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Does Mayoral Control Improve Performance in Urban Districts?

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Mayoral appointment of school boards is gaining national prominence as a reform model. The public is paying growing attention to mayoral control as an option to improve public school governance. In 2006 and 2007 the Gallup Poll surveyed the public's view on mayoral control in schools. In 2006, only 29 percent was in favor, but in 2007 that number had jumped to 39 percent. Of the parent respondents, 42 percent were in favor.[1] Such trends in public opinion, combined with growing media attention to mayoral involvement in urban schools, elevate this topic in today's education policy circles. The 2007 annual meeting of the National Conference of State Legislatures drew a huge audience to the session on mayoral control and the future of school boards. Currently, almost two-thirds of the states have passed legislation authorizing either the city or the state to govern and manage school districts that are underperforming. An appointed school board now runs the district in New York, Philadelphia, Chicago, Boston, Baltimore, Cleveland, Providence, Trenton, and Washington DC., among others.

The growing public support for mayoral control suggests the promise of the reform's core design—an integration of electoral accountability and education performance at the system-wide level. The question is "Does Mayoral Control Work to Raise District Performance?" This paper addresses this critical question with evidence on the effects of mayoral control on student achievement and management performance. In the last several years, we have conducted extensive analyses on the nation's one hundred big-city school systems, which allow us to compare systems that are governed by an elected board and those that are under mayoral control. We found that mayoral control has a statistically significant, positive effect on student achievement. Mayoral control also improves management and financial administration. This paper will highlight these results on student achievement as well as discussing the key factors on why mayoral control works in urban districts.

In essence, mayoral control allows the city's public, parents, and taxpayers to hold the mayor and his/her appointed school board ultimately accountable for school performance. This governance reform, which can be characterized as "integrated governance," is designed as a corrective to sprawling administrative and political subsystems with too much fragmentation.[2] Mayoral control, when properly designed and implemented, can enhance educational accountability. In light of the rising importance of this strand of reform, this paper addresses issues that are critical to system-wide improvement: What are the effects of mayor-appointed school board on student achievement? Do institutional checks and balances account for district performance? Does mayoral control widen or narrow the achievement gap? Do mayors spend more in administration? Have more resources been provided for teaching and learning? These issues of accountability and management will form the basis for considering the future of mayoral control in urban districts.

Assessing Academic Performance

In a recently published book, The Education Mayor: Improving America's Schools, my collaborators and I have completed the most comprehensive empirical analysis to date on the effects of mayoral control on student outcomes and management performance.[3] We examine 104 big-city school systems located across 40 states, and we synthesize standardized achievement data from thousands of schools. The study examines multiple years of data by using a mixed methods approach, applying both statistical models and conducting indepth case studies that connect the macro policy conditions to the micro level practices in a sample of urban classrooms. Since the detailed research design and methodologies can be found in the book, this section will highlight a few of the study's key findings on student achievement as well as tables on school performance in middle grades that are not part of the book.

Focus on District-level Performance

Because the mayor operates at the system-wide level and the enabling conditions at the district level may take some time to affect student achievement, our study looks at district wide performance year-to-year across urban districts. We analyze student achievement over the period 1999-2003 in a purposeful sample of 101 urban districts for which we have school-level achievement data from the National Longitudinal School-Level State Assessment Score Database (NLSLSASD). We examine the core subjects of reading and math outcomes separately. In some districts for some years, especially the early years of 1999 and 2000, some states did not have achievement data in the NLSLSASD. Accounting for these data constraints, for elementary achievement analysis we have 451 district-year observations for reading achievement, and 449 observations for math achievement. These observations include the districts with some degree of mayor-appointed school board: Chicago, Boston, Baltimore, Cleveland, Detroit, Philadelphia, Oakland, New Haven, Jackson, New York, and Providence. Washington, D.C. is not included in the achievement analysis because it is not possible to standardize DC performance against other districts in the state, i.e., DC is a single-state district. Our analysis does not include the small and mid-size districts of Harrisburg, Hartford, and Trenton. For high school analysis, where there is less data available, we have 264 observations for reading and 268 observations for math. The smaller number of observations limits the inferences we can make about high school achievement.

