College	53.6	55	5.2	1.7	6.4	2.5	1.4	1.8		
Purdue University-Calumet Campus	85.2	90	1.3	0.5	3	0.4	1.3	0.2		
Purdue University-Main Campus	58.4	64	2.8	1.1	2.4	0.7	3.2	0.6		
Quinnipiac University	25.9	14	3.4	0.6	1.1	0	2.3	0.4		
Radford University	101.8	95	1.9	0.2	3.8	0	4.4	1.5		
Ramapo College of New Jersey	68.8	77	0.8	0.2	0	0	2.2	0.2		
Randolph-Macon College	50.2	47	18.9	5.9	17.4	3.9	15	5.3		
Reed College	73.7	82	6.7	1.6	6.7	5.3	8	3.2		
Regis University	6.2	3	1.8	0.1	0	0	0.4	0		
Rhode Island College	90.2	92	1.2	0.2	3.4	0.5	1.5	0		
Rhodes College	78.8	87	8.1	4.7	7.9	3.2	12	4		
Rice University	64.7	72	11.8	5.4	13.3	4.3	8.6	6.6		
Ripon College	7.9	4	6.7	2.6	0	0	0	0		
Roanoke College	176.4	100	3.1	0.6	13.6	4	6.7	2.6		
Robert Morris University	72	80	1.2	0.4	0	0.9	3	0		
Rochester Institute of Technology	29.1	16	0.6	0.2	0.7	0	0	0		

Institution Name	Educ Inclusio	nomic cation on Index	F Wł	ec	which stores onomics Afri	(percer	major in nt) Hispanic	
institution Name	(EE	CII) ⁴¹ Percen	VV I	nte	Ame	rican	nisp	ame
	Value	tile	Μ	F	Μ	F	Μ	F
Rockhurst University	51.9	52	7	1	0	2.7	11.9	2.4
Rollins College	52.5	53	19.3	4.3	22.4	4.9	15.8	3.1
Roosevelt University	23.8	10	1.7	0.4	0.5	0.3	0.5	0.2
Rowan University	49.9	47	1.5	0.3	1.6	0.2	1.5	0.2
Rutgers University-Camden	111.3	97	4	1	11.8	1.4	7.3	0.9
Rutgers University-New Brunswick	47.6	42	6.3	1.3	4.3	1.3	6.8	1.2
Rutgers University-Newark	76.5	85	3	0.8	4.1	2.2	3.3	1.2
SUNY Buffalo State	99.9	94	3.2	0.5	8.5	1.5	3.4	2
SUNY College at Cortland	60.7	68	4.2	1.2	5.6	2.1	2.3	1.5
SUNY College at Geneseo	36	26	4.3	0.9	2.8	0	4.2	0
SUNY College at Oswego	79.9	88	1.3	0.6	2.1	1.1	1.6	0
SUNY College at Plattsburgh	134.3	99	1.2	0.1	4.6	0	3.2	0
SUNY at Albany	61.4	69	8	1.6	9.6	2.7	8.2	2.4
SUNY at Binghamton	65.9	74	8.6	2.9	7.8	4	9.8	3.8
SUNY at Fredonia	22.9	9	1.7	0.6	1.3	0	0	0
SUNY at Purchase College	76.3	85	2.4	0.5	2.8	1.1	3.5	1.1
Sacred Heart University	52.7	54	4.6	0.8	4.6	3	3.1	0.5
Saint Ambrose University	19	7	2.2	0.4	0	0	1.7	0
Saint Cloud State University	108.7	96	1.2	0.3	3.4	0	2.1	0.8
Saint Edward's University	11.5	5	2.3	0.2	0	0	0.8	0.3
Saint John Fisher College	48.6	44	2.7	0.4	0	0.9	5.1	0
Saint Johns University (MN)			5.7		0		2.1	
Saint Joseph's University	23.1	9	3.9	0.8	1	0.4	2.3	0
Saint Mary's College of California	25.9	13	5.8	1.6	3.3	0	2.6	0
Saint Michael's College	9.8	5	4.9	2.4	0	0	0	0
Saint Norbert College	29.2	16	6.2	0.7	0	0	8.3	0
Salem State University	52.8	54	1.6	0.3	1.1	1.2	1.4	0.2
Salisbury University	58.6	64	1.8	0.2	1.7	0.4	2.4	0.5
Salve Regina University	40	30	4.9	0.4	0	0	4.8	4.5
San Diego State University	54	56	5.1	1.1	3.9	1.8	5	1.8
San Francisco State University	35.9	25	1.4	0.2	0.9	0.5	0.7	0.2
San Jose State University	49	46	2.6	0.3	3.6	0.9	1.5	0.2
Santa Clara University	60.9	69	7.2	4.2	3.9	3.4	8.2	2.3
Scripps College			0	4.8	•	4.9		8.3
Seattle Pacific University	113	98	3.5	2.9	9.7	2.5	3.2	1.8
Seattle University	58.3	63	3	1.3	2.5	0.6	2.4	2
Seton Hall University	68.8	77	1.3	0.5	1	0.6	1.7	0.7
Sewanee-The University of the South	59.1	66	17	6.1	17.2	18.2	5.6	3.1

