The Impact of State Intervention on School District Fiscal Performance: Evidence from a Regression Discontinuity Design

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Abstract

There are numerous works, either academic or practitioner, on the impact of state-level intervention on fiscal performance of monitored local governments. However, very few of them examine these effects in a causal sense. This paper contributes to this literature by studying a fiscal monitoring and intervention system in Illinois. This program was implemented by Illinois State Board of Education (ISBE) and named "School District Financial Profile" (SDFP). Every fiscal year since 2003, SDFP calculates a total financial score for each school district based on fiscal data from their prior fiscal year annual financial reports. The calculation is determined using a weighted average score for five financial indicators: Fund Balance to Revenue Ratio (FBRR), Expenditure to Revenue Ratio (EXRV), Days Cash on Hand (DCOH), Percent of Short-Term Borrowing Ability Remaining (STB), and Percent of Long-Term Debt Margin Remaining (LTD). The total score is employed to provide an overview of school district finances, and to measure the fiscal health by placing each district into one of four categories: Financial Recognition (best), Financial Review, Financial Early Warning and Financial Watch (worst). ISBE will monitor districts with the two worst designations (indicating more serious financial difficulties) tightly and provide intervention: regionally-based finance consultants from ISBE are available to offer technical assistance and help financially distressed districts with financial data analysis, proper accounting for state and federal funds, and development of sound financial management practices.

In this paper, I use district-level administrative data from ISBE to examine the causal effect of state intervention on fiscal performance of school districts. Instead of using difference-in-differences approach that has been mostly employed in studying this topic (e.g., Thompson, 2016, 2017; Spreen & Cheek, 2016), I design a regression discontinuity (RD) framework by using the exogenous variation in state intervention generated by the cutoffs for each of the five

financial indicators. Taking advantage of the system design of SDFP and the ideally-suited administrative data from ISBE, this study is the first to use the predetermined thresholds of financial indicators to investigate how state intervention influences future fiscal performance of monitored school districts.

I begin by documenting the descriptive relationship between state intervention and school districts future fiscal health. I show that on average receiving intervention is associated with worse future performance (measured by the values of the five abovementioned financial indicators), and more performance improvement (measured by the gains of financial indicator values). However, OLS estimates are biased due to omitted variables and mean reversion. I next consider the causal effects of state intervention. I find that the magnitudes of RD estimates are small and precisely close to zero, with both values and gains in values as the outcomes. These results are robust with different bandwidths on either side of the cutoff.

However, in heterogeneity analysis, I document statistically significant positive impacts on financial indicators reflecting long-run fiscal health in a relatively long term for districts with certain characteristics. Splitting by types of school districts (i.e., elementary, high school, and unit districts), I find that elementary school districts witness significant gains in LTD in three to four years since the intervention: the intervention increases the long-term debt capacity remaining by 15-20 percentage points more on average for districts just receiving the intervention, compared to those just not. This indicates that they are less reliant on issuing long-term debt in order to meet obligations. Similarly, with respect to accrual basis school districts, state intervention leads to greater improvement in EXRV for treated districts relative to untreated: the intervention decreases the value of Expenditure to Revenue Ratio by 0.035-0.050 unit more on average for districts barely receiving the intervention, suggesting that their budget is becoming more structurally balanced.

Keywords: Education Finance, State Intervention, Fiscal Performance, School Districts