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ABSTRACT

Demographic Diversity and Economic Research: Fields of Specialization and Research on Race, Ethnicity, and Inequality*

Using dissertation research topics found in the EconLit database and large-scale algorithmic methods that identify author demographics based on names, we explore the link between race and ethnicity and fields of economic research. We find that underrepresented racial and ethnic minority (URM) researchers are more likely to write dissertations in some unexpected sub-fields of economics, but limited evidence that they are more likely to write dissertations on racial topics once we include basic controls. These descriptive results may be due to limitations in the data, intrinsic motivations, or external constraints.

JEL Classification: I23, J15, O30
Keywords: economic research, race and ethnicity, dissertation

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1 Introduction

How does researcher identity affect research output? In economics, the persistently low representation of Black/African American, Hispanic/Latino, and Native American individuals among doctoral recipients (Hoover and Washington, 2023) raises the question of what economic research might be lost due to the underrepresentation of these groups.[1] It is often argued that underrepresented minority (URM) groups bring distinct perspectives to their research, asking questions that might not otherwise have been explored and lending unique insight (Collins, 2000). Thus, underrepresentation of these groups represents lost contributions to economic thought that may be particularly harmful to society at large, especially given the public interest in social justice and the profession's prominent role in providing evidence for policy making. If URM individuals are more likely to research areas of greater interest to URM communities, this lack of representation may be acutely felt in terms of lost ideas that could benefit communities that are marginalized in society overall. However, very little is known about the research topics pursued by researchers of different racial and ethnic backgrounds. This is, in part, due to data limitations, which rarely link researchers with their demographic information, and to team production, which makes it difficult to assign credit to individual coauthors and problematic to link multi-racial teams to the race/ethnicity of a specific author. Hofstra et al. (2020) overcome some of these challenges to show that demographically underrepresented groups innovate at higher rates, but do not explore the subjects of these novel contributions.

If background is a strong determinant of research interests, one might expect URM authors to be more likely to write on distinct topics from the majority group, including those related to race/ethnicity. On the other hand, they might be less likely to research distinct topics if they expect greater repercussions if they deviate from established topics. Research on or adjacent to race and ethnicity, such as inequality, may be understudied and relatively less established in economics, as suggested by Advani et al. (2021), attracting or deterring URM researchers for the reasons noted above. This paper explores the link between racial/ethnic background and research topics, including those on race/ethnicity and inequality, to address whether individuals from different racial groups contribute to different areas of research in economics.

[1] Black/African American, Hispanic/Latino, and Native American Ph.D.s in economics represented approximately 3%, 7%, and (exactly) 0% of all economics Ph.D.s awarded to U.S. citizens and Permanent Residents in 2020-21, treating these three groups as mutually exclusive (Hoover and Washington, 2023). The following terms are used interchangeably throughout: Black and African American; Hispanic and Latino/Latinx; Native American and American Indian/Alaska Native. These groups are collectively referred to as Underrepresented Racial Minority (URM) groups because they are underrepresented relative to their shares in the U.S. population. We use the term racial minority groups to refer to URM and Asian racial groups collectively. Unfortunately, Native Americans are too small a share of our sample for meaningful analysis.

Thus far, the literature linking racial/ethnic backgrounds of economists to research content has mainly focused on author-collected samples of known Black academic economists (Price, 2009), which may suffer from undercounts and selection bias. For example, Peoples (2009) suggests Black economists' research is heavily concentrated in the field of labor and demographic economics, Mason et al. (2005) and Price and Allen (2014) find that a significant proportion of authors writing on racial inequality topics are Black, and Price and Sharpe (2020) conclude that the underrepresentation of Black economists in Ph.D.-granting departments has limited research on the economics of race.

In contrast to this existing work, we use 3 decades (1991-2021) of the EconLit dissertation database to investigate the link between race/ethnicity of economic dissertation authors and research subjects.[2] These more comprehensive data allow us to more conclusively link racial/ethnic background to economic research because dissertations are solo-authored and arguably represent the broadest possible population of economists. Our results suggest that economists differ on research topics in ways that appear related to race/ethnicity, but in perhaps unexpected ways. We also find an increase in dissertations on racial topics and inequality over time, but limited evidence that Ph.D. economists from URM groups are more likely to research racial topics once Ph.D. cohort year is held constant. Women Ph.D. economists are also more likely to write dissertations on inequality.