	Edu	nomic cation on Index	Rates at which students major in economics (percent)						
Institution Name		EII) ⁴¹	Wł	nite	Ame		Hisp	anic	
	Value	Percen tile	М	F	Μ	F	Μ	F	
Shepherd University	53.1	54	2.8	1	3.4	0	3	0	
Shippensburg University of Pennsylvania	5.1	2	1.7	0.4	0	0	0	0	
Siena College	73.4	81	5.7	2.5	9.3	0	9.1	0	
Simmons College		•		1.9		0.6	•	2.3	
Simpson College	5.5	3	4.7	1.3	0	0	0	0	
Skidmore College	48.7	45	8.2	2.1	7.5	4.9	5.4	0	
Smith College				4.3		10.3		4.9	
Sonoma State University	37.1	27	4	0.7	2	0	3.4	1.3	
South Dakota State University	91	93	6.2	2.6	15.6	4.5	5.6	0	
Southeast Missouri State University	58	62	1.1	0.2	0.4	0	2.4	0	
Southern Connecticut State University	41.3	32	1.1	0.2	0.6	0.5	0.9	0.2	
Southern Illinois University-Carbondale	45.2	38	1.8	1.3	1.6	0.2	0.5	0.5	
Southern Illinois University-Edwardsville	92.9	93	0.5	0.1	0.4	0.3	1.4	0	
Southern Methodist University	54.3	57	15	2.7	14.1	3.3	16.6	4	
Southern New Hampshire University	33.2	22	2.1	0.5	1.7	1.4	0	0	
Southern Oregon University	43	35	2.6	0.2	2.5	0	2.2	0.6	
Southern Utah University	16	6	2.3	0.4	0	0	1.4	0	
Southwestern University	73	81	5.6	1.5	8.3	4	5.2	1.3	
Spelman College						8		0	
St Catherine University			0	2.1	0	0		5.4	
St Francis College	47.4	42	3.6	2.8	1.7	1.2	2.3	0.4	
St John's University-New York	65.4	74	1.7	0.5	2.1	0.8	1.9	0.4	
St Lawrence University	47	41	19.5	5.6	21.7	2.9	10.8	4.8	
St Mary's College of Maryland	66.5	75	17.5	6.2	18.2	3.8	28.1	1.8	
St Mary's University	79.6	87	2.3	0.4	6.7	0	1.3	0.8	
St Olaf College	35.3	23	15.8	5.3	10.3	3.7	5.1	3.6	
Stanford University	53.6	55	6.9	2.8	4.2	1.7	6.9	2.8	
State University of New York at New Paltz	48	43	1.3	0.4	0.9	0.4	1.1	0.3	
Stockton University	74.5	83	1	0.1	1.8	0.8	0.8	0.2	
Stonehill College	31	18	5.2	1.6	2.1	0	4.3	0	
Stony Brook University	56.8	61	5.5	1.3	5.5	2.3	5.5	1	
Suffolk University	59.1	66	2.4	0.6	2.2	0.6	3.2	0.6	
Susquehanna University	47.9	42	4.7	1	7.7	0	2.6	0	
Swarthmore College	46.4	39	19.7	5.6	8.6	7.7	13.3	10.6	
Syracuse University	73.6	81	5.1	0.9	7.2	1.1	6.9	2.7	
Tarleton State University	16	6	3.1	0.8	0.4	0	1.3	0	
Temple University	40.3	31	1.9	0.3	1.8	0.4	1.2	0.3	
Texas A & M University-College Station	50.4	48	4.7	1.5	3.1	1.6	4.4	1.3	