The use of panel data allows us to look at two types of changes in governances. First, we have differences across districts: some districts have mayoral control in a given year, while others have elected school boards. Second, we observe changes within a district over the period

of 1999-2003. In Oakland, for instance, elements of mayoral control are not put into place until 2000. In Philadelphia, governance changes in 2001.

Considering Value Added Function

In keeping with the social science approach on the relationship between educational inputs and outputs, we estimate the value-added function as measured in terms of standardized district achievement, relative to other districts within the same state. Standardized achievement is measured as the z-score of the district, for a given year. We include a series of input and control variables, with greatest interest in the effect of governance arrangements on district output. Again, we discuss in greater details our methodological approach in our book.

Introducing the notion of value-added through the use of a lagged achievement control variable enables us to better isolate the effects of governance changes, distinct from influences such as unobserved family background influences, e.g., parental involvement. If the assumption holds that parental involvement is roughly the same year to year (e.g., active parents in year t-1 are still active in year t and vice versa), then those parental involvement factors will be captured by the lagged achievement variable. To the extent that new factors, which did not determine the previous year's achievement, enter into the present year's achievement production, our model has omitted variables.

Three institutional dimensions of mayoral control

Our analysis has identified three key dimensions in which mayoral control can be institutionalized: the presence of a mayor with a vision on education accountability (or what we characterized as "new style" mayor), formal authority for that mayor to appoint a majority of the school board, and whether the appointive power is restricted. Because we are not sure which

aspect of mayoral control may be most salient, we consider each aspect independently before summing them up into an index. Based on these three dimensions, we create three dichotomous variables. Each variable measures a unique aspect of mayoral control. We use this method – a series of Yes/No questions about mayors' formal powers – because it avoids the almost impossible task of somehow specifying a mayor's precise "level of control". For instance, it is not possible to accurately assess whether a mayor has "a lot" or "a little" power. Instead, we try to get at this by thinking about factors which are likely to be highly correlated with mayoral power in the education realm. We consider three factors:

1) *NEW_STYLE*: A dichotomous variable, coded as 1 if the mayor has **adopted a new style of governance**, integrating electoral accountability and school performance. The variable is coded 0 if the school system remains governed within an old style regime.
2) *MAJORITY*: A dichotomous variable, coded as 1 if the mayor has the power to **appoint a majority** of the school board. The variable is coded 0 if the mayor can appoint zero or any sub-majority of the board.
3) *FULL*: A dichotomous variable, coded as 1 if the mayor has **full appointment power** for school board, with no requirement of City Council, nominating process, or other formal approval. The variable is coded 0 otherwise.

Because the effectiveness of mayoral control may also depend on the cumulative effect of these powers, we add an additional index variable that sums over the four dimensions above. This index variable, labeled *MAYOR_INDEX*, has a low value of 0, and a high value of 3. We run two sets of models. In "Model A" we include the three measures of mayoral control independently. This allows us to test their relative contribution to student achievement and other outcomes. We

then run “Model B” in which we replace the three individual measures with the composite Mayor Index.

Our data set allows us to look over many districts and across multiple years. This means that our unit of observation is not simply the district (as it would be if we had only data from one year), but the “district-year.” The values of the mayoral control variables change, over time, within the same district.

Policy and political variation across the group of school districts we have labeled “new style” serves as a reminder that institutional change may not necessarily be tied to change in mayors’ personal priorities or governing styles. Along the gradation of partial to complete mayoral control, we cannot be entirely sure how the formal role of the appointed school board matches up to their actual role. At issue is the question of institutional checks and balances. Is the appointed board simply rubber stamping the mayor’s requests, or (even if appointed), do they voice opposition? Do formal measures, such as requiring approval of the budget by the City Council, really provide a check against mayoral power? From a different angle, does giving the mayor formal powers such as hiring the school district CEO actually empower the mayor relative to other interests in the city? These are all great questions, but also questions that we cannot readily introduce into an empirical model. We cannot quantify factors such as “informal influence” or “policy priority” with available datasets. We do, however, take into consideration a number of control variables, such as poverty, racial/ethnic composition of the students, city governance, private school enrollment, revenues, and special education and English Language Learner populations, among others.

