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Determinants of School Performance in the San Diego Unified School District

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Executive Summary

Given the debates around academic achievement from the local to national level, and the extraordinary amounts of data on student achievement that is currently available – most recently with the release of the Academic Performance Index (API) statewide, it is interesting and useful to step back and to look more carefully at the factors that influence these scores.

To do this, I conducted a statistical analysis of student performance in 116 of the 120 Elementary Schools in the San Diego Unified School District using the API which provides a aggregate measure of student performance at the school level as the dependent variable. Three factors which can be considered outside the control of the school: 1) student socioeconomic status (as measured by percent of students receiving reduced or free lunch); 2) the stability of a school's population from year to year (the percent of students who first attended the school within the current school year who were also students in the same district the previous year); and 3) English language fluency (percentage of English learners in the school) accounted for an astounding 80.6% of the variance in the schools' API index – that is, these three factors explain approximately 80% of the difference between school scores at the district level. Adding teacher quality to the model (as measured by percent of teachers that are fully credentialed) explains an additional 2.1% which is statistically significant. Adding parent education to the model adds another 2.2% which is likewise statistically significant.

This analysis suggests two important points. First, the Academic Performance Index as it is currently configured is largely driven by the socioeconomic conditions of the school and should therefore be used with care as an instrument for public policy. However the second conclusion that can be drawn is more optimistic -- *the positive and statistically significant effect of the variable measuring teachers' credentials suggests quite strongly that improving the quality of teachers in a school has a positive effect on a school's overall performance.* Because the API is an aggregation of the performance of individual students, this provides indirect evidence that increasing teacher quality at a school will have a strong effect on student achievement. Yet credentialed teachers also tend to be concentrated in schools with lower percentages of students receiving reduced or free lunch, lower concentrations of English learners, and schools with more stable school populations, all of which are strongly associated with the racial demographics of the school's population. *This analysis provides*

evidence that the schools in most need of high quality teachers are not only lacking, but would benefit from this resource.