	Edu	nomic cation on Index	F		which s conomics	(perce	-	n
Institution Name		CII) ⁴¹	Wł	nite	Afri Ame		Hisp	anic
	Value	Percen tile	М	F	Μ	F	Μ	F
Texas Christian University	43.5	36	6	0.7	5.1	1.2	4.7	1.3
Texas State University	57.2	61	0.6	0.1	0.8	0.2	0.5	0.1
Texas Tech University	32.3	20	5.4	1.2	2.8	0.9	2.9	1
The College of New Jersey	36.3	26	1.9	0.6	0.9	0	2	0
The College of Wooster	32.1	20	8.4	1.7	3.3	1.1	3.8	3.6
The New School	23.4	10	1.2	0.3	0	1.1	0	0
The University of Montana	93.1	93	1.7	0.4	0	5	1.5	1.1
The University of Tampa	102.2	95	1.5	0.6	4.8	0	2.2	0.2
The University of Tennessee-Chattanooga	26.7	14	1.4	0.3	1.6	0	0	0
The University of Tennessee-Knoxville	94.4	94	1.6	0.3	3.9	0.7	1.3	1.1
The University of Texas Rio Grande Valley	19.4	7	1.2	0.4	0	0	0.5	0.2
The University of Texas at Arlington	35.1	23	2.6	0.4	1.7	0.2	1.9	0.3
The University of Texas at Austin	46.8	40	6.1	1.4	4.8	1.3	5.4	1.3
The University of Texas at Dallas	64.6	72	3.2	1	4.4	1.7	2.8	0.4
Tougaloo College	51.3	50	50	0	20.3	8	100	0
Towson University	59.2	66	3.4	0.5	4	0.7	3.9	0.9
Transylvania University	4	2	5	1	0	0	0	0
Trinity College	33	21	27.1	8	9.1	5.4	16.5	5.6
Trinity University	46.5	40	11.3	2.8	5.6	9.1	5.1	3.7
Truman State University	36.3	26	3.1	0.7	2.3	0	1.7	1
Tufts University	48	43	16.3	5.8	8.3	5.4	14.6	5
Tulane University of Louisiana	56.8	61	5.7	2.6	3.6	0.4	8.2	1.4
Union College	32.3	20	22.1	4.8	7	1.7	16.4	5.7
Union University	29	15	2.2	0.3	0	0	0	2.9
United States Air Force Academy	62.9	70	6.6	3.4	4.8	2	6.9	3.7
United States Military Academy	55.5	59	7.6	2.9	5.3	5.9	4.9	2
United States Naval Academy	83.9	90	13.2	6.4	19.3	4.8	16.5	8.6
University at Buffalo	83.5	89	2.5	0.7	3.5	1.9	3.3	1.2
University of Akron Main Campus	42.7	34	0.6	0.2	1.1	0	0	0
University of Alaska Anchorage	59.9	67	2.5	1	2.2	0	2.8	1.6
University of Alaska Fairbanks	72.2	80	1.3	0.8	0	0	3.8	0
University of Arizona	53.7	55	3.4	0.7	3.8	1.2	2.8	0.7
University of Arkansas	48.9	45	1	0.2	0.9	0.3	0.5	0.4
University of California-Berkeley	38.7	28	5.5	2.1	2.3	1	4.1	1.2
University of California-Davis	54.1	56	8.1	2.1	9.1	1.9	6.7	2
University of California-Irvine	58.5	64	4	1.4	4.5	1.1	3.5	1.3
University of California-Los Angeles	65.1	73	6.7	5	3.5	3.7	4.6	5
University of California-Merced	78.2	86	3.7	1.4	2.4	3.2	5.5	2

	Educ	nomic cation	F		conomics	(perce	ts major in cent)		
Institution Name		on Index CII) ⁴¹	Wł	nite	Afri Ame		Hisp	anic	
	Value	Percen tile	М	F	М	F	М	F	
University of California-Riverside	89.8	92	3.6	1.8	6.3	2	4.2	1.7	
University of California-San Diego	55.9	59	7	2.7	7.4	1.2	6.1	2.2	
University of California-Santa Barbara	35.6	24	8.7	2.7	4.5	1.1	5.4	1.8	
University of California-Santa Cruz	65.3	73	4	1.8	3.7	1.7	3.9	1.8	
University of Central Arkansas	26	14	2.2	0.4	1	0.2	1.3	0	
University of Central Florida	52.1	52	0.6	0.1	0.7	0.1	0.5	0.2	
University of Central Missouri	32.4	21	1.1	0.2	0.4	0	1.2	0	
University of Chicago	39.5	29	22.5	7.4	10.8	2.3	18.9	5	
University of Cincinnati-Main Campus	51.3	50	1.9	0.4	1.5	0.7	1.5	0.7	
University of Colorado Boulder	48.1	43	7.3	1.9	5.2	2	6.7	1.7	
University of Colorado Colorado Springs	79.9	88	2	0.5	3.1	0	3.5	0.8	
University of Colorado Denver/Anschutz Medical Campus	59.7	67	3.2	0.7	3.8	0.4	3.6	1	
University of Connecticut	66.7	75	10.3	2.2	14.3	3.8	10.7	3.3	
University of Dallas	102.4	95	13.5	4	50	0	10.6	4.6	
University of Dayton	109.1	97	0.7	1.1	0	0.8	1.1	1	
University of Delaware	42	33	5	0.9	3.4	0.9	4.3	0.9	
University of Denver	46.1	39	2.2	0.8	2.3	0.9	1.1	0	
University of Detroit Mercy	22.7	9	2.6	0.4	2.1	0.5	0	0	
University of Florida	50.9	49	6	2.1	3.7	1.6	5.8	2.1	
University of Georgia	38	27	2.4	0.7	1.6	0.8	1.2	0.2	
University of Hawaii at Hilo	83	89	1.3	0.6	5	0	0	0	
University of Hawaii at Manoa	69.9	78	4.4	0.7	6.2	2.9	4.7	0.9	
University of Houston	58.7	65	4.4	0.8	5.8	1.7	3.5	1.1	
University of Idaho	58	62	0.5	0.3	0	0	0.7	0.3	
University of Illinois at Chicago	64.6	72	3	1	3.5	1.4	2.7	1.1	
University of Illinois at Urbana-Champaign	31.2	19	8.3	2.5	2.9	1.4	4.5	1.6	
University of Iowa	45.5	38	6	1.3	4	1.6	5.6	1.2	
University of Kansas	65.8	74	4.3	0.6	5.6	2.2	4	1.5	
University of Kentucky	58.2	63	6.3	1.5	8.2	2.7	4	1.9	
University of Louisville	87.5	91	0.4	0.2	0.4	0	1	0.4	
University of Maine	73.4	81	2.9	0.7	1.5	4	2.1	2.2	
University of Mary Washington	50.5	49	5.7	1.6	4.3	2.8	3.7	2	
University of Maryland-Baltimore County	73.9	82	7	2.2	9.6	3.2	8.6	2.3	
University of Maryland-College Park	73.7	82	7.8	2.2	8.7	3.6	11.3	2.8	
University of Massachusetts-Amherst	69.2	77	8.1	1.8	12.9	4.3	6.8	2.2	
University of Massachusetts-Boston	77.8	86	5.2	1.3	9.9	1.4	5.8	1.6	
University of Massachusetts-Dartmouth	69.4	78	1.8	0.5	3.2	0	1.8	0.6	
University of Massachusetts-Lowell	128.9	99	1.1	0.4	1.3	1.5	3.1	1	