A related question concerns the duration of mayoral control, timing, and possible lag effects. It could be the case that mayors are not able to bring about changes in the school system

until they have been able to establish a new management regime. To the extent that this is true, we would expect to see the effects of mayoral control not in the same year as the reform is implemented, but in later years. Although our data constraints affect the extent to which we can evaluate lag effects, we run separate models where we look at one-year and two-year lagged effects. In these models, we are looking at the effect of governance structure in year *t* on student performance in year *t+1* and year *t+2*. With more years of data going forward in the near future, we may be in a better position to evaluate the long term effects of mayoral control, beyond a one- or two- year window.

A variable that we are not able to measure across all districts is the extent to which the mayoral reform has become institutionalized through the multi-layered policy organizational system. For instance, have management practices really changed after one year of mayoral involvement? Or, how long will it take for mayors to affect teaching and learning in their city's schools? This is related, but not the same as, the simple duration of the reform. While a reform is likely to take deeper root the more years it has been in practice, it is not clear that just because a reform has been in place for multiple years it will not necessarily be implemented widely. For instance, a mayor may be in power for three years, but if that mayor makes few systematic changes, the "duration" of the takeover will not accurately represent the low-level of systemic implementation of the reform.

Mayoral Control Raises Elementary School Performance

With the details of the study design now laid out, we turn to the central question of our study: does mayor control work in raising student achievement? The answer, simply put, is *yes*. More specifically, majority appointment power of school board members is an effective strategy for raising achievement, but that a lack of oversight on the mayor's choices may actually work

against this progress. Furthermore, mayoral control still faces the challenge of poverty and other structural problems that hinder student achievement.

How does mayoral control relate to standardized elementary reading achievement? We see that giving the mayor power to appoint a majority of the city's school board is associated with an increase of .14 in standardized elementary reading achievement. When we give the mayor two years, and look at the two-year lag model, we see that not only is there a positive association with majority appointment power, but new style mayors (those who focus on accountability) bring about a .15 standard deviation increase as well. Driven by these two aspects of mayoral control, the composite mayoral control index is significantly and positively related to achievement in both the baseline and 2-year lag models. At the same time, however, allowing the mayor full power to appoint school board members, without oversight from a nominating committee, is inversely related to elementary reading achievement.

What happens when we turn our focus on standardized elementary math achievement? We find that a similar pattern emerges, with the difference being that the positive effects of new style mayors are only seen after two years. In the two-year lag model, the presence of a new style mayor is associated with a .14 standard deviation increase in standardized elementary math achievement. We observe the same inverse relationship between math achievement and allowing mayors full appoint power without committee oversight.

Putting the evidence from reading and math analyses together, it is clear that mayoral leadership has made a difference. It may take a couple of years, however, for that difference to be seen in aggregate, district wide achievement results. At the same time, not putting any restrictions on who the mayor appoints to the school board seems to dampen achievement levels. In light of these findings, a few policy implications are immediately evident. First, optimal

systems should design mayoral control systems to include nominating committees which provide the mayor with a slate of candidates from which to choose school board members. Second, evaluation of mayoral control should recognize that improvements from mayoral control may take at least two years to become evident in aggregate statistics.

To fully understand these mayoral control results requires us to examine the rest of the contextual variables included in the model. The most important relationship to discuss is the strong predictive power of previous district achievement on current district achievement. This is true in both reading and math, and it suggests that it is difficult to change the absolute position of a district's achievement. If a mayor inherits a district that is performing near the bottom of the pack, no amount of skill from that mayor is likely to make the district leapfrog to the top. Instead, the more realistic goal should be for the mayor to improve the trajectory of the district's performance. Our results are consistent with this pattern of tangible gains. When we look at where the districts start out, we see that an increase of .15 standard deviations will not rapidly move mayor-led districts above the mean in their state. It does, however, put them one important step closer to that goal.

A consistent finding across both elementary achievement models is a significant, inverse relationship between standardized achievement and the percentage of school-age children attending private schools. This may be an indicator of "brain drain," with some of the city's best students opting out of the public school system and into private options. Not surprisingly, the percentage of children in poverty in a district is inversely related to achievement. This is consistent with the long-standing finding that students with lower socio-economic backgrounds perform less well in school.