2 Data and Methods

Our primary data source is the EconLit dissertation database which is available through institutional license and includes information on publication year, author, title, key words, and subject code, as per the Journal of Economic Literature (JEL). We use these data to construct measures of (a) racial research (also referred to as race/ethnicity research) and (b) inequality research. Our primary measures are based on JEL codes: (1) the racial research outcome is an indicator variable equal to one if any of the JEL codes associated with a dissertation are J15; (2) the inequality research outcome is an indicator variable equal to one if any of the JEL codes associated with a dissertation are D63, I14, I24, J14, J71, or K38.[3] To probe robustness, we also define alternative broader outcome variables, which utilize keywords in addition to the JEL codes to identify research on race and inequality.[4]

[2]See https://www.aeaweb.org/econlit/

[3]J15: Economics of Minorities, Races, Indigenous Peoples, and Immigrants; Non-labor Discrimination. D63: Equity, Justice, Inequality, and Other Normative Criteria and Measurement. I14: Health and Inequality. I24: Education and Inequality. J14: Economics of the Elderly; Economics of the Handicapped; Non-Labor Market Discrimination. J71: Discrimination. K38: Human Rights Law; Gender Law; Animal Rights Law.

[4]Our broader Racial research outcome is an indicator equal to 1 if a dissertation's keywords include any of the following terms: Race, Racial, Ethnicity, Hispanic, Latino, Indigenous, Segregation, or Black,

We algorithmically impute race, ethnicity, and gender based on the names of the 31,223 doctoral recipients.[5] Figure 1 shows growth in dissertations on racial and inequality topics despite persistently low shares of URM groups earning dissertations in economics. The share of dissertations on racial and inequality topics goes from less than 0.6% in the mid-1990s (regardless of measure) to about 7% for racial topics and to about 8% for inequality topics using the broader measures in 2021. Meanwhile, the share of Asian dissertators rises from about 32% to almost 43%, while the shares of non-Hispanic Black and Hispanic authors have remained relatively stagnant (2% and 12% by 2021 respectively). One explanation for the increase in dissertations on race while the share of URM dissertators has stayed flat is that race and inequality have risen in the public consciousness over time.

(Figure 1 and Figure 2 here)

Figure 2 explores whether research specialization differs by race and ethnic background in a way that is not unique to these specific topics. It shows that dissertators' fields of specialization differ by race/ethnic background, but perhaps in unexpected ways. Minority authors are more likely to write on macro and monetary topics (Asian or Hispanic: $P < 0.01$), international topics (all three groups: $P < 0.01$), and development topics (Non-Hispanic Black or Hispanic: $P < 0.01$) relative to non-Hispanic Whites. Non-Hispanic Black and Asian authors are also more likely to write dissertations in finance ($P < 0.05$) and Asian authors are more likely to write in the mathematical and quantitative field ($P < 0.01$) and microeconomics ($P < 0.01$).[6] Perhaps most notably, minority dissertators appear less likely to write dissertations in labor and demographic economics relative to non-Hispanic Whites (Asian or Hispanic: $P < 0.01$). The stark contrast between this result and prior studies (Peoples, 2009) may be due to our sample, which focuses on all economics dissertators, as opposed to professional academic economists.

At the same time, Figure 3 shows that non-Hispanic Black authors are somewhat more

in addition to the JEL code J15. Similarly, our broader Inequality research outcome is an indicator equal to 1 if a dissertation's keywords include any of the following: Identity, Discrimination, Disparity, Underrepresentation, Underrepresented, Minority, Inequality, or Gap, in addition to the JEL codes noted in (2). Note that our definitions of racial and inequality research include all JEL codes or keywords identifying the dissertation research as being on racial research or inequality research, and are not limited to the primary JEL research area.

[5]We use Python packages gender-guesser and ethnicolr to impute gender and race/ethnicity based on author names. This is similar to racial/ethnic imputations used elsewhere (Hofstra et al., 2020). In terms of imputing race and ethnicity, these algorithms tend to have reasonably high precision but low recall for Hispanics and non-Hispanic Blacks. Mis-assigning URM dissertators to the majority group is likely to have a small effect on the estimates for the majority group. On the other hand, our low recall rate for minorities means that representativeness may be an issue for our minority sample if false negatives are not random. The sample used in the regression analysis drops to 24,723 due to missing values in cases where the gender imputation is uncertain.

[6]These differences may be related to other aspects of researcher background, which may be correlated with our racial measures (e.g. international student status, 1^{st} or 2^{nd} generation immigrant), which unfortunately are not included in our data.

likely to write dissertations on racial topics compared with other racial/ethnic groups and all racial minority groups are slightly more likely to write dissertations on inequality (broadly defined) relative to non-Hispanic White authors.[7] Figure 4 shows that racial and inequality research topics span most primary JEL fields, but are concentrated in labor and demography, health and education, and public. Inequality research is also well-represented in micro.