	Edu	nomic cation on Index		ec	onomics			
Institution Name		II) ⁴¹	W	hite		rican	Hisp	oanic
	Value	Percen tile	М	F	Μ	F	Μ	F
University of Memphis	33	22	0.9	0.1	0.6	0.1	0.7	0
University of Miami	54	56	5.5	2.2	2.9	1.8	6	2
University of Michigan-Ann Arbor	49.7	47	8	2.6	4.5	0.9	8.6	3.2
University of Michigan-Dearborn	75.8	84	3.1	0.5	6	1.3	4.1	0
University of Michigan-Flint	46.6	40	2	0.3	1.4	0	3	0
University of Minnesota-Duluth	56.2	60	2.4	0.5	0	2.7	3.6	0
University of Minnesota-Morris	54.2	56	5	1.9	0	0	11.8	0
University of Minnesota-Twin Cities	50.3	48	4.5	1.2	4.4	1.4	3.2	1.
University of Mississippi	57.4	62	0.4	0.2	0.2	0.1	0.8	0
University of Missouri-Columbia	31.2	19	1.9	0.4	1	0	1.4	0.
University of Missouri-Kansas City	105.7	96	1.8	0.5	3.7	0.3	3.9	1
University of Missouri-St Louis	51.1	50	2.4	0.5	2.1	0.5	3.1	0
University of Mount Union	3.5	1	2.2	0.4	0	0	0	0
University of Nebraska at Omaha	80.3	88	0.4	0.1	0.5	0.4	0.6	0
University of Nebraska-Lincoln	32.6	21	2.7	0.6	1.5	0	2.3	C
University of Nevada-Las Vegas	51.6	51	2.1	0.6	1.9	0	2.5	0.
University of New Hampshire-Main Campus	41	31	2.5	0.7	3.6	0	0.8	C
University of New Mexico-Main Campus	54.7	57	2.8	0.7	2.8	1	2.6	0.
University of North Carolina Wilmington	36	25	0.9	0.2	0	0	1.2	0.
University of North Carolina at Asheville	56.7	60	3.2	1.4	3	0	4.7	C
University of North Carolina at Chapel Hill	42	33	14	3.3	8.4	1.7	12.7	3.
University of North Carolina at Charlotte	59.6	67	0.8	0.3	0.7	0.4	0.9	0.
University of North Carolina at Greensboro	52.7	53	2	0.3	1.2	0.3	2.7	0.
University of North Dakota	30.4	17	0.9	0.1	1.3	0	0	C
University of North Florida	44.2	37	1.2	0.4	0.6	0.4	1	0.
University of North Texas	50.9	49	1.2	0.5	1.3	0.3	1.1	0.
University of Northern Colorado	22	9	2	0.3	0.8	0	0.9	0.
University of Northern Iowa	23.3	10	2.6	0.6	0	1	0	1.
University of Notre Dame	32.6	21	9	3.9	1.9	1.3	6.4	1.
University of Oklahoma-Norman Campus	68.2	76	1.3	0.5	1	0.9	1.5	0.
University of Oregon	47	40	7.2	1.1	4.5	0.6	8.5	2.
University of Pennsylvania	43.2	35	8.6	3.3	4	2.4	5.4	3.
University of Pittsburgh-Pittsburgh Campus	53.6	55	5	1.7	5.1	2.1	2.7	1.
University of Portland	148.6	100	1.1	0.5	5.3	0	2	0.
University of Puget Sound	25.5	13	9.4	2.6	5.3	0	3	1.
University of Redlands	19.5	8	3.9	1	0	0	2.2	0.′
University of Rhode Island	51.8	51	4	0.6	3	0.9	4.9	0.3
University of Richmond	52.1	52	6.5	2.6	1.6	1.4	7.1	4.2

