The Effects of Principal and Teacher Demographic Similarity on Teacher Turnover and School Climate

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Background

K-12 public education has been suffering from high rate of teacher turnover.
- It is related to lower teacher retention in K-12 public schools, it might be hard to maintain the quality of teachers.
- Ultimately, it decreases the quality of K-12 public education.

Previous studies have illustrated the racial composition of teachers matters for student’s outcomes and makes outcomes differ across student groups.
- Minority students can achieve much more academic performances when they are taught by teachers who share their racial backgrounds (Clofteter et al., 2007; Dee, 2005; Egalite et al., 2015; Grissom & Redding, 2016; Linsay & Hart, 2017).
- These consequences are enough to urge we are required to take a look at the diversity of teacher’s composition in public schools.

Theoretically, this paper is motivated by representative bureaucracy and similarity-attraction theory.
- It is possible that principals prefer teachers who have similar demographics to whom has different ones. At the same time, teachers are also feel comfort when they work with principals with similar characteristics (Bartenan and Grissom, 2019).

There are few researches on examining how principal’s racial background affects teacher turnover (Grissom & Keiser, 2011, Bartenan & Grissom, 2019).

Research Questions

- Are teachers more likely to stay in schools when they work with a principal who shares similar racial background?
- Are teachers more likely to satisfy their principal when he or she shares similar racial background?

Methods

Pr(Turnover_{ipst} = 1) = \beta_1 (Blackmatch_{ip}) + \beta_2 (Whitematch_{ip}) + S_{it} + Z_{ipst} + y_{it} + \delta_i + \tau_t + \epsilon_{ipst}

Where Pr(Turnover_{ipst} = 1) is a probability indicator for teacher i, in school s, principal p, year t.

Principal characteristic controls: years in a principal experience, indicator for annual salary.
School characteristics controls: total enrollment, proportion of Black students, proportion of Hispanic students, proportion of students qualifying for free/reduced price lunch program.

Data

Longitudinal NYCDOE Pedagogue data (From 2006-07 to 2016-17 school year)
- Reports principals and teachers data

The NYC School Survey – Teacher Survey
- Pooled survey from eleven panels (From 2005-06 to 2016-17 school year) by school-year level

Analytical Sample: teachers in NYC public schools (N=715,996)

<table>
<thead>
<tr>
<th>Model</th>
<th>Black Principal x Black Teacher</th>
<th>White Principal x White Teacher</th>
<th>Teacher Fixed Effects</th>
<th>Year Fixed Effects</th>
<th>School Fixed Effects</th>
<th>Observations</th>
<th>R²</th>
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<td>YES</td>
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<td>0.269</td>
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</tbody>
</table>

Model (1): The principal places a high priority on the quality of teaching at this school.
Model (2): There is a person or program in my school to help students resolve conflicts.

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Results

This paper finds consistent negative effects of matched teacher-principal racially on teacher turnover.
- It also has some positive effects on school climate according to teacher’ survey.
- These results might suggest policy implications for public schools that increasing diversity of teachers could improve the quality of education.