(Figure 3 and Figure 4 here)

3 Results

(Table 1 and Table 2 here)

Table 1 considers the relationship between dissertators' demographics and whether the dissertation relates to race or inequality. Our baseline model controls for a vector of mutually exclusive and exhaustive dummies indicating the race/ethnicity of the author, an indicator for woman author, and fixed effects for Ph.D. cohort year and institution. Panel A, column 1 shows that women are more likely to produce racial research relative to men by 0.6 percentage points (pp) ($P < 0.01$), and Asian authors are less likely to produce racial research by 1.3 pp ($P < 0.01$). The coefficients on Hispanic and non-Hispanic Black are negative, and only marginally statistically significant for Hispanics (-.005, $P < 0.10$). Thus, URM researchers are not more likely to work on race compared with non-Hispanic White authors after controlling for Ph.D. institutions and cohort years.

In column (2), which further controls for primary JEL research area fixed effects, the coefficients on woman author and URM authors are no longer statistically significant, suggesting that these relationships may be fully explained by primary fields of interest.[8] Columns (3) to (4) show a similar pattern if URM dissertation authors (Black and Hispanic) are grouped into one category and compared to well represented groups (White and Asian). Columns (5) and (6) include an interaction term between female and URM author, which yields a positive and statistically significant coefficient at the 10% level (0.011 to 0.013). Panel B shows the results are robust to using the broader definition of racial research, which incorporates keywords. URM groups do not appear more likely to write dissertation on racial topics once we include basic controls, except for potentially women URM.

Table 2 shows the results for the inequality research outcome defined narrowly by

[7]The absolute differences in Figure 3 are relatively small–generally within one percentage point across racial/ethnic groups, with the overall share of research on these topics hovering between 1.6% to 3% for racial research and 3.6% to 4.6% for broad inequality research. Note that the overall average of racial research in economics we find here is close to that reported in Advani et al. (2021) suggesting that economics dissertators match the overall patterns of economics publications.

[8]Results are very similar to column (2) if institution fixed effects are dropped from the regression model.

JEL codes and broadly by both JEL codes and keywords. Columns (1) to (6) in Panel A suggest that women are about 0.6 to 1.0 pp more likely to write a dissertation on a JEL-defined inequality topic relative to men, regardless of controls for primary research field. This suggests that women may emphasize inequality research in a variety of fields within economics. After we expand the definition of inequality using both JEL codes and selected key words, the result on women diminishes when controlling for primary field fixed effects. With respect to race and ethnicity, we find that Hispanic authors are less likely to study JEL-defined inequality topics, and some evidence that Black authors are more like to study inequality in the broader definition.

4 Conclusions

We have explored the link between racial and ethnic diversity and dissertation research topics to assess whether URM scholars work on different research areas within economics and whether they are more likely to produce research on race and inequality using large-scale algorithmic methods. We find URM researchers are more likely to write dissertations in some unexpected sub-fields of economics, but limited evidence that URM researchers are more likely to write dissertation research on racial topics once we include basic controls. As noted at the outset, these results may be due to intrinsic motivations of Ph.D. economists themselves or may stem from constraints on the types of doctoral research open to URM researchers. The evidence that women are more likely to write dissertations on inequality and racial topics is consistent with other research showing fields of specialization differ markedly by gender (Antman et al., 2024).

While we have expanded the literature on the relationship between racial/ethnic background and fields of specialization within economics using a large sample of doctoral dissertations, one limitation of our research is that our computational algorithms are discrete, have errors, and surely imperfectly reflect people's identities. Another limitation is that we are not able to distinguish between international and domestic dissertation authors (i.e., non-residents, permanent residents, and U.S. citizens), and one might expect country of origin to be an important explanatory variable determining research focus. Future research should aim to better combine demographic and social background information with research output to better understand the link between demographic diversity and knowledge creation.

