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Minority Groups in the Economics Profession*

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ABSTRACT

The primary objective of this paper is to provide information about minorities (blacks, Hispanics and Native Americans) in economics, at various stages in the education pipeline, and in the labor market. Despite sustained increases in the numbers and percentages of minorities earning bachelors degrees and Ph.D.s, the absolute numbers remain very small -- only about 36 new Ph.D.s per year, including permanent residents. Minority economists are relatively under-represented on four-year college faculties and in government employment. The paper also discusses activities by the AEA's committee on minority groups, aimed at increasing minority representation in the profession.

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I. Introduction

In 1974, the American Economics Association (AEA) established the Committee on the Status of Minority Groups in the Economics Profession (CSMGEP). CSMGEP grew out of discussions between the AEA Executive Committee and members of the Caucus of Black Economists who were extremely concerned about the very small numbers of minority economists (Spratlen, 1970). "Minority" was defined to include three under-represented groups in the profession -- blacks, Hispanics and Native Americans.¹ Then, as now, there were at least two reasons for this concern. First, sound economic analysis benefits from a broader range of perspectives and experiences in the profession. Second, a more diverse faculty in institutions of higher education will provide role models for students and faculty of all races and will help to counter biased perceptions. In its 25-year history, CSMGEP has focused on identifying, training and supporting promising minorities who are interested in pursuing economics Ph.D.s and in becoming professional economists. There is some evidence that these activities have been associated with an increase in minority economists -- but the absolute numbers remain small.

This paper begins by presenting data on the numbers and percentages of minorities at various stages along the educational pipeline, and for doctoral degree holders in the economics profession. It then moves to describing the activities of CSMGEP, focusing on the now 25 year-old Summer Program that seeks to better prepare talented minority undergraduates for doctoral programs and on the Outreach and Mentoring initiatives of the new Pipeline Program.

There is a growing body of work on gender inequalities in economics at the undergraduate and graduate levels, as well as for academic and non-academic employment (Kahn, 1995). In contrast, there is very little systematic literature exploring the reasons for the persistently small

numbers of minority economists.ⁱⁱ It is hoped that this discussion will stimulate future analyses of racial and ethnic differences in the economics profession.

II. Minorities in the Economics Degree Pipeline

I begin with information about blacks, Hispanics and Native Americans along the way to receiving Ph.D.'s in economics. In contrast to other studies that tend to distinguish U.S. citizens from all foreigners, the tables below include permanent residents as well as U.S. citizens where possible. This is because blacks and Hispanics are disproportionately represented among permanent residents - a group more likely than other foreigners to remain in the United States.

In the late 1970s and mid-1980s, roughly 9 percent of B.A.s in all fields were awarded to minority group members; about 6 percent to blacks, less than 3 percent to Hispanics, and half a percent or less to Native Americans. However, by the mid-1990s, the share of total bachelors degrees received by minorities had risen to 12 percent; about 2 percentage points of the increase was due to a rise in the share going to Hispanics, and the remaining percentage point to the share going to blacks (U.S. Department of Education, 1997, Table 265).ⁱⁱⁱ

Table 1 presents the allocation of degrees to minority students by field in 1995, the first year for which such data were available. Economics is similar to the overall average, with 12 percent of economics B.A.'s earned by minorities. This percentage is significantly smaller than the percentage of B.A.s awarded to minorities in political science and sociology, but slightly greater than the share completing degrees in math and engineering.

Table 1. Bachelor's Degrees Awarded by Racial/Ethnic Background, 1995

(U.S. Citizens and Permanent Residents)

| Field | Number of Degrees | | Percent of Total Degrees | | | |
|-------------------|-------------------|----------|--------------------------|-------|----------|-----------------|
| | Total | Minority | Minority | Black | Hispanic | Native American |
| Economics* | 16937 | 2073 | 12.2 | 6.8 | 5.0 | 0.4 |
| Sociology | 22108 | 4951 | 22.4 | 14.5 | 7.1 | 0.8 |
| Political Science | 31814 | 5532 | 17.4 | 9.8 | 6.9 | 0.6 |
| Math | 12988 | 1538 | 11.8 | 7.4 | 4.0 | 0.4 |
| Chemistry | 9446 | 1348 | 14.3 | 7.8 | 5.9 | 0.6 |
| Engineering | 57268 | 6717 | 11.7 | 5.0 | 6.4 | 0.4 |

Source for Bachelor's, all fields:

U.S. Department of Education, National Center for Education Statistics. 1997 Digest of Education Statistics. Table 265, "Bachelor's degrees conferred by institutions of higher education, by racial/ethnic group and sex of student: 1976-77 to 1994-95". p.295.