Tearth dans North	Edu	nomic cation on Index		economic		students major in cs (percent) rican		
Institution Name	(EE	CII) ⁴¹	W	nte	Ame	rican	Hisp	anic
	Value	Percen tile	М	F	Μ	F	Μ	F
University of Rochester	53.6	55	11	2.6	11.8	2.2	9.7	3.1
University of San Diego	42.3	34	3.6	0.6	1.3	2.2	2.8	0.7
University of San Francisco	59.5	67	4.6	1.6	4.5	0.7	4.3	2.3
University of Scranton	25.6	13	1.6	0.2	0	0	1.8	0
University of South Carolina-Columbia	51.4	51	2.3	0.2	2.7	0.4	2.2	0.4
University of South Dakota	48.3	44	3.4	0.7	4	0	3.6	0
University of South Florida-Main Campus	64.4	72	2	0.5	3	0.6	2	0.5
University of South Florida-St Petersburg	84.7	90	1.7	0.4	3.2	0.7	2.6	0
University of Southern California	64.1	71	4.4	1.6	4.6	1.9	4.5	1.7
University of Southern Indiana	58.8	65	1.5	0.2	1.1	0	3	0
University of Southern Maine	56.9	61	2.7	0.4	4.3	0	2.9	0
University of St Thomas	105.9	96	1.5	1.9	0	0	1.7	4.3
University of St Thomas	45.6	38	4.4	2.2	2.9	1.2	2.9	0.8
University of Toledo	63	70	0.7	0.1	0.8	0	0.9	0.4
University of Tulsa	85.8	90	3.2	1.6	0	1.5	9.2	1.5
University of Utah	65.6	74	6.5	1.6	8.4	2.5	6.9	1.8
University of Vermont	104.1	96	4.8	2.3	12.3	2.4	6.9	1.3
University of Virginia-Main Campus	44.3	37	13.7	5.2	4.6	1.5	12	7.1
University of Washington-Seattle Campus	34.3	22	3.8	1.3	2.1	0.6	2.2	0.4
University of West Georgia	75.1	83	3	0.6	1.4	0.7	7.4	1.2
University of Wisconsin-Eau Claire	38.1	27	3	0.6	0	0	5.2	0
University of Wisconsin-Green Bay	79.6	88	2.8	0.3	0	3.7	7.1	0
University of Wisconsin-La Crosse	66.7	75	3.1	0.7	7	0	2.8	0
University of Wisconsin-Madison	48.6	45	10.4	2.5	7.5	0.5	12.3	2.7
University of Wisconsin-Milwaukee	51.7	51	2.8	0.9	2.5	0.9	2.3	0.8
University of Wisconsin-Oshkosh	39.5	30	5.4	1.1	6	0	3.6	0
University of Wisconsin-Parkside	9.7	5	2.9	0.7	0	0	0.7	0
University of Wisconsin-River Falls	98.7	94	3.7	1.1	10	0	7.1	0
University of Wisconsin-Stevens Point	29.4	16	2.5	0.5	1.8	0	1.5	0
University of Wisconsin-Whitewater	49	45	1.7	0.2	0.7	0	3.2	0
University of the District of Columbia	35.4	24	5.8	5	4.1	1.1	0	0
University of the Pacific	82.5	89	2.9	1.4	6.7	0	3.1	0.9
Ursinus College	39.5	29	25.5	7.1	12.2	7.5	17.9	5.6
Utah State University	47.4	41	5.1	1	5.7	0	5.1	0.4
Utah Valley University	17.9	6	0.3	0	0	0	0.3	0
Valparaiso University	20	8	2.3	1.3	0	0	0	1
Vanderbilt University	42.3	34	23.3	7.5	11.3	1.6	22.9	6
Vassar College	64.4	72	9.9	2.9	12.5	6.1	8.8	1.7