Our study also finds significant, inverse relationships between achievement and the percentage of Hispanic and African-American students. The magnitude of these effects is great, approximately three times as large as the effects of mayoral control. As discussed earlier, because our data is aggregated up from the school to the district level, we need to be wary of ecological inference issues. Nevertheless, in light of scholarship that has identified a persistent racial gap in American public education, these results may suggest that while institutional governance changes can raise overall district performance, there is still much to do to lift the achievement of all city students.

Progress in lowest performing and higher performing schools

A promising effect of mayoral control lies in the academic improvement of the district's lowest performing schools, such as the lowest-25th-percentile schools. To be sure, these schools consist of a higher concentration of students eligible for free and reduced-price lunches. In most cases, these schools are also educating greater percentages of African American students than the overall district average. Despite these structural challenges, lowest-25th-percentile schools in mayor-controlled districts show steady progress. Between 1999 and 2003 where data is available, these schools made steady in the percentage of students who were tested proficient in the state annual benchmarking-grade assessment. As shown in Table 1, the lowest 25th-percentile schools in Baltimore's 3rd grade reading improved from 5.6% to 32.7%. In math, Chicago's 5th grade math improved from 10.4% to 27.5% in the lowest performing schools, while Cleveland's 4th grade improved from 14.8% to 30.5% during 1999 and 2002. Similar trends in middle grades are shown in Table 2.

While tracking low performing schools serves as a useful first step in evaluating mayoral control, we need to take additional analytic steps to specify the effects of mayoral control on the

achievement gap. Specifically, we need to develop a measure that is comparable across districts. For analytical purpose, we focus on the ratio of the top quarter of schools to the bottom quarter of schools. We refer to this as the "75/25 Ratio," as it represents the average performance of schools in the 75th percentile and above, divided by the average performance of schools in the 25th percentile and below. The 75/25 Ratio becomes our dependent variable in our statistical analysis of the achievement gap.

To provide a sense of what these ratios look like, Tables 3 and 4 present the inequality ratios for the mayoral control districts for elementary grades. Most of the ratios hover around the value of 2, implying that schools in the top quarter of the district score twice as well on the state achievement test than do their counterparts in the bottom quartile. Looking over the time span of 1999-2003, it is difficult to make generalizations about trends across districts. Chicago's achievement gap during this period remains roughly the same for elementary reading and math.

Specifying how Mayoral Control Affects Achievement Inequality Ratio

To better understand what explains these inequality ratios, we turn to multivariate analysis similar to the analysis conducted for estimating the overall district-level performance. Here, the unit of analysis is the grade-district-year. For each year 1999 through 2003, we measure the 75-25 ratio as it is available for different grades across different districts. In this part of the analysis, we look at all the 100 districts in the sample, not just those with mayoral control. Our data is *school-level* data, which means that as a prerequisite, a school district must have enough schools in a particular grade to consider the inequality spread between them. A district with only four schools, for instance, would be too prone to outliers. In order to be included in our analysis, our decision rule was that a particular district-grade must have at least 10 schools. Since school districts typically have more elementary schools than middle schools, and more middle

schools than high schools, we separated out our regressions into separate elementary and middle school categories. The middle school category only had 107 district-grades with at least 10 observations, and because of this skewed and reduced sample, we focus solely on the elementary grades.

Some districts have more than one grade worth of data available, and consequently they supply more of the observations in our analysis. Because different grades are involved, we introduce the variable $GRADE_i$ to serve as an additional control. If it is the case that certain grades are associated with lower inequality ratios, this control variable will capture that effect. Aside from this addition, however, we examine the relationship between the 75/25 ratio and various inputs using the same production function, state fixed-effects model as we did for the overall district achievement.

Having set up the analysis, we are ready to answer the question: does mayoral control reduce the achievement gap? The answer seems not to be the case, at least in the short run. Although majority appointment power is inversely and significantly related to reading achievement gap, the overall mayoral control index is positively, significantly related to inequality in both reading and math. There also exists a positive relationship between new style mayors and the achievement gap in elementary reading. These positive relationships may be a result of mayors' interests in maintaining high-performing schools in order to anchor middle-class communities in the city. We also find that higher percentages of elected, single-member district board members are associated with greater 75-25 ratios in math, suggesting that this governance arrangement as well can lead to more stratification.