The survey's used for this include: Higher Education General Information Survey (HEGIS), "Degrees and Other Formal Awards Conferred" surveys, and the Integrated Postsecondary Education Data System (IPEDS), "Completions" surveys. Note- data are missing for years 1978, 1980, 1982, 1983, 1984, 1986, 1988

Source for Bachelor's, various fields, 1995-

Unpublished tabulations by National Science Foundation/SRS;

data from National Center for Education Statistics IPES Completions Surveys available on website

[<http://www.nsf.gov:80/sbe/srs/sedtabs/start.htm>]

*Economics includes agricultural economics

Table 2 provides information about Ph.D.'s awarded in economics.^{iv} To highlight broad trends, and because the totals for minority Ph.D.'s in economics bounce around quite a bit from year to year, these figures are presented as three-year averages. The last three columns of the table give the absolute numbers of Ph.D.'s granted to minorities, because the relevant percentages are quite sensitive to changes in the total number of degrees granted.

Table 2. Representation of Minorities Among Conferred Economics Doctorates

Period Averages

| Year | Total | Total Minority | % Minority | Blacks | Hispanics | Native Americans |
|--|-------|-------------------|---------------|--------|-----------|---------------------|
| <i>U.S. Citizens Only</i> | | | | | | |
| 1976-78 | 537.7 | 11.0 | 2.1 | 7.7 | 2.7 | 0.7 |
| 1979-81 | 482.3 | 18.3 | 3.8 | 7.3 | 9.0 | 2.0 |
| 1982-84 | 451.0 | 19.3 | 4.3 | 11.0 | 8.0 | 0.3 |
| 1985-87 | 429.0 | 16.0 | 3.8 | 6.3 | 8.3 | 1.3 |
| 1988-90 | 412.0 | 20.7 | 5.0 | 10.0 | 10.0 | 0.7 |
| 1991-93 | 380.3 | 20.0 | 5.3 | 12.3 | 7.3 | 0.3 |
| 1994-96 | 408.7 | 22.3 | 5.4 | 12.0 | 10.0 | 0.3 |
| <i>U.S. Citizens and Permanent Residents</i> | | | | | | |
| 1977-78 | 561.5 | 19.0 | 3.4 | 13.0 | 5.5 | 0.5 |
| 1979-81 | 535.7 | 27.0 | 5.0 | 12.7 | 12.3 | 2.0 |
| 1982-84 | 513.3 | 30.7 | 6.0 | 18.3 | 12.0 | 0.3 |
| 1985-87 | 491.0 | 27.3 | 5.6 | 15.0 | 11.0 | 1.3 |
| 1988-90 | 470.3 | 29.7 | 6.3 | 15.7 | 13.3 | 0.7 |
| 1991-93 | 443.3 | 36.3 | 8.2 | 23.3 | 12.7 | 0.3 |
| 1994-96 | 517.7 | 35.0 | 6.8 | 20.3 | 14.3 | 0.3 |

Sources: Affirmative Action Table #3: PhDs Awarded to U.S. Citizens and Permanent Residents by Race/Ethnicity, Gender, Fine Field of Doctorate, and Year, 1977-1996

Affirmative Action table #2: PhDs Awarded to U.S. Citizens by Race/Ethnicity, Gender, Fine Field of Doctorate, and Year, 1976-1996

This is a statistical compilation of data issued by the National Opinion Research Center, Doctorate Data Project.

(NSF/NIH/NEH/USED/USDA, Survey of Earned Doctorates)

Individuals classified as "race/ethnicity unknown" are excluded from these figures.

The top panel of table 2 includes U.S. citizens only. These data show a trend decline in the total number of economics doctorates awarded to Americans since the late 1970s, followed by a partial recovery since 1992. However, the number of economics Ph.D.'s earned by blacks rises from the 1980s to the 1990s, and the number of degrees earned by Hispanics rises from the late 1970s to the 1980s. The number of degrees earned by Native Americans falls slightly in the 1990s.

The bottom panel includes both U.S. citizens and permanent residents. Interestingly, when permanent residents are included, the overall number of Ph.D. degrees granted return in 1995-96 to nearly 95 percent of its 1977-78 high; in other words, declines in economics Ph.D. degrees granted to American citizens have been almost entirely offset by increases in degrees to permanent residents. Indeed, the number of residents receiving economics Ph.D.s has jumped from an average of just 32 per year during 1977-80 to 86 per year during 1991-96. Table 2 also shows that excluding permanent residents from the sample leaves out more than one-third of the total number of economics Ph.D.'s awarded to minority scholars since 1977. However, because of the overall rise in degrees given to permanent residents, minorities are actually a declining share of total permanent residents earning Ph.D.'s.

Including both citizens and residents, the average number of minority individuals awarded economics Ph.D.s has risen from just 19 per year during 1977-78 to more than 35 per year from 1991-96. Again, for Hispanics the numbers achieved since 1979 appear to have been sustained throughout subsequent years. Blacks, on the other hand, seem to have gained in the early 1980s, lost some ground during the second half of the 1980s, and then made additional gains during the 1990s. For Native Americans, a total of eight Ph.D.'s in economics were awarded in the six years from 1976-1981, but only two such degrees were awarded during 1991-96.