	Edu	nomic cation	F		onomics	(perce	major i nt)	n
Institution Name		on Index CII) ⁴¹	Wł	nite	Afri Ame		Hisp	anic
	Value	Percen tile	М	F	Μ	F	Μ	F
Villanova University	55.8	59	7	2.5	6.1	0	6.7	4.2
Virginia Military Institute	86	91	15.9	1.6	26	20	11.5	9.1
Virginia Polytechnic Institute and State University	71.9	80	2.6	1.2	2.8	1.7	1.8	1.8
Wabash College		•	9.9	·	6.5	•	7.7	•
Wake Forest University	45.7	39	14.1	4.4	7.9	3.3	13.6	3.1
Washington & Jefferson College	79.1	87	9.6	3.6	8.7	5.3	10	10.5
Washington College	63	70	14.9	3.7	10.5	2.7	20	10
Washington State University	58.2	63	2.2	0.3	3.4	0.7	1.5	0.5
Washington University in St Louis	40.7	31	8.5	3.2	6.7	0.7	4.8	1.9
Washington and Lee University	84.9	90	13.9	8	17.9	3.3	15	14.6
Wayne State University	39.5	29	1.5	0.4	0.9	0.3	0.6	0.7
Weber State University	141.6	99	0.4	0.1	0	1.8	1.3	0
Webster University	57.5	62	1	0.2	0	0	1.6	1.1
Wellesley College				10.2		5.7		7.6
Wesleyan University	47.1	41	16.2	4	14.9	3.1	13.5	2.5
West Virginia State University	41.4	32	2.2	2.1	0.7	1.8	0	0
West Virginia University	68.7	76	1.9	0.8	0.8	1.1	2.8	0.9
West Virginia Wesleyan College	13.7	5	4.4	0.9	2	0	0	0
Western Illinois University	76.1	84	0.4	0	0.3	0.2	0.9	0
Western Kentucky University	49.7	47	1.2	0.2	1.5	0.2	1.1	0
Western Michigan University	58.6	64	0.6	0	0.6	0	0.9	0.3
Western Oregon University	30.4	17	2.1	0.1	0	0	2.7	0.3
Western State Colorado University	4.2	2	3.7	0.8	0	0	0	0
Western Washington University	44.5	37	5.6	1.4	4.7	0	4.8	1.7
Westfield State University	24.2	11	3.3	1.1	2	0	0.9	0
Westminster College	3.6	1	4.8	0.9	0	0	0	0
Westminster College	51	50	5.2	1.1	10	0	2.3	0
Wheaton College	44.1	36	18.3	2.7	13.3	4.8	16.7	2.9
Wheaton College	34.2	22	5	1.1	2.7	0	4.8	0
Whitman College	104	96	9.1	4.4	18.2	6.7	16.7	1.3
Whittier College	37.4	27	6.2	2.2	3.2	0	3.6	2.6
Whitworth University	40.6	31	4.3	0.4	8.3	0	0	0
Willamette University	60.5	68	16.4	3.3	26.3	6.2	13.6	0
William Paterson University of New Jersey	64.5	72	1	0.3	0.8	0.1	1.5	0.4
Williams College	44.8	37	23	8.3	20	3.8	16.8	2.6
Winona State University	0.6	1	1.5	0	0	0	0	0
Winston-Salem State University	31.8	20	1.6	0.2	1.9	0.4	0	0
Winthrop University	41.6	33	1.7	0.6	0.3	0.1	0	2.5

Institution Name	Educ	nomic cation on Index CII) ⁴¹			onomics Afri		major in nt) Hispanic	
	Value	Percen tile	М	F	Μ	F	Μ	F
Wittenberg University	36	26	7	1.8	2.4	2.6	5.9	0
Wofford College	51.6	51	6.8	2.3	5.3	0	10	0
Worcester State University	88	91	2	0.4	2.7	0	5.7	0
Wright State University-Main Campus	105.7	96	0.3	0.1	1.4	0.4	0	0
Xavier University	112.9	98	1.3	0.5	2.6	0.4	2.8	0.9
Yale University	57.1	61	16	4.7	18.1	5.8	12.1	4.9
Yeshiva University	165	100	8.2	1.7	50	0	16	0

	Adjusted EEII ⁴² race/ethnicity disparities only	White female rate of majoring in economics (percent)	Black female rate of majoring in economics (percent)	Hispanic female rate of majoring in economics (percent)
Agnes Scott College	159.2	5.0	9.3	6.7
Barnard College	109.7	6.7	8.6	6.1
Bryn Mawr College	104.5	1.8	3.7	0.0
Meredith College	123.9	1.2	1.1	1.9
Mills College	110.3	5.1	6.7	4.6
Mount Holyoke College	62.9	2.8	2.2	1.4
Scripps College	138.3	4.8	4.9	8.3
Simmons College	74.9	1.9	0.6	2.3
Smith College	177.8	4.3	10.3	4.9
Spelman College			8.0	0.0
St Catherine University	128.1	2.1	0.0	5.4
Wellesley College	65.6	10.2	5.7	7.6

Appendix Table 2. Rating the inclusiveness of economics departments at women's colleges, 2011-2015

Appendix Table 3. Rating the inclusiveness of economics departments at men's colleges, 2011-2015

	Adjusted EEII ⁴³ race/ethnicity disparities only	White male rate of majoring in economics (percent)	Black male rate of majoring in economics (percent)	Hispanic male rate of majoring in economics (percent)		
Hampden-Sydney College	77.9	20.5	22.4	9.5		
Morehouse College	17.2	16.7	5.7	0.0		
Saint Johns University (MN)	18.5	5.7	0.0	2.1		
Wabash College	72.0	9.9	6.5	7.7		

Appendix Table 4. Rating the inclusiveness of economics departments at HBCUs, 2011-2015

	Adjusted EEII, ⁴⁴ gender disparities only	Black male rate of majoring in economics (percent)	Black female rate of majoring in economics (percent)
Alcorn State University	28.5	3.7	1.1
Benedict College	113.6	1.9	2.1
Florida Agricultural and Mechanical University	25.5	1.9	0.5
Fort Valley State University	78.5	2.1	1.7
Howard University	31.6	3.4	1.1
Morehouse College		5.7	
North Carolina Agricultural and Technical State University	46.6	2.5	1.2
Spelman College			8.0
Tougaloo College	39.7	20.3	8.0
University of the District of Columbia	27.6	4.1	1.1
West Virginia State University ⁴⁵	-	-	-
Winston-Salem State University	21.6	1.9	0.4

⁴² Higher value indicates more inclusion. Inclusion Index=100*average(bfrate, hfrate)/wfrate

⁴³ Higher value indicates more inclusion. Inclusion Index=100*average(bmrate, hmrate)/wmrate

⁴⁴ Higher value indicates more inclusion. Inclusion Index=100*bfrate/bmrate

⁴⁵ Data on West Virginia State University are suppressed here, but are fully reported in Appendix Table 1, because of the large proportions of white students in the overall BA count and among economics majors specifically.