There are other contextual factors that influence the achievement gap. Looking at the non-governance control variables, one draws attention to the strong predictive power of previous

inequality on existing inequality in both reading and math. This result is not surprising, and it reminds us that reducing entrenched achievement inequality is a difficult task. We see that larger per-pupil expenditures are inversely associated with the 75-25 ratio in math, suggesting that greater resources may be effective in reducing the math achievement gap. The only student background variable that is significantly related to the 75-25 ratio is the percentage of special education students in the district. The magnitude of the effect of special education on the gap is quite large, suggesting that it is a large factor in explaining the achievement gap. Interestingly, the measures of minorities in the student body are not significant in these initial models. This may be explained by the fact that in districts with very high minority populations, both high- and low-performing schools will serve primarily minority students.

Our cross-district analysis of 75-25 ratios finds a positive relationship between mayoral control and the ratio in both elementary reading and math. A move from an old style governance regime to a new style governance is associated with roughly a .38 increase in the 75-25 ratio in elementary reading. The magnitude of this impact will depend on what the baseline ratio in a particular city is. In a school district that had about the same inequality as Chicago, the baseline would see the best 25% of schools outperform the lowest 25% of schools roughly 2-to-1. Our analysis suggests that in this district, the introduction of mayoral control would change that ratio to 2.38-to-1.

One way of interpreting the finding that mayors and achievement stratification are positively linked is that mayors, facing competition from both the suburbs and private schools, may need to invest resources into high-performing schools in order to stem ‘brain drain’. In metropolitan areas where districts are competing for high performing schools, it is likely that the city’s overall performance might significantly improve if 2 out of every 10 departing ‘brain

drain' students can be kept. The appointed school boards in Chicago and Philadelphia, for example, have introduced more rigorous curricular programs, such as AP and IB classes, as a strategy to attract well-prepared students. Another explanation may be the assessment structure itself—Chicago's first wave accountability focused schools on the achievement of the top students as well as what is being called the "bubble" students (those on the cusp) whereas NCLB focuses on the bottom quartile. The data in our study capture only the first year of NCLB when schools were just starting to adapt.

It may also be the case that the mayors see greater need to initially establish stronger schools for middle-class residents before tackling the greater problem of turning around the district's worst schools. High-performing schools serve as an anchor for middle class families. In a 2005 keynote address at the Delivering Sustainable Communities Summit, Mayor Daley evaluated his school reforms using that imagery:

> "So how does government help build stronger neighborhoods? … You start by building what I call community anchors: schools, libraries, parks and police and fire stations. *The most important anchor, by far, is the school.*"

Recognizing this link between citywide economic interest and education is important when considering the relationship between redistribution and development. As Paul Peterson has argued, "in some cases redistribution may be economically beneficial … [but] in the contemporary United States … it must be recognized that in most cases redistributive programs have negative economic effects" for the city as a whole.[4] In the realm of education, mayors may see a need to respond to corporate and civic interests that are demanding high-performing schools for the city's tax base.

While we do not go so far as Peterson in arguing that focusing on equality "comes at the expense of the development of the big-city economy," we recognize that mayors are caught between competing interests. Certainly turning around low-performing schools can have positive economic effects. Mayors need to be mindful of the development of a new, skilled labor force that draws on all sectors of the city. Redistributive programs can go hand-in-hand with the citywide interest.

These results may provide some evidence to support the concerns of those who believe that mayoral control will lead toward programs that favor business-interests.[5] But it is important to recognize that although mayoral control is associated with higher 75-25 ratios, it does not appear to be the case that the lowest performing schools are getting worse, as discussed earlier. Instead, they are not improving as fast as some of the highest-performing schools. In this view, mayoral control is a reform that improves student performance overall, but at least initially, improves student performance at a greater rate in the upper quartile of city schools.

These dual findings raise a question of tradeoff and citywide interest that are at the heart of most inequality discussions. Should the city focus on raising the 'floor' of student achievement, or focus primarily on closing the gap, even if that means dropping the 'ceiling'? Clearly, this policy challenge poses trade-offs in terms of local policy priorities. Nonetheless, as many urban centers face increasing economic constraints, there is a need for maintaining a strong, middle-class city population core. High-performing schools are necessary to attract and keep those residents in the city. A strong middle class presence enables the city to build a broader political coalition for intergovernmental lobby. Middle class also forms a strong "voice" to air concerns on education quality. In addressing the challenges of the lowest performing schools, cities must also recognize that their mission may be made quite difficult by the levels of

poverty and special education needs of students in those schools. In this view, the most efficient use of resources may be to make simultaneous investments in both high-performing and low-performing schools, understanding that the overall 75-25 ratio may grow in the short run.