Table 3 compares economics with other fields in terms of doctoral degrees for minorities. Minority scholars received nearly 8 percent of the doctorate degrees awarded in all fields during 1988-96, up from 7 percent during 1979-87. The share awarded to minorities in economics in the later period is only slightly below the average among all fields, and has risen relative to the earlier period. As is true for B.A. degrees, a larger share of doctorates are earned by minorities in political

science and sociology than in economics. Minorities are much less well represented among doctoral degree recipients in chemistry, math and engineering, although there have been gains in chemistry and engineering.^v

Table 3. Ph.D.s Awarded in Various Fields, by Racial/Ethnic Background, Annual Averages: 1979-87 and 1988-96

(U.S. Citizens and Permanent Residents)

| | Number of Degrees | | Percent of Total Degrees | | | |
|--------------------------|-------------------|----------|--------------------------|-------|----------|----------|
| | Total | Minority | Minority | Black | Hispanic | American |
| All PhDs | | | | | | |
| 1979-87 | 24728 | 1738 | 7.0 | 4.2 | 2.4 | 0.4 |
| 1988-96 | 27948 | 2232 | 7.9 | 4.3 | 3.2 | 0.5 |
| Economics | | | | | | |
| 1979-87 | 513 | 28 | 5.6 | 3.0 | 2.3 | 0.2 |
| 1988-96 | 477 | 34 | 7.1 | 4.2 | 2.8 | 0.1 |
| Sociology | | | | | | |
| 1979-87 | 441 | 41 | 9.4 | 5.7 | 3.4 | 0.4 |
| 1988-96 | 364 | 46 | 12.9 | 7.2 | 5.1 | 0.7 |
| Political Science | | | | | | |
| 1979-87 | 332 | 31 | 9.4 | 6.2 | 3.0 | 0.1 |
| 1988-96 | 366 | 37 | 10.1 | 6.5 | 3.2 | 0.4 |
| Math | | | | | | |
| 1979-87 | 461 | 17 | 3.8 | 1.7 | 2.0 | 0.2 |
| 1988-96 | 536 | 19 | 3.6 | 1.3 | 2.1 | 0.2 |
| Chemistry | | | | | | |
| 1979-87 | 1331 | 45 | 3.3 | 1.4 | 1.7 | 0.2 |
| 1988-96 | 1461 | 80 | 5.5 | 1.9 | 3.2 | 0.3 |
| Engineering | | | | | | |
| 1979-87 | 1528 | 55 | 3.6 | 1.5 | 1.9 | 0.2 |
| 1988-96 | 2632 | 125 | 4.7 | 1.9 | 2.5 | 0.3 |

Source: Affirmative Action Table #3: PhDs Awarded to U.S. Citizens and Permanent Residents, by Race/Ethnicity, Gender, Fine Field of Doctorate, and Year, 1979-1996

This is a statistical compilation of data issued by the National Opinion Research Center, Doctorate Data Project. (NSF/NIH/NEH/USED/USDA, Survey of Earned Doctorates)

* 1996 numbers are preliminary.

It is frequently asserted that talented minority students choose not to pursue Ph.D.'s because of the allure of professional schools in business, law and medicine. There is some evidence to support this claim. From 1977-79 to 1993-95, the number of minorities earning an M.D. rose by about half (from 1048 to 1614), minorities earning a law degree doubled (from 2246 to 4522) and minorities earning an MBA nearly tripled (from 2588 to 7710) (U.S. Department of Education, various years).^{vi} If just five of the minority individuals who earned MBAs in 1995 had earned an economics doctorate instead, the number of minority economics Ph.D.s would have risen by 15 percent, while the number of minority MBA's would have declined by less than 0.1 percent.

III. Minorities in the Economics Profession

There are several sources of data about professional economists. The National Science Foundation (NSF) collects comprehensive data on employed doctoral scientists in all fields. As reported in Table 4, these data show that in 1995, there were 21,103 Ph.D. economists in the United States, of which 5.3 were minorities. Of the 18,110 who were U.S. citizens, 3.9 percent, or 699, were minorities. (Unfortunately, the non-citizens group includes both non-residents and permanent residents.) Table 4 also shows that minority and non-minority economics Ph.D.'s appear to be distributed quite differently by sector of employment. Minority economists are over represented in two-year colleges and business or nonprofit employment, and under represented in four-year colleges and in government employment.

**Table 4. Employed Scientists and Engineers with an Economics Doctorate,
by Racial/Ethnic Background, Sector of Employment, 1995**

| | Total | Minority | % Minority |
|---|-------|----------|------------|
| All Economics Ph.Ds in U.S. | 21103 | 1112 | 5.3 |
| Citizens Only | 18110 | 699 | 3.9 |
| <i>Sector of Employment (Citizens Only)</i> | | | |
| 2-yr College or other school system | 303 | 47 | 15.5 |
| 4-yr College or medical institution | 10997 | 332 | 3.0 |
| Government | 2519 | 57 | 2.3 |
| Business or non-profit | 4291 | 263 | 6.1 |

Source:

Data analysis done using SESTAT95 Public- Integrated Data Base, Pub 95, provided by the National Science Foundation [<http://srsstats.sbe.nsf.gov>].

