

Project Title: Does Diversity in Academia Generate Diversity in Research? Evidence from the Dissertation Projects of Underrepresented Groups

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Research Plan/Project Plan

SIGNIFICANCE

Efforts to broaden the racial and ethnic make-up of university faculties are now being seen in universities, colleges, and academic organizations across the nation. While the motivations behind these endeavors typically tout the educational benefits of diversity, they are often vague as to the mechanism through which such benefits are conferred. This project addresses one channel through which diversity in academia benefits society through the important role academics play as researchers.

Just as any community of ideas benefits from having a variety of experiences and viewpoints from which to draw, it can be argued that members of underrepresented groups bring distinct perspectives to their research, asking questions that might not otherwise have been explored and lending insight that might not otherwise have been included in academic pursuits (Collins, 2000). In the social sciences, where many researchers study the problems faced by underrepresented groups, the value added of these viewpoints can be particularly important in broadening and deepening the scope of academic research. To the extent that public policy debates and ultimately legislation are influenced by this research, the argument for including diverse perspectives in academia is especially justified.

While the case for diversity in academia is strong on these grounds, very little is known about the actual research endeavors of members of underrepresented groups. In economics, most research on diversity in academia focuses on the effects of affirmative action hiring policies on the efficiency and performance of faculty (Holzer and Neumark, 2000). There is also some consideration of other benefits of diversity in academia such as service to minority communities and mentoring future generations, but no discussion of benefits through diverse research (Dyanan and Rouse, 1997; Canes and Rosen, 1995).

AIMS

This project aims to determine whether minorities in the social sciences are in fact more likely to direct their research efforts toward issues facing their respective communities. For example: Are Latinos more likely to write on topics of particular relevance for Latino communities such as immigration or assimilation? Are African-Americans more likely to write on topics of special relevance for African-American communities such as segregation or racial discrimination?

A second aim concerns the labor market outcomes of Ph.D. recipients by race, ethnicity, and their research areas. For instance: Are doctoral recipients of color more or less likely to join an academic institution than their peers if they have written on a topic relevant to communities of color? Is writing on such a topic more likely to gain or restrict access to higher-ranked academic departments for people of color?

A final aim is to provide an underlying explanation for the outcomes observed. *Why* might Ph.D. recipients of color be more or less likely to write on topics relevant to populations of color? An explanation that would support the diversity benefits hypothesis laid out above is that

people of color focus on these issues because they have special insight or a comparative advantage in addressing these questions. However, dissertation topics are not chosen in isolation but are often selected in consultation with advisers at doctoral institutions. Could it be that dissertation advisers at some institutions are more or less likely to steer people of color in the direction of these topics?

Similarly, dissertation topics are often chosen with the job market in mind. It could be that students are self-selecting into the academic group and the group that writes on these topics, generating a confounded relationship between dissertation topic and market outcome. Such problems mean that the raw estimates of the relationship between dissertation topic and job market outcome do not clearly measure the market's valuation of such work.

METHODS

To address these questions, this project will use the Survey of Earned Doctorates (SED), a census of all U.S. doctoral recipients sponsored by the National Science Foundation (NSF) in conjunction with other federal funding agencies and collected by the National Opinion Research Center. The SED collects information on the race, ethnicity, gender, and socio-economic status of Ph.D. recipients as well as the title of their dissertation and, if their future employment prospects are known at the time of submission, their new employer. To limit costs for this pilot project, only doctoral recipients who received their degree from 2003-2007 will be examined at this stage, yielding a projected sample size of about 20,000 observations.

The dissertation title variable will be coded to provide an indicator variable for whether the topic is of particular relevance for Latino, African-American, or Native-American groups. For example, a "Latino topic" variable will equal one if any of the following words are found in the dissertation title: Mexican, Latino, Hispanic, Mexican-American, Chicano, Mexico, Immigration, etc. Sensitivity analyses will be run where this indicator contains more and less topics to confirm that the empirical relationships observed are robust.

To address the first aim, the most basic regression model will estimate the probability of writing a dissertation on a "Latino topic" as a function of race, ethnicity, gender, socio-economic status, and field of the doctoral recipient (e.g. economics). This will provide a gauge of the relationship between race, ethnicity, gender, and "Latino topic." To explore the second aim, the employer variable will be coded as an indicator variable corresponding to whether the employer is an academic or non-academic institution. Following this, a similar regression will be run to predict the probability of obtaining academic employment as a function of writing on a "Latino topic," along with the race, ethnicity, gender, socio-economic status, and field of the doctoral recipient (e.g. economics). The analysis will also include interaction variables between race, ethnicity, and "Latino topic" so as to determine whether there is an additional effect of being Hispanic and writing on a "Latino topic" on the probability of securing academic employment. Additionally, the employer variable will be coded to provide a numerical rank of academic institutions using the National Research Council's ranking system. Thereafter, the same regression could be run to estimate the relationship between writing on a "Latino topic" and the academic rank of the doctoral recipient's new home department.