Mayoral Control Shows Positive Results in High School Performance

Before discussing the high school results, it is worth emphasizing that the NLSLSASD does not contain as much high school data as it does elementary data. Part of this is due to states' having less high school data readily available for analysis. But whatever the reasons, the consequences for our analysis are that we are left with a much smaller sample when we examine high school reading and math. Specifically, the NLSLSASD does not contain high school data from these states (for which we did have elementary school data): Alaska, Arkansas, Colorado, Connecticut, Louisiana, Maryland, Minnesota, Mississippi, New York, North Carolina, Oklahoma, South Carolina, and Tennessee. As a result of these dropped observations, we are left with no districts like New York City, where a mayor appoints a majority, but not all of the board. We therefore drop the "majority" category from the analysis. Clearly, a priority for future research in this area remains better data collection and analysis at the high school level. This data collection could cover both achievement scores and other indicators such as attendance, drop out, or graduation rates. We will continue to work in this area, and we hope that others will as well. In light of this need for more data, we proceed cautiously in interpreting the high school results.

With all the data cautions aside, the high school results mirror the elementary results in that majority school board power is significantly, positively associated with higher reading and math achievement, while full appointment power without oversight is inversely related to achievement in both subjects. That the high school results mirror the elementary results gives us

reason to think that they are credible. The same processes that lead to improvements in elementary achievement may be operating for high school achievement. Many reforms, such as reducing central office bureaucracy, can be thought to be grade-level neutral. Less red tape in the central office will benefit all schools, regardless of the grades they serve.

The control variables in the high school statistical regressions are generally related to standardized achievement in the same way they were in the regression models on elementary achievement. Once again, we see a significant inverse relationship between standardized achievement and the percentage of Hispanic and African-American students in the district remains statistically significant in the high school models as well. The magnitude of these effects at the high school level, however, is even more striking. In high school reading, a one unit increase in the percentage of African-American students has more than five times greater impact on achievement than a governance switch to a majority mayoral appointed board. Although the conclusion remains that mayors can produce significant, positive change at the high school level, it is evident that deeper challenges remain for a school system to overcome underperformance.

Governance Matters on Student Achievement

Some skeptics believe that the United States' large, urban school districts face too many external obstacles to ever be effective. Our empirical analysis assesses the marginal effects that a change in institutional governance can have on student outcomes, even controlling for all of the socio-economic challenges that many researchers have documented.

The results of our analysis suggest that a governance change that gives the mayor the power to appoint a majority of the school board will lead to a z-score improvement of .15 to .19 in elementary reading and math. To give these gains some context, we can consider again the starting points of the mayoral control districts, measured as their z-score in 1999. Practically

every district has a negative z-score, and most are z-scores less than -1, meaning that every district in 1999 was performing below the state mean. Most districts were worse than one standard deviation below the mean. If we were to go through the list of other (non mayor control) districts in our total sample, most would have similar z-scores.

Our analysis predicts that two years after the introduction of a mayoral appointed school board, achievement will raise approximately a 0.15 to 0.19 of a standard deviation. This is a significant improvement, even if it does not bring the district all the way back to the state average. The limited time span of our data prevents us from estimating long-term changes, but our look at 2-year lag effects, where the relationship between mayoral control and achievement becomes even stronger, leads us to believe that the long-term effects could be at least a .15 increase, and perhaps more.

In the context of high school achievement, it also appears that mayors can have an impact. Because of our smaller sample and more limited data, we can not make as general inferences as we can for elementary achievement. The indications are positive, however, that mayors may be able to have a similar, positive impact on high school reading and math achievement.

What is encouraging about the elementary achievement results is that they are the *marginal effects of mayoral control*, holding all else constant. In other words, even if poverty levels remain the same, funding levels don't improve, and private school competition holds constant, our model predicts that a governance change will lead to significant, positive improvements in overall district achievement. If mayors can work simultaneously to reduce poverty and increase funding, the overall effect of mayoral control may be even larger in the longer run.