This contains data integrated from three surveys: Survey of Doctorate Recipients (SDR95), National Survey of College Graduates (NSCG95), and the National Survey of Recent College Graduates (RCG95)

An alternative source of information about professional economists comes from surveys of American Economic Association (AEA) members. Unlike the comprehensive NSF data, the AEA data focus on a self-selected sample who have chosen to join the AEA, but need not have a Ph.D. nor be located in the United States. These data probably focus on economists who are relatively active in academia. In 1997, of the total individual AEA membership of 22,736, about half were U.S. citizens and roughly 60 percent had a Ph.D. The AEA membership survey did not ask non-citizens if they were permanent residents. It did ask in one question whether respondents were white, black, Asian, or "other," and in a separate question whether respondents identified themselves as Hispanic. Respondents were not asked whether they were Native Americans.

The discussion here and the figures in Table 5 focus on the subset of 8938 who are both Ph.D. economists and U.S. citizens, and who will be called "AEA economists" for short. In 1997, only 121 (1.4 percent) of AEA economists identified themselves as black and 80 (0.9 percent) of AEA economists identified themselves as Hispanic.^{vii} The share of AEA economists who are black may underestimate the share of blacks in the profession as a whole. The National Economic Association (NEA), which grew out of the Caucus of Black Economists, includes more black economists than the AEA.^{viii}

Table 5. 1997 AEA Membership by Year Received Ph.D.
(Ph.D. and U.S. Citizens Only)

| | Pre-1959 | 1959-68 | 1969-78 | 1979-88 | post 1988 | # Respondents | Survey Total |
|----------------------------------|----------|---------|---------|---------|-----------|---------------|--------------|
| <i>A. Numbers of Individuals</i> | | | | | | | |
| All | 611 | 1220 | 2840 | 2568 | 1638 | 8877 | 8938 |
| # Respondents | 590 | 1168 | 2719 | 2476 | 1513 | 8466 | 8515 |
| Asian | 10 | 64 | 116 | 108 | 61 | 359 | 363 |
| Black | 4 | 9 | 34 | 39 | 33 | 119 | 121 |
| White | 576 | 1092 | 2552 | 2303 | 1410 | 7933 | 7974 |
| Other | 0 | 3 | 17 | 26 | 9 | 55 | 57 |
| Hispanic | 0 | 4 | 15 | 25 | 32 | 78 | 80 |
| <i>B. % Distribution</i> | | | | | | | |
| Asian | 1.7 | 5.5 | 4.3 | 4.4 | 4.0 | 4.2 | 4.3 |
| Black | 0.7 | 0.8 | 1.3 | 1.6 | 2.2 | 1.4 | 1.4 |
| White | 97.6 | 93.5 | 93.9 | 93.0 | 93.2 | 93.7 | 93.6 |
| Other | 0.0 | 0.3 | 0.6 | 1.1 | 0.6 | 0.6 | 0.7 |
| Hispanic | 0.0 | 0.3 | 0.6 | 1.0 | 2.1 | 0.9 | 0.9 |

Source: 1997 AEA Survey of Members and author's calculations

Among the AEA membership, Table 5 shows that minorities are least well represented among those who received their Ph.D.s in earlier years.^{ix} This could reflect the rise in minority Ph.D.s among later cohorts, or an aging effect -- if there are different attrition rates across ethnic groups -- or a combination of both. Only 1 percent of AEA economists who received their degrees before 1968 identify themselves as black or Hispanic. Although this percentage has risen steadily over time, these groups combined account for just 4 percent of AEA economists who received their degrees since 1988. In the AEA membership data, the increase by year-received-Ph.D. has been much more pronounced for Hispanics than for blacks.

Table 6. 1997 AEA Membership: Distribution by Primary Field
(Ph.D. and U.S. Citizens Only)

| | All | Asian | Black | White | Other | Hisp. |
|---------------------------|------|-------|-------|-------|-------|-------|
| Sample | 8938 | 363 | 121 | 7974 | 57 | 80 |
| # Respondents | 7487 | 312 | 101 | 6660 | 51 | 77 |
| # Members by Field | | | | | | |
| General | 211 | 7 | 4 | 194 | 0 | 3 |
| Methodology | 120 | 1 | 1 | 112 | 0 | 0 |
| Math Econ | 446 | 36 | 5 | 384 | 7 | 2 |
| Micro | 487 | 23 | 8 | 427 | 1 | 2 |
| Macro | 790 | 35 | 15 | 688 | 5 | 7 |
| International | 661 | 53 | 10 | 558 | 6 | 10 |
| Financial | 576 | 36 | 10 | 492 | 2 | 4 |
| Public | 588 | 13 | 7 | 529 | 3 | 5 |
| Health/Ed. | 481 | 12 | 8 | 443 | 3 | 8 |
| Labor/Dem. | 692 | 17 | 14 | 634 | 6 | 8 |
| Law&Econ | 135 | 3 | 4 | 117 | 1 | 0 |
| I.O. | 799 | 23 | 6 | 734 | 3 | 8 |
| Business | 138 | 8 | 1 | 124 | 2 | 2 |
| Econ.History | 174 | 3 | 0 | 165 | 0 | 1 |
| Development | 384 | 28 | 5 | 321 | 4 | 8 |
| Ec. Systems | 86 | 1 | 0 | 76 | 2 | 0 |
| Agricultural | 477 | 9 | 1 | 435 | 6 | 6 |
| Urban/Reg. | 233 | 4 | 2 | 219 | 0 | 3 |
| Other | 8 | 0 | 0 | 7 | 0 | 0 |

