What Do We Know About the Use of Value-Added Measures for Principal Evaluation?

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Principals

• Play a central role in *how well a school performs*
  – Establish school goals and strategies
  – Lead their schools’ instructional programs
  – Recruit and retain teachers
  – Maintain the school climate
  – Allocate resources

• Play a central role in *current policy approaches*

• Interest in understanding principal effectiveness and improvement
Evaluation

• Recent policy interest in using student test scores to evaluate school personnel
  – New York: Educational Law 3012-c (2010), 20-40%
  – Louisiana: House Bill 1033 (2010), 50%
  – Florida: Senate Bill 736 (2011), 50%

• A relatively large literature has focused on the issues surrounding the use of student growth models to measure teacher effects

• In contrast, very little research on using test scores to do the same for principals.
Aren’t the principal issues like the teacher issues?

• In some ways, yes
  – Which test you use matters
  – Student sorting across schools can create bias if not well addressed
  – Test measurement error, sampling error, and other shocks introduces error in effect estimates

• But in some important ways, no
  – Principal effects dispersed over entire school, so the principal can affect a given student in more than one year
  – Indirect effects on students mediated by resources that are only partially under principal’s control
  – For teachers, we can compare within the same school to combat sorting and control for school contextual factors—but only 1 principal per school at a time
Mechanisms of Principal Effects

• Clear process by which teachers affect students

• Less clear for principals

• Two salient issues
  – Time span
  – Domain of control

• Assumptions about each of these lead to different approaches to measurement
Approach 1: School Effectiveness

• Assume the principal...
  – Immediately affects schools
  – Has complete control over all aspects of schooling outside of who the students are

• Principal effectiveness = School effectiveness

• Similar to the approach used for teachers

• Validity
  – Concern that principals, especially new principals, can not influence (and should not be held responsible for) all aspects of the school
Approach 2: Relative School Effectiveness

- Assume the principal...
  - Immediately affects schools
  - Inherits an existing school with many features out of his/her control

- Principal effectiveness = School effectiveness relative to other principals who have led the same school

- Validity
  - Appealing given substantial differences in schools
  - But, schools change
  - Small number of principals per schools over the period of available data leads to small (potentially idiosyncratic) comparisons.
Approach 3: School Improvement

• Assume the principal...
  – Takes time to make changes and that their impact builds the longer they lead the school

• Principal effectiveness = *Improvement* in school effectiveness during the principal’s tenure

• Validity
  – Appealing because principals probably do affect students by improving the school over time
  – If the school was already improving may falsely attribute to current principal
  – Measuring change compounds imprecision - may be too imprecise to provide information
Current State of Knowledge

• Compared to knowledge about teacher value-added
  – Much smaller literature
  – Based on different conceptions of how principals affect students

• Model Choice Matters
  – Affects which principals look good
    • School improvement estimates not similar to school effectiveness or relative school effectiveness measures
  – Affects how important principals appear for student learning
    • School improvement approach leads to small estimates of principal effects, potentially due to measurement error
    • School effectiveness models show greater effects than relative school effectiveness models
  – Affects which principals receive evaluations
    • Far fewer for improvement – need multiple years in a school
    • Far fewer for relative school effectiveness – need multiple principals per school
Current State of Knowledge

- Comparison to other measures
  - For example, district evaluations, self-evaluations, staff evaluations...
  - No relationship with school improvement measures
  - School effectiveness models closer to other measures
    - Could results from shortcomings in other measures

- Summary
  - School Improvement as Principal Effectiveness
    - Face validity
    - Some variation across principals (British Columbia study)
    - Substantial error, limited coverage
  - Relative School Improvement
    - Potentially idiosyncratic
    - Low coverage
  - School Improvement
    - Best coverage, lowest error, best alignment
    - Still may not be right – low face validity
What More Needs to be Known

• Tests
  – How different are estimates with different outcomes

• Mechanism: How principals affect schools
  – Timing
  – Features of control

• Use
  – Given imperfections how useful for improvement
What Can’t be Resolved by Empirical Evidence?

• Whether VA is a productive source of information for evaluation

• How to balance value-added with other measures

• Both depend on ability to collect and processes additional information – costs and benefits
Conclusion

• Inconsistencies and drawbacks of principal value-added measures lead to questions about whether they should be used at all
  – Not an accurate measure of effectiveness
  – Lacks reasonable validity when calculated in a similar fashion to teacher value added
  – Other approaches are conceptually beneficial but difficult to implement: imprecise or small coverage

• Even if inaccurate could signal importance of student performance

• Other measures have similar problems.

• Currently it takes thought and multiple measures to convincingly assess principal effects.
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