Thus far, the methods used to address the first and second aims will have established whether there is a positive or negative relationship between dissertation projects and race and/or ethnicity, and how dissertation project influences job market outcomes. These results

are valuable in and of themselves because they shed light on whether diversity in academia in fact produces more research on issues facing underrepresented groups.

The focus of the third aim surrounds the tougher question of whether there may be institutional factors that explain why these relationships exist. So long as the propensity to encourage or discourage doctoral students of color from writing on these topics varies at the level of the institution or field, including interaction terms between race and institution, race and field, ethnicity and institution, and ethnicity and field will control for whether certain schools or fields are more or less likely to produce doctoral recipients of color who work on these topics.¹ A more difficult methodological question surrounds the possibility that doctoral candidates anticipate the market with their choice of dissertation topic. This would generate spurious positive correlation between market outcomes and dissertation topic if people who write on these topics are positively selected from the group of all doctoral candidates. To address this issue it is necessary to obtain some variable that influences dissertation topic but does not influence job market outcome directly and perform instrumental variables analysis. Possible candidates include national events that might focus student's attention on issues affecting underrepresented groups at the time when dissertation topic is selected. Since this operates with a lag, it can be argued that it will not directly affect the student's job market outcome when the Ph.D. is completed.

EXPECTED OUTCOMES AND PROJECT CONTINUATION

While there is little existing literature on which to base predictions about expected outcomes, it is expected that race and ethnic background will have a significant positive effect on the likelihood that a doctoral recipient submits a dissertation on a topic relevant for underrepresented groups. The effect that writing on these topics will have on job market outcomes is expected to vary by field, but is difficult to predict based on the potential selection issues raised above.

This research, covering only 5 years of data, is a first step toward examining the relationship between diversity in academia and diversity in research. In economics, there appears to be significant interest on the topic of minorities in the economics profession, so there is every reason to believe that this research will result in a publication at a top economics journal and a presentation at a national conference. This will also result in moving the principal investigator's research into the area of diversity in higher education and make a significant contribution to this field of study.

The next step will be to submit an NSF grant in order to code and procure the rest of the data which cover 1957-1998.² The SED program director at the NSF has suggested that the NSF is interested in coding the remainder of the questionnaires, and as such, it seems likely that they would be interested in funding this project. Examination of the larger data set will then allow the researcher to address how the link between race, ethnicity, dissertation topic, and employment has evolved over time as more members of underrepresented groups have obtained doctorates.

¹ One could counter-argue that no such correction is needed since students are selecting schools and fields based on their initial interest in these topics.

²The questions on dissertation title and future employer have not been entered for these years.

References

- Tierney, William G. 1997. "The Parameters of Affirmative Action: Equity and Excellence in the Academy." *Review of Educational Research*, 67(2): 165-196.
- Holzer, Harry, and David Neumark. 2000. "Assessing Affirmative Action." *Journal of Economic Literature*, 38(3): 483-568.
- Leeds, Michael A. 1992. "Who Benefits from Affirmative Action? The Case of the AEA Summer Minority Program 1986-1990." *The Journal of Economic Perspectives*, 6(2): 149-156.
- Fryer, Roland G. Jr. and Glenn C. Loury. 2005. "Affirmative Action and Its Mythology." *The Journal of Economic Perspectives*, 19(3): 147-162.
- Collins, Susan M. 2000. "Minority Groups in the Economics Profession." *The Journal of Economic Perspectives*, 14(2): 133-148.
- Cole, Stephen and Elizabeth Arias. 2004. "Can Demand-Side Variables Explain the Low Numbers of Minority Faculty in Higher Education?" *The American Economic Review Papers and Proceedings*, 94(2): 291-295.
- Myers, Samuel L. Jr. and Caroline S. Turner. 2004. "The Effects of Ph.D. Supply on Minority Faculty Representation." *The American Economic Review Papers and Proceedings*, 94(2): 296-301.
- Ginther, Donna K. and Shulamit Kahn. 2004. "Women in Economics: Moving up or Falling off the Academic Career Ladder?" *The Journal of Economic Perspectives*, 18(3): 193-214.
- Dynan, Karen E. and Cecilia Elena Rouse. 1997. "The Underrepresentation of Women in Economics: A Study of Undergraduate Economics Students," *The Journal of Economic Education*, 28(4): 350-368.
- Canes, Brandice J. and Harvey S. Rosen. 1995. "Following in Her Footsteps? Faculty Gender Composition and Women's Choices of College Majors," *Industrial and Labor Relations Review*, 48(3): 486-504.