The AEA survey also asks about the primary field of members. This information, presented in Table 6, shows that black members are relatively more concentrated than non-minorities in the fields of macroeconomics and labor/demographics. Hispanic members are relatively concentrated in international, development and health/education. A striking feature of the data is just how few minority economists there are in specific fields.

Finally, we look at minority representation on economics department faculty. Table 7 summarizes data collected through the 1997 Universal Academic Questionnaire (UAQ).^x Unfortunately, although the UAQ did include questions about race and ethnicity in earlier years, a relatively low completion rate in those years raises questions about data reliability. An interesting feature of these data is that they distinguish among academic institutions based on the highest degree awarded in economics. Thus, of the 360 departments that completed the 1997-98 survey, 204, 50 and 106 are classified as B.A.-, M.A.-, and Ph.D.-granting institutions respectively. The survey asked respondents to exclude visitors as well as faculty who are not U.S. citizens or permanent residents.^{xi}

The absolute numbers of minority faculty are small: 150 out of the 3990 economics faculty members covered by the survey. Minority faculty seem to be better represented among junior than among senior faculty. The top panel of table 7 shows that, across all 360 departments, blacks and Hispanics together account for only 2 percent of all full professors. This figure increases to 7.6 percent for assistant professors. In comparison, recall from Table 2 that blacks and Hispanics were awarded 7.5 percent (4.6 percent and 2.8 percent respectively) of all economics Ph.D.'s during 1991-1996.

Table 7. 1997-98 Universal Academic Questionnaire: Full-Time Tenured and Tenure-Track Faculty in Economics Departments

| A. # Faculty | Full | Assoc. | Asst. | Other | Total | B. % of Total Faculty in Rank | | | | |
|--------------------------|-------|--------|-------|-------|-------|-------------------------------|-------------|-------------|-------|-------|
| | Prof. | Prof | Prof. | | | Full Prof. | Assoc. Prof | Asst. Prof. | Other | Total |
| All Institutions(n=360) | | | | | | | | | | |
| Total | 2068 | 1117 | 772 | 33 | 3990 | | | | | |
| Black | 23 | 29 | 29 | 2 | 83 | 1.1 | 2.6 | 3.8 | 6.1 | 2.1 |
| Hispanic | 18 | 20 | 29 | 0 | 67 | 0.9 | 1.8 | 3.8 | 0.0 | 1.7 |
| Bachelor Schools (n=204) | | | | | | | | | | |
| Total | 534 | 401 | 227 | 17 | 1179 | | | | | |
| Black | 7 | 15 | 15 | 0 | 37 | 1.3 | 3.7 | 6.6 | 0.0 | 3.1 |
| Hispanic | 0 | 0 | 9 | 0 | 9 | 0.0 | 0.0 | 4.0 | 0.0 | 0.8 |
| Masters Schools (n=50) | | | | | | | | | | |
| Total | 294 | 191 | 93 | 2 | 580 | | | | | |
| Black | 8 | 7 | 9 | 1 | 25 | 2.7 | 3.7 | 9.7 | 3.0 | 4.3 |
| Hispanic | 3 | 5 | 4 | 0 | 12 | 1.0 | 2.6 | 4.3 | 0.0 | 2.1 |
| PhD Schools(n=106) | | | | | | | | | | |
| Total | 1240 | 525 | 452 | 14 | 2231 | | | | | |
| Black | 8 | 7 | 5 | 1 | 21 | 0.6 | 1.3 | 1.1 | 3.0 | 0.9 |
| Hispanic | 15 | 15 | 16 | 0 | 46 | 1.2 | 2.9 | 3.5 | 0.0 | 2.1 |

Source: 1997 Universal Academic Questionnaire and author's calculations

The UAQ data also reveals significant differences between ethnic groups and by type of department. More than two-thirds of the Hispanic faculty teach in Ph.D.-granting departments compared with 56 percent of all faculty, which implies some potential on the horizon for an increase in Hispanic senior faculty at these institutions. The picture for blacks is strikingly different. Only a quarter of black economics faculty teach in doctoral granting departments -- as a group, blacks are concentrated in B.A.- and M.A.-granting departments. Moreover, blacks

teaching in Ph.D.-granting departments are not better represented among the junior than the senior faculty. In fact, the UAQ survey identified only five black assistant professors among more than 100 Ph.D.-granting departments. Thus, these figures suggest little reason to expect an increase in black tenured faculty at Ph.D.-granting institutions over the next few years.

