Is There Shortage of Rural School Principal? Examining the Rural Principal Shortage Using Application Information

Minseok Yang*, Se Woong Lee**, Peter Goff*

* University of Wisconsin-Madison, **University of Missouri-Columbia

Motivation
- Many studies highlight the shortage and high turnover of principals
- However, little is known about principal shortage, application pool, and hiring results in rural schools

Research Questions
(1) How many applicants apply to a leadership position in rural schools?
(2) To what extent does the application pool differ by rural communities (rural fringe, rural distant, and rural remote)?
(3) What do district-level characteristics attract more applications? And what do individual characteristics lead an applicant to be hired for principalship?

Application Pools, Patterns, Hiring Results
- Application information further reveals how application pool differs by school places and who gets hired in principal position
- Little evidence exists how the application pool in rural schools as well as the specific rural communities (rural fringe, distant, and remote) differ from nonrural schools (e.g., gender, race/ethnicity, experience)
- We know little about how candidates’ application patterns are related to district characteristics, particularly in rural schools.
- No studies have explored principal hiring contingent upon candidates’ characteristics in rural schools.

Data & Empirical Strategy
- Rural principals take many responsibilities with limited resources
- Geographical distance from urbanized areas involves opportunities as well as challenges (e.g., high levels of social cohesion vs. burden for school-community linkages)
- Rural schools are not all similar in structures and organizational systems (e.g., rural fringe, rural distant, and rural remote defined by NCES based on distance from urbanized area)
- However, rural schools are described as a singular story with the labels of white, quite, and backwards
- While studies on principal shortage depend on perceptions of superintendents and survey results, leading to mixed results, no research examines with job application data, particularly in rural schools as well as specific rural contexts

Results
Q1: Number of Applications per Vacancy by Rural Subtypes
- Statewide job application/vacancy data in WI between 2014 and 2016
- The data include a rich set of information (e.g., Number of applicants, candidate demographics)
- Q1: descriptive statistics
- Q2: to what extent applicants’ characteristics differ by school location (logit model)

Results
Q3A: Relationship between Number of Applications and District Characteristics
- As farther away from an urbanized area, number of applicants tend to be substantially reduced, but rural-remote receives at least 30 applications per vacancy; Rural school principal shortage in terms of number of applications seems to be not existing
- Rural application pool shows less portion of female and applicants of color, as compared to urban vacancies. As a vacancy in the rural area is farther away from an urbanized area, the estimated magnitudes also decrease.
- While there is little evidence female candidates are less likely to be hired for principalship in rural schools, applicants of color face a difficulty to become a school leader in rural schools.

Q2: Differences in Application Pool (Odds Ratios)
- Rural-Fringe
- Rural-Distant
- Rural-Remote
- Q3B: Applicant Characteristics Related to Being Hired (Odds Ratios)
- While there is little evidence female candidates are less likely to be hired for principalship in rural schools, applicants of color face a difficulty to become a school leader in rural schools.