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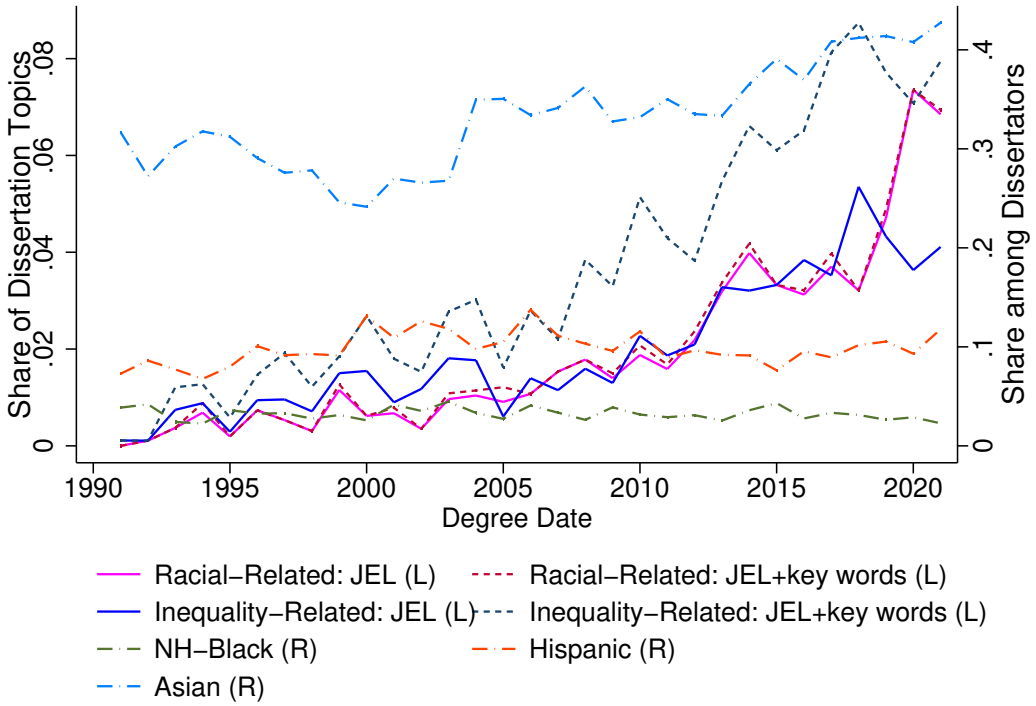
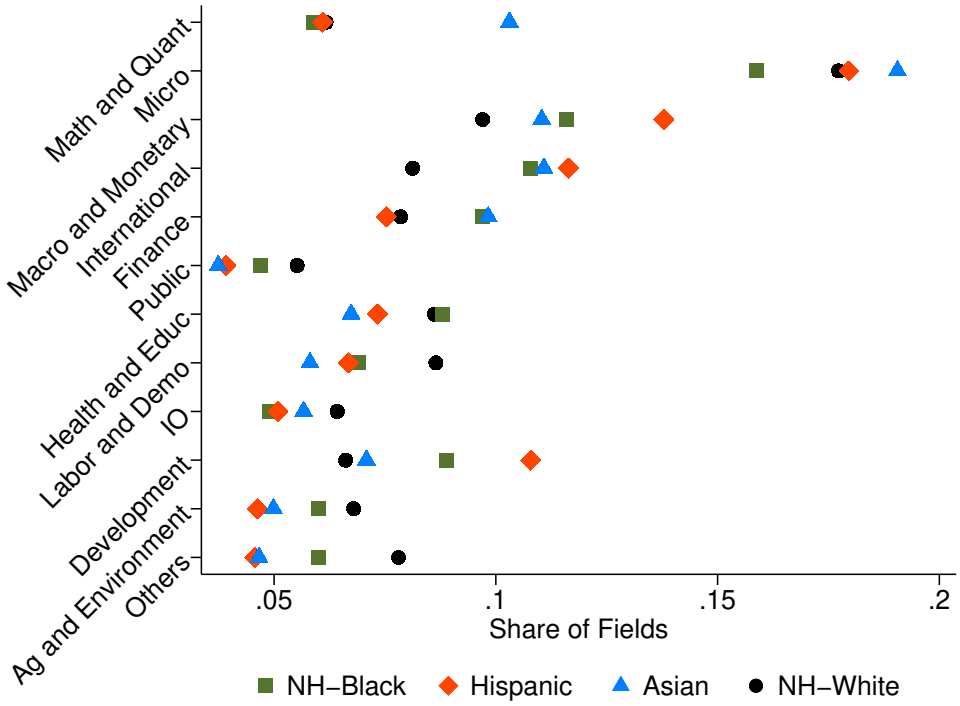
Figure 1: SHARE OF RESEARCH TOPICS AND RACIAL MINORITY AUTHORS OVER TIME