IV. CSMGEP Activities

The mission of the Committee on the Status of Minority Groups in the Economics Profession (CSMGEP) is to increase the representation of minority groups in economics. Thus, its main objective has been to increase the number of economics Ph.D.s earned by minorities through various interventions targeted at minority undergraduate and/or graduate students. These interventions are intended to give students access to additional information about economics as a profession and about graduate programs, to strengthen students' preparation for doctoral programs and to enhance students' support networks -- including minority peers, role models and mentors. The rationales behind providing students with information and improving their preparation are self-evident. However, there is less consensus about the importance of peer groups^{xii}, role models and mentors^{xiii} on student's success in higher education. Indeed, the existing empirical literature on these topics (much of which focuses on gender, not ethnicity) is small and inconclusive. Anecdotal evidence, including feedback from many past participants in AEA minority programs and from practicing minority economists, supports the view that role models as well as peer supports can play an important, positive role in the academic choices and performance of minority individuals.

CSMGEP's primary activity has been overseeing a Summer Program. For many years, it also co-sponsored with the Federal Reserve System a fellowship program for minority doctoral students, but this was suspended in 1997 because of legal concerns related to Federal Reserve funding of minority fellowships. It has recently undertaken some new initiatives which are discussed further below.^{xiv}

The Summer Program

An annual summer training program was initially discussed by the Caucus of Black Economists and the AEA Executive Committee in 1969, as a means to increase the numbers of minority economists. The first Summer Program was first held at the University of California at Berkeley in 1974, largely due to the efforts of Marcus Alexis.^{xv} Since then, the Summer Program has been held every year, providing about 20-25 minority undergraduates who express interest in careers in economics with an intensive eight-week course of instruction in analytic materials essential to graduate study. Since its inaugural year at Berkeley, the Summer Program has had six different host institutions, each running the program for a period of three to five years.

It is difficult to evaluate the effectiveness of the Summer Program for a number of reasons. Until recently, no systematic effort was made to follow students who participated in the program. Even with such a data set, evaluation will be complicated by the fact that participants are unlikely to be a random sample of minority undergraduates. Anecdotal evidence suggests that the overall quality of the applicant pool, and thus the sample selection issues, may have depended on the reputation of the host. The specifics of the Summer Program have changed over time. For example, the programs at Berkeley and Northwestern included courses in microeconomics,

macroeconomics and quantitative methods, while the Stanford and Texas programs have dropped macroeconomics but added an applied course, in which students are required to prepare and present an empirical paper. The objectives of different Summer Program directors have changed as well. For example, Michael Leeds (1992) examines the implications of Temple's decision to alter the admissions criteria during 1989-90 in favor of students from relatively disadvantaged backgrounds. He finds that such students did tend to have more difficulty in the Summer Program, but lack of data precludes an analysis of what happened to the students subsequently. Finally, it is unclear how to measure "success." Throughout its history, CSMGEP and host institution faculty have recognized that doctoral work in economics is not for every promising student with an interest in the profession.

With these concerns in mind, CSMGEP is taking concrete steps towards evaluating the Summer Program. Together with staff at the current Summer Program host -- the University of Texas -- CSMGEP is trying to locate and survey past participants in the Summer Program. The resulting data on what has happened to these individuals will enable us to evaluate and strengthen the Summer Program, as well as providing useful information for other minority and non-minority initiatives. This effort is still in progress, and the data collected so far are incomplete, especially for graduates in earlier years.

Table 8 provides summary results of the information gathered so far. A total of 634 students participated in the Summer Program since 1974. We have follow-up information about 348 individuals. Data for each of the seven host institutions (with the relevant years of operation) are provided on separate lines. Not surprisingly, the data are most complete for participants from the more recent Programs. However, the University of Texas data should be interpreted with

caution, since many of these participants are still completing their undergraduate degrees, and others had already already been accepted to graduate programs when they participated in the Summer Program.

Table 8: AEA Summer Program Follow-Up Information

| Host Institution | Years | Total for Host | Total with Educational Information | Economics Ph.D. Program | | | |
|------------------|----------------|----------------|------------------------------------|-------------------------|----------------|--------------------|----------------|
| | | | | Began Ph.D. Program | Received Ph.D. | Currently Enrolled | Left w/o Ph.D. |
| U. Texas, Austin | 1996-98 | 60 | 46 | 13 | 0 | 12 | 1 |
| Stanford | 1991-95 | 123 | 114 | 49 | 5 | 32 | 12 |
| Temple | 1986-90 | 137 | 70 | 33 | 13 | 11 | 9 |
| Wisconsin | 1983-85 | 87 | 29 | 7 | 5 | 1 | 1 |
| Yale | 1980-82 | 88 | 52 | 13 | 10 | 0 | 3 |
| Northwestern | 1975-79 | 117 | 32 | 13 | 12 | 0 | 1 |
| U.C., Berkeley | 1974 | 22 | 5 | 1 | 1 | 0 | 0 |
| Total | 1974-98 | 634 | 348 | 129 | 46 | 56 | 27 |

Source: These data were gathered by CSMGEP and staff on the Summer Program at the University of Texas at Austin. The information is preliminary (as of 4/14/99), and searches are still underway to locate and survey past participants. Note that many participants from recent Summer Programs are still completing their undergraduate degrees, and some are working, but plan to pursue advanced degrees within the next few years.