Implications on Governance Change. Our study provides evidence that mayoral control has a positive effect on student achievement. More specifically, mayoral power to appoint a majority of the city's school board is associated with an improvement of about 0.15 to 0.19 of a standard deviation in standardized elementary achievement. However, a lack of oversight on the mayor's choices may slow down this progress. Our analysis suggests that mayors have a positive effect on academic accountability, but they still face an enormous challenge in the context of concentrated poverty and disenfranchisement in urban school communities.

These findings suggest implications for governance redesign. First, depending on local context, it may make sense to include proper checks and balances in the institution of mayoral governance of schools. These mechanisms include nominating committees that provide the mayor with a slate of candidates from which to choose school board members. Second, evaluation of mayoral control should recognize that academic improvements may take at least two years to become evident in aggregate, district-level outcomes. Third, our achievement results are the *marginal effects of mayoral control*, holding all else constant. In other words, even if poverty levels remain the same, funding levels don't improve, and private school competition holds constant, our model predicts that a governance change leads to significant, positive improvements in overall district achievement. If mayors can work simultaneously to reduce poverty and increase funding, the overall effect of mayoral control may be even larger in the longer run.

The positive achievement findings may suggest the viability of a dual strategy that focuses on sanctions and support for failing schools in districts under mayoral control. At the urging of the mayor, much stricter grade promotion policies have been implemented in New York and Chicago. In Philadelphia, the appointed school board started implementing academic

promotion policy to grades 3-9 during 2003-04. Students were required to score at or above the 26th national percentile in both reading and mathematics on the TerraNova test in order to be promoted to 4th or 9th grade. Students who scored somewhere between 20th and 25th national percentile could be promoted if they maintained strong academic records, 90% attendance, and no major disciplinary problems.

At the same time, mayoral control systems implement a wide range of initiatives to build the school capacity and expand learning opportunities for students. Chicago and Philadelphia, for example, created an office of accountability, which conducts ongoing, on-site school quality assessment and initiate school-specific intervention in low performing schools. Philadelphia also focused on high school and middle school improvement based on strategic planning that led to the "secondary education movement." Among the strategies were 9th grade academy, doubling the number of counselors, "credit recovery" program, and consolidation of middle schools and high schools. Students who did not make the grade were offered summer programs and a second-chance summer test for promotion.

Strategic Management of Resources

Mayor-led integrated governance as a reform policy is distinguished by its efforts to improve management efficiency throughout the system. Mayors are in a position not only to support teaching and learning in schools, but to improve the financial and management conditions in which teaching and learning occurs. In addition to improving fiscal stability, integrated governance allows the central decision-making authorities more flexibility in terms of resource allocation. In particular, mayors may be able to reduce school district central office

inefficiencies, thereby allowing for greater investments in teaching, learning, and student service provision. At the same time, however, they are operating in an environment that is often hostile to change. Whether or not mayors can make good on their promise to improve fiscal efficiency remains an open question for which we conducted extensive additional rounds of statistical analysis to address.

To consider the relationship between mayoral appointed school boards and measures of effective management and improvements in human capital, we once again employed a panel data approach. We obtained financial and staffing data for all of our 104 sample districts, and for the entirety of our eleven-year period of observation, 1993-2003. The financial outcome data comes from the Annual Survey of Government Finances conducted by the United States Bureau of the Census. The Annual Survey gathers data on revenues, expenditures, and debt from over 15,000 school districts. In addition to this financial data, we use the National Center for Education Statistics' Common Core of Data (CCD) as a source for our demographic control variables, as well as data on district staffing patterns. Both data sources provide data that is comparable across time and across districts.[6] Using our time series (1993-2003) and cross-sectional (104 districts) data, we employ a fixed-effects regression model similar to the achievement model to examine the effects of mayoral control.[7]

Does mayoral control lead to greater per pupil revenues? Our results suggest that they do not.[8] The power to appoint a majority of school board members is significantly and negatively related to per-pupil revenues. Returning to the general question of whether a mayor can overcome institutional inertia and broader economic trends, the negative relationship between mayoral control and per-pupil revenues suggests that factors beyond the mayor's control may determine revenue levels. Faced with limited options for raising new funds themselves, and

dealing with urban districts that already rely heavily on state and federal compensatory funding, mayors may have to reframe their financial aims. Rather than infuse the school district with new money, they may be forced to work more efficiently with the same or even fewer resources.