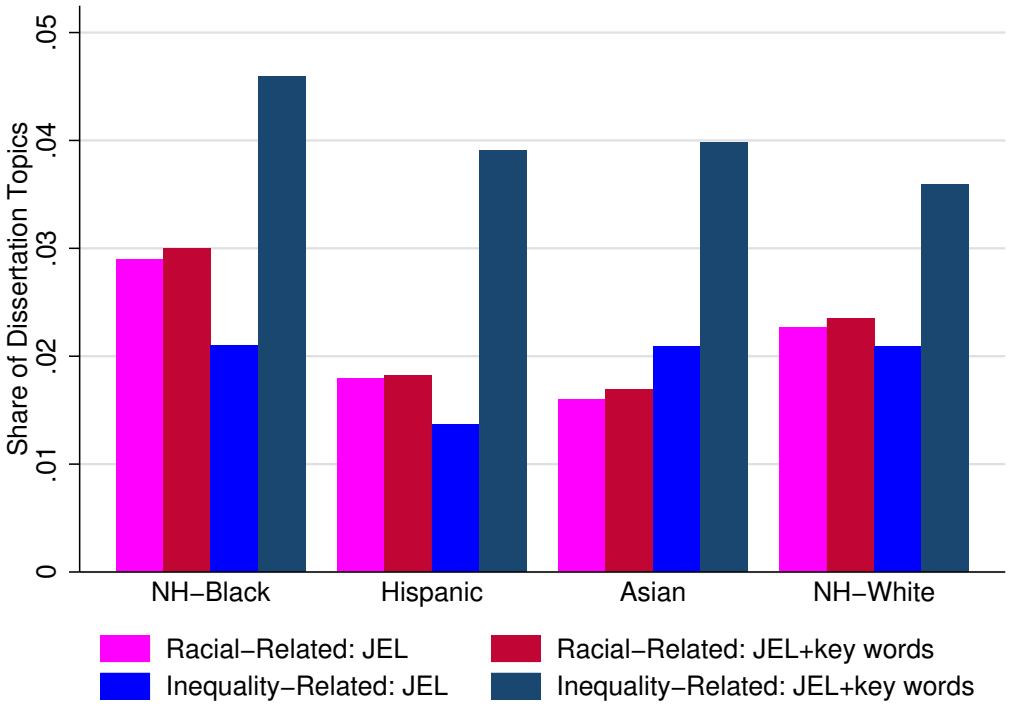
Notes: This figure plots the yearly share of dissertations with racial/inequality topics (left axis) and the share of each race/ethnic group among dissertators (right axis).

Figure 2: SHARE OF PRIMARY RESEARCH FIELDS, BY RACE / ETHNICITY



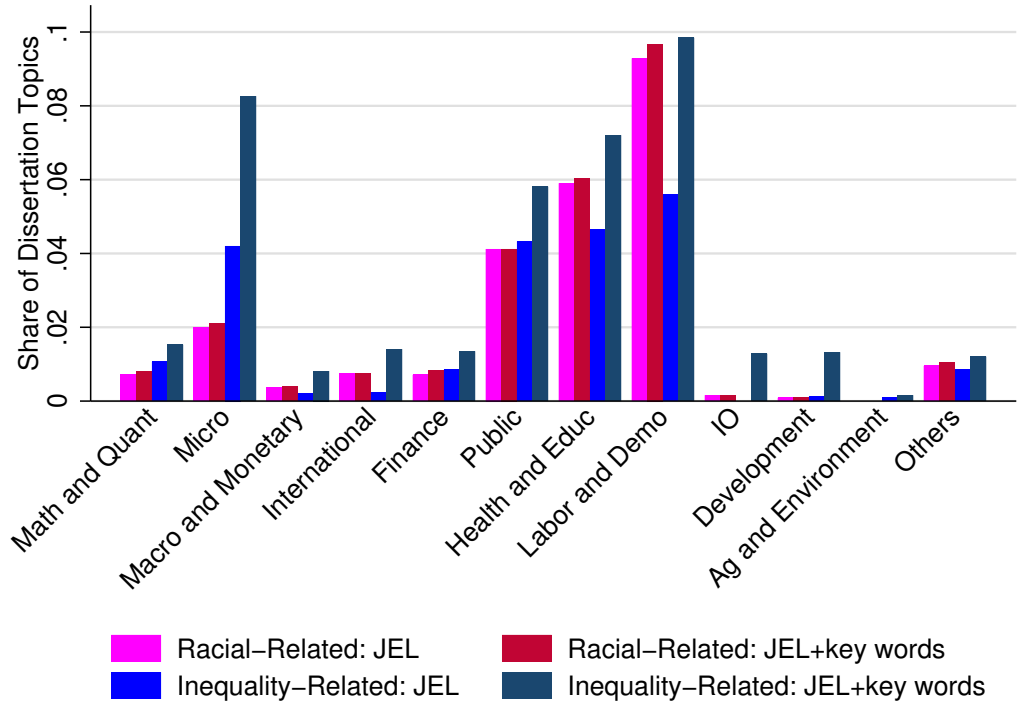
Notes: This figure shows the share of primary dissertation fields within each race/ethnic group.