Of the 348 participants for whom we have information, 129 (or 37 percent) enrolled in economics Ph.D. programs, as shown in Table 8. We have located 46 Program alumni who received doctorates in economics and 56 who are still enrolled in graduate programs. These figures suggest a positive effect of the Summer Program, especially in light of the very small absolute number of minority economists who receive doctorates each year, but the lack of benchmark for what these students might have done in the absence of the Summer Program clearly

makes it difficult to draw conclusions. The table also shows that 27 individuals left their doctoral programs without receiving a Ph.D.^{xvi} In light of this information, CSMGEP sought to leverage the benefits of the Summer Program through a broader set of activities.

The Economics Pipeline Project

In 1998, CSMGEP secured funding for its Economics Pipeline Project. The objective of the Pipeline is to expand the pool of minority Ph.D. economists by using a series of interventions targeted at critical junctures in their training and professional development. The junctures include interest in economics as a major, preparation for graduate school, successful completion of core theory and field exams as a first-year student, and initiation of dissertation research. Statistical evidence is not available on the proportions of minority groups compared to nonminority groups that are lost at each point along the pipeline from undergraduate school to post-doctoral success. However, the basic conception of the pipeline is not minority-specific; these are critical junctures where many students are likely to have difficulties.

The Pipeline Project adds two new programs (the Outreach and Mentor Programs) to the existing Summer Program so as to establish a longer-term support system for minority students interested in pursuing economics Ph.D.'s. The Outreach Program will extend support by seeking to attract students early in their college experience. In the initiation stages at the time of writing, it will begin by developing activities on a target campus. It also intends to maintain a clearing-house of information relevant for those interested in careers as professional economists. The Mentor Program, now underway, extends support beyond the Summer Program's preparation for graduate school. Participating students are matched with a mentor who will be expected to

work cooperatively and actively with the student's departmental adviser. They are also linked to minority economists, intended to serve as role models and a peer support network. To evaluate the Mentor program, CSMGEP intends to compare the progress of participants with general norms for completion of educational milestones in the participants' own departments and with outcomes for other comparison groups.

V. Concluding Remarks

The absolute number of economics Ph.D.'s earned by minorities who are either U.S. citizens or permanent residents is small: about three dozen per year. Even a figure this low contains some good news: There have been sustained increases in the absolute numbers of economic Ph.D.s awarded to both black and Hispanic scholars. The percent of economics doctorates earned has risen over the past two decades, and is approaching the average for all fields.

However, the very low numbers of minority economists strongly suggest that at key junctures along the pipeline to becoming a professional academic economist, minority individuals seem more prone to exit than do nonminorities. In particular, having received a B.A. in economics, they are less likely to complete a Ph.D. Having received a Ph.D., blacks especially are less likely to be employed at a 4-year college or university. Future work should seek to better understand the differential experiences and outcomes for minorities at various stages in their education and professional development, to fulfill the goal of increasing minority representation in economics.