		EII	Rates at which students major in economic					nics (percent)	
			White		African A	merican	Hispanic		
	Value	Percen tile	М	F	Μ	F	Μ	F	
Amherst College	35.6	25	21.9	7.5	15.7	1.4	11.3	3.2	
Barnard College				6.7	•	8.6	•	6.1	
Bates College	32.2	20	17.6	4	9.8	1.6	8.7	4.3	
Bowdoin College	24.8	12	22.8	5.7	2.7	1.5	14.2	4.3	
Bryn Mawr College	65.9	74	17.6	1.8 8.9	23.3	3.7	16.2	0 3.3	
Bucknell University Carleton College	38	27	11.2	2.7	4.4	6.2 2.6	5.9	5.5	
Centre College	58.7	65	29.4	6.1	42.9	4	33.3	0	
Claremont McKenna	35	23	31.2	10	13	5	13	13.7	
Colby College	24.6	11	24.8	5.8	10.8	0	10.3	3.6	
Colgate University	28.9	15	20.7	8	9	1.4	10.1	1.3	
College of William and Mary	55.3	59	11.9	4.1	14.9	2.6	8.6	2.6	
College of Holy Cross	30.7	18	28.5	10.9	7.1	2.1	17.2	6.3	
Colorado College	63.2	71	22.1	9.3	27.3	13.6	13	6.4	
Connecticut College	58.7	65	23.9	8.2	28.1	4	20.4	9.4	
Dartmouth College	53.1	54	19.9	8.4	13.2	2.2	23.1	5.8	
Davidson College	35.4	24	14.2	5.4	7.9	0	8.9	2.9	
DePauw University	26.6	14	19	4.3	10.8	3	5.4	1.8	
Denison University	42.9	35	27.3	9.2	17.6	6.5	24.1	1.3	
Dickinson College	48	43	11.6	3.3	15.7	4.1	4.8	0	
Franklin and Marshall College	58.5	64	8.7	1.6	13.3	2.3	6	2.3	
Furman University	76.9	85	6.3	2.6	8.2	1.1	10.3	2	
Gettysburg College	25.4	13	13.3	2.5	4.3	0	10	0	
Grinnell College	51.1	50	13.4	2.2	14	4	10.5	3.6	
Hamilton College	22.2	9	24.2	5.3	7.3	0	12.9	1.2	
Haverford College Kenyon College	28.3 49.6	15 46	16.2 16.5	3.6 4.1	2.5 23.3	1.6 2.9	13.7 8.8	1.5 1.7	
Lafayette College	78.7	40 87	22.8	4.1	23.3	7.3	27.4	12.8	
Macalester College	49.9	47	11.4	3.8	13.6	0	10	12.8	
Miami University-Oxford	42.3	34	2.3	0.3	0.3	0.2	4	0	
Middlebury College	41.4	32	22.2	7.3	11.8	3	16.5	7.3	
Mount Holyoke College				2.8		2.2		1.4	
Oberlin College	32.3	20	8.4	1.7	2.7	1.9	5.6	1.6	
Occidental College	49.1	46	22.5	7.4	19.5	10.2	14.4	3.7	
Pitzer College	35.1	23	11.2	2	0	6.1	7.5	4	
Pomona College	51.5	51	16.9	7.2	18.6	2.4	13.9	1.4	
Reed College	73.7	82	6.7	1.6	6.7	5.3	8	3.2	
Rhodes College	78.8	87	8.1	4.7	7.9	3.2	12	4	
Scripps College			0	4.8		4.9		8.3	
Sewanee	59.1	66	17	6.1	17.2	18.2	5.6	3.1	
Skidmore College	48.7	45	8.2	2.1	7.5	4.9	5.4	0	
Smith College				4.3		10.3		4.9	
St Lawrence University	47	41	19.5	5.6	21.7	2.9	10.8	4.8	
St Olaf College	35.3	23	15.8	5.3	10.3	3.7	5.1	3.6	
Swarthmore College Trinity College	46.4 33	39 21	19.7 27.1	5.6 8	8.6 9.1	7.7 5.4	13.3 16.5	10.6 5.6	
Trinity University	46.5	40	11.3	2.8	5.6	9.1	5.1	3.7	
Tufts University	40.5	40	16.3	5.8	8.3	5.4	14.6	5	
Union College	32.3	20	22.1	4.8	7	1.7	16.4	5.7	
University of Richmond	52.1	52	6.5	2.6	1.6	1.4	7.1	4.2	
Vassar College	64.4	72	9.9	2.9	12.5	6.1	8.8	1.7	
Washington and Lee	84.9	90	13.9	8	17.9	3.3	15	14.6	
Wellesley College				10.2		5.7		7.6	
Wesleyan University	47.1	41	16.2	4	14.9	3.1	13.5	2.5	
Whitman College	104	96	9.1	4.4	18.2	6.7	16.7	1.3	
Williams College	44.8	37	23	8.3	20	3.8	16.8	2.6	
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Appendix Table 5. Rating the inclusiveness of economics departments at top LACs, 2011-2015