Figure 3: SHARE OF DISSERTATIONS ON TOPICS, BY RACE / ETHNICITY OF AUTHOR



Notes: This figure shows the share of dissertations related to race/ethnicity and inequality according to the race/ethnicity of the author.

Figure 4: SHARE OF DISSERTATIONS ON TOPICS, BY FIELD



Notes: This figure shows the share of dissertations related to race/ethnicity and inequality according to the primary field of the dissertation.

Table 1: AUTHOR DEMOGRAPHICS AND RESEARCH ON RACE

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Race research: JEL (sample mean: 0.020)					
Female	0.006***	-0.001	0.005**	-0.001	0.004	-0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Asian	-0.013***	-0.009***				
	(0.002)	(0.002)				
Hispanic	-0.005*	-0.002				
	(0.003)	(0.003)				
Non-His black	-0.001	0.001				
	(0.005)	(0.005)				
Black/Hispanic			-0.001	0.001	-0.004	-0.002
			(0.002)	(0.002)	(0.003)	(0.003)
Female* Black/Hispanic					0.013*	0.011*
					(0.007)	(0.007)
Primary field F.E.		Y		Y		Y
R-squared	0.034	0.064	0.033	0.063	0.033	0.063
Panel B	Race research: JEL+key words (sample mean: 0.021)					
Female	0.006***	-0.000	0.006***	-0.001	0.004*	-0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Asian	-0.013***	-0.009***				
	(0.002)	(0.002)				
Hispanic	-0.005*	-0.002				
	(0.003)	(0.003)				
Non-His black	-0.000	0.002				
	(0.006)	(0.005)				
Black/Hispanic			-0.001	0.001	-0.004	-0.002
			(0.003)	(0.002)	(0.003)	(0.003)
Female* Black/Hispanic					0.011*	0.010
					(0.007)	(0.007)
Primary field F.E.		Y		Y		Y
R-squared	0.034	0.064	0.033	0.063	0.033	0.063

Notes: Size is 24,723 in all regressions. Ph.D. cohort / year and institution fixed effects are controlled. Standard errors are clustered at institution-cohort level. Significant level at ***p<0.01, **p<0.05, *p<0.1.

Table 2: AUTHOR DEMOGRAPHICS AND RESEARCH ON INEQUALITY

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A	Inequality research: JEL (sample mean: 0.020)					
Female	0.009***	0.006***	0.009***	0.006***	0.010***	0.006***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Asian	-0.003	0.000				
	(0.002)	(0.002)				
Hispanic	-0.008***	-0.005**				
	(0.003)	(0.003)				
Non-His black	0.002	0.004				
	(0.006)	(0.006)				
Black/Hispanic			-0.005**	-0.003	-0.004*	-0.002
			(0.002)	(0.002)	(0.003)	(0.003)
Female* Black/Hispanic					-0.002	-0.003
					(0.006)	(0.006)
Primary field F.E.		Y		Y		Y
R-squared	0.021	0.037	0.021	0.037	0.021	0.037
Panel B	Inequality research: JEL+key words (sample mean: 0.038)					
Female	0.009***	0.004	0.009***	0.004	0.008**	0.003
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Asian	-0.001	0.004				
	(0.003)	(0.003)				
Hispanic	0.002	0.006				
	(0.004)	(0.004)				
Non-His black	0.010	0.013*				
	(0.008)	(0.008)				
Black/Hispanic			0.004	0.006*	0.001	0.004
			(0.004)	(0.004)	(0.004)	(0.004)
Female* Black/Hispanic					0.012	0.010
					(0.009)	(0.009)
Primary field F.E.		Y		Y		Y
R-squared	0.031	0.055	0.031	0.055	0.031	0.055

Notes: Size is 24,723 in all regressions. Ph.D. cohort / year and institution fixed effects are controlled. Standard errors are clustered at institution-cohort level. Significant level at ***p<0.01, **p<0.05, *p<0.1.