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- i. The terminology used throughout this paper was chosen in part to be consistent with this history and in part for want of general consensus on which alternatives -- like African-American, Latino, and so on -- are preferable.
 - ii. There is, of course, a more general literature on minorities and higher education. For example, see Fleming (1985) as well as the papers in Elam (1989) and in Altbach and Lomotey (1991). Holzer and Neumark (1999) provide a comprehensive survey of the theory and evidence on affirmative action in both employment and education.
 - iii. Individuals for whom race is classified as "unknown" are excluded from minority and overall totals. This especially effects the 1976-81 period, reducing the totals by 6.5% on average.
 - iv. Some recent papers contain additional detail about U.S. economics Ph.D.s. Siegfried and Stock (1999) provide a profile of graduate training in economics, focusing on the labor market experience for new Ph.D.s. Hansen (1991) and Krueger et al. (1991) present the major findings and recommendations from an AEA commissioned study of graduate education in economics in U.S. universities. Aslanbeigui and Montecinos (1998) discuss foreign students in American economics programs. (Permanent residents are included as "foreign" nationals in their paper.)
 - v. In terms of gender, during 1993-95 women earned roughly half of all the Ph.D., law, medical and business degrees awarded to minorities; however, minority women earned only a quarter of the Ph.D. degrees earned specifically in economics by minorities. Among non-minorities, women earned roughly 40 percent of all Ph.D., business, law, and medical degrees from 1993-95, but 31% of Ph.D.'s in economics. The source for Ph.D. data is National Opinion Research Center, Doctoral Data Project. The source for professional fields is U.S. Department of Education (various years).
 - vi. The average annual number of all U.S. citizens and permanent residents earning professional degrees in business rose from 44016 in 1977-79 to 79247 in 1993-95. Over the same period, the number of total degrees rose from 34510 to 39586 for law and from 14005 to 15281 for medicine.
 - vii. The published summary tables of 1997 AEA membership in the December 1997 American Economic Review directory issue (p. 685) incorrectly states that 867 of the U.S. citizens (with and without Ph.D.'s) were Hispanic. The correct figures are that 117 of all AEA members who are U.S. citizens identified themselves as Hispanic, and of that group, 80 held a Ph.D.
 - viii. A survey of NEA members is in process, but was unavailable at the time this paper was prepared.
 - ix. The last column in Table 5 shows all 1997 AEA members who were U.S. citizens and had a Ph.D. The second to last column shows the subset of 8877 members who also provided the year in which they received their Ph.D. For those members with multiple Ph.D.s, this is the year in which the first Ph.D. was received.
 - x. The AEA sponsored Universal Academic Questionnaire is a survey of economic departments taken each Fall and administered by Charles E. Scott and John J. Siegfried. Information from the UAQ is available from the AEA. Summary tables will be published in the Papers and Proceedings of the *American Economic Review* starting in 1999.

xi. An alternative source of data on minority status of professors is the annual survey conducted by the AEA Committee on the Status of Women in the Economics Profession (CSWEP). In 1997, CSWEP received responses from 95 of 118 departments surveyed, all of which are Ph.D.-granting. This survey did ask about Native American faculty, but *none* were identified by respondents.

The CSWEP survey results are broadly comparable to the UAQ results discussed in the text; however, the CSWEP data show more black faculty (especially full professors) than the UAQ data, while the UAQ data show more Hispanic faculty. The CSWEP survey also includes questions about Ph.D. students and about students receiving Bachelors degrees in economics.

xii. Work on the role of peer groups is difficult to interpret. Case and Katz (1991) find that (neighborhood) peer effects have an important influence on behavior and outcomes for disadvantaged youth. But peer groups are likely to be endogenous. (See Evans, Oates and Schwab, 1992, which also contains a brief literature summary.) More fundamentally, researchers do not know how individuals form their reference groups (Mansky 1993). Finally, returning to the focus of this paper, analyses that define peers based on neighborhood and classmate characteristics may give little insight into the potential role of *external* peer networks -- minorities studying economics at other institutions -- for college and graduate students who are one of very few minority individuals in their own departments.

xiii. Recent studies about the importance of role-models also reached mixed conclusions (Ehrenberg, 1995 and Holzer and Neumark, 1999). In particular, Rothstein (1995) concludes that the share of female faculty at a college or university is positively associated with the percent of female students who earn an advanced degree. Other studies find little or no evidence that female role-models affect school performance or choice of major by female students. (Canes and Rosen, 1995; Neumark and Gardecki, 1998). However, Evans (1992) does find a positive role-model effect for black high school students -- even though he finds no such effect for female students. Frierson et. Al. (1994) find that black college students' attitudes towards research are positively affected by the race (and gender) of their mentor in a summer research program.

Work on implications for black students of attending historically black colleges and universities (HBCUs) is relevant for both peer group and role model effects. Ehrenberg and Rothstein (1994) conclude that attending an HBCU increases the probability black students will graduate within seven years, but has no effect on subsequent earnings or probability of enrolling in graduate school. In contrast, Constantine (1995) does find a positive earnings effect for black students attending an HBCU.

xiv. Other fields also maintain programs to increase diversity of their Ph.D. recipients. For example, The American Sociological Association (ASA) runs a minority fellowship program that provides financial assistance, mentoring and research training. It funded roughly 20 percent of the sociology Ph.D.s earned by minorities during 1978-96. In 1994, ASA launched the 5-year MOST Program (Minority Opportunities through School Transformation). It is working with 18 departments (4-year and university) to improve minority recruitment, retention and training by focusing on issues such as climate and curricula. The American Political Science Association (APSA) maintains the Minority Identification Project, which provides career and graduate school information to minority undergraduates who can then be recruited by (the more than 40) participating graduate programs. It also runs the annual 5-week Ralph Bunche Summer Institute for advanced undergraduates interested in a Ph.D., as well as a minority fellowship program for doctoral students in political science. Additional information about these activities can be obtained from the ASA and the APSA.

xv. Alexis (1975) describes the history and first year of the Summer Program. See also the annual minutes

of AEA Executive Committee and annual reports of CSMGEP, both printed in the AEA Papers and Proceedings (May issues).

xvi. Other data, not reported here, shows that 37 (11 percent) of the 348 students entered economics masters programs, and 106 (30 percent) entered other graduate programs, including business and law.