Institution Name	Edu	nomic cation	Rates at which students major in economics (percent)					
	Inclusion Index (EEII)		White		African American		Hispanic	
	Value	Percen tile	М	F	Μ	F	Μ	F
Boston College	50.3	48	18.4	7.1	11.8	5.1	16.2	6
Boston University	58	63	4.7	1.6	2.4	1.5	5.8	2.3
Brown University	55.2	58	17.3	8.2	13.3	7.4	12.1	6.7
Carnegie Mellon University	71.2	79	3.2	2	2.3	2.6	1.5	3.1
Columbia University	59.8	67	15.3	6.9	12.4	4.5	15	6.8
Cornell University	74.3	83	14.7	6.6	17.4	6.6	18.1	6.1
Duke University	40	30	14.5	4.4	5.6	1.4	11.8	5.8
Harvard University	52.9	54	15.1	4.8	12.7	4.4	12.9	5.1
Indiana University-Bloomington	29.6	16	3.5	0.5	0.8	0.4	3.2	0.3
Johns Hopkins University	19.4	7	12.1	2.6	2.5	0.7	4.1	1.7
Massachusetts Institute of Technology	80.7	88	3.1	2.2	4.6	1.6	2.6	1.6
Michigan State University	57.8	62	3.4	0.5	3.8	0.9	4.4	0.3
New York University	60.5	68	7.6	3.4	5.8	2	7.7	4.2
Northwestern University	39	29	19.1	7	8.7	1.7	16.4	3.4
Ohio State University-Main Campus	67.8	76	4.5	1.2	7.1	1.5	4.7	0.7
Pennsylvania State University	75.1	83	3.2	1	4.5	1.1	4	1.6
Princeton University	60.5	68	12.4	5.3	6.5	2.7	16.7	6.2
Stanford University	53.6	55	6.9	2.8	4.2	1.7	6.9	2.8
Texas A & M University-College Station	50.4	48	4.7	1.5	3.1	1.6	4.4	1.3
The University of Texas at Austin	46.8	40	6.1	1.4	4.8	1.3	5.4	1.3
University of California-Berkeley	38.7	28	5.5	2.1	2.3	1	4.1	1.2
University of California-Davis	54.1	56	8.1	2.1	9.1	1.9	6.7	2
University of California-Los Angeles	65.1	73	6.7	5	3.5	3.7	4.6	5
University of California-San Diego	55.9	59	7	2.7	7.4	1.2	6.1 5.4	2.2
University of California-Santa Barbara	35.6	24	8.7	2.7	4.5	1.1		1.8
University of Chicago	39.5 31.2	29	22.5 8.3	7.4 2.5	10.8 2.9	2.3 1.4	18.9 4.5	5 1.6
University of Illinois, Urbana-Champaign	73.7	19 82	8.5 7.8	2.3	2.9 8.7	3.6	4.5	2.8
University of Maryland-College Park University of Michigan-Ann Arbor	49.7	47	8	2.2	4.5	0.9	8.6	3.2
University of Minnesota-Twin Cities	50.3	47	4.5	1.2	4.4	1.4	3.2	1.1
University of North Carolina, Chapel Hill	42	33	4.5 14	3.3	8.4	1.4	12.7	3.4
University of Pennsylvania	43.2	35	8.6	3.3	4	2.4	5.4	3.4
University of Pittsburgh	53.6	55	5	1.7	5.1	2.4	2.7	1.7
University of Rochester	53.6	55	11	2.6	11.8	2.1	2.7 9.7	3.1
University of Southern California	64.1	71	4.4	1.6	4.6	1.9	4.5	1.7
University of Virginia-Main Campus	44.3	37	13.7	5.2	4.6	1.5	12	7.1
University of Washington	34.3	22	3.8	1.3	2.1	0.6	2.2	0.4
University of Wisconsin-Madison	48.6	45	10.4	2.5	7.5	0.5	12.3	2.7
Vanderbilt University	42.3	34	23.3	7.5	11.3	1.6	22.9	6
Washington University in St Louis	40.7	31	8.5	3.2	6.7	0.7	4.8	1.9
Yale University	57.1	61	16	4.7	18.1	5.8	12.1	4.9

Appendix Table 6. Rating the inclusiveness of economics departments at universities with top PhD programs, 2011-2015