Our analysis finds that at baseline, mayoral control is inversely associated with the level of per-pupil spending on instruction and support, but given five years, the percentage spent on instruction and support increases. The distinction between percentage allocation and overall expenditure levels is an important one. Mayoral-led districts aren't spending more, but they're spending differently. Mayor led districts are re-allocating resources to instruction and instructional support.

While mayors may be able to institute changes in school district financial management, it appears that district employees may be insulated from sweeping changes brought in by mayoral control regimes. Mayoral control measures are not statistically significantly related to increases in the percentage of district staff that are teachers, administration, or student support.

Synthesizing the findings of our analysis of mayors and school finances, we believe that the big picture story is one in which the education mayors are becoming more strategic in prioritizing their resource allocation and management. Central to this strategy is the notion of fiscal discipline in constraining labor costs. We see this in the inverse relationship between mayoral control and expenditures. Education mayors, while continuing to partner with labor unions, seem able to leverage cooperation (or concessions) from the school employees' unions. Our case analyses suggest that the education mayors are able to negotiate multi-year contracts with teachers' union and administrators' union. Mayoral success in managing unions has been aided by the enabling legislation that grants mayoral control. For example, the Illinois reform act in 1995 precluded a teachers strike during the first 18 months of mayoral control.

Another aspect of mayors' strategic priorities seems to be improving bureaucratic efficiency by reducing expenditures on general administrative purposes. Mayoral control lowered the level spending on general administration and also reduced the percentage of expenditures on general administration. By reducing general administrative costs, mayors free up more money for instructional purposes and may improve public confidence that wasteful spending is not occurring in the district. The trend of mayors spending more on instructional purposes is also seen in their decision to prioritize this type of spending over non-instructional services such as support services, transportation, and some operations costs.

A third aspect of mayoral control emerging from our analysis is the need for leadership to do "more with less," presumably by improving district efficiency. While we do not have a direct measure of efficiency, we find some circumstantial evidence to suggest new spending priorities under mayoral control systems. Given five years to implement their strategies, mayoral led systems allocate more salaries and wages to instruction, thus prioritizing the resources that most directly affect quality teaching. Another indicator we see are allocations for "other" non-elementary and secondary programs declining at both baseline and five years.

From a broader institutional perspective, city hall is likely to apply fiscal discipline and accountability to the school system in both formal and informal ways. During the late 1970s and the1980s as well as early 2000s, when cities faced severe fiscal stress, mayors began to adopt a new governing culture, which may be characterized as the New Fiscal Culture.[9] The NFC-oriented mayors tend to focus on management efficiency and emphasize "quality of life" issues. Growingly responsive to concerns of the taxpayers, NFC-type mayors move away from policies defined by traditional party labels and organized interest groups. In NFC-oriented local governance, the traditional party labels become less relevant as the relation between social and

fiscal issues weakens. Fiscal responsibility is no longer strongly linked with social conservatism and vice-versa.[10] In reforming management of agencies, NFC-oriented mayors accelerate contracting out, hold down taxes, focus on management efficiency, and introduce outcome measures for periodic evaluation. These changes tend to overlap with the policy vision of civic-spirited business leaders and the taxpaying electorate. The quality of life issues are often defined in terms of the city's physical environment, parks and recreation, and public education.

In mayor-led school systems, consistent with the NFC-like milieu, improvement in financial management tends to occur during the first couple of years. Analysis of documentary sources in mayoral appointed boards suggests improvement in financial and administrative management. These districts seem able to show financial solvency, often turning a deficit into a balanced budget. The school boards in mayoral control systems seem to associate with an improved bond rating, labor peace, better client satisfaction, and greater efficiency at the central office. In Chicago, for example, in response to labor peace and balanced budgets, Standard & Poor's raised the district's bond rating from BBB- to BBB in March 1996, then to A- in 1997. The favorable bond rating enabled the appointed board to raise billions of dollars to finance the first citywide capital improvement project in decades.

The appointed school board in Chicago was able to draw on a broad pool of expertise in operation, finance, and management. An analysis of 111 top administrative appointments made in the central office between July 1995 and February 1998 showed diversity of expertise. More than 40% of these appointees came from outside the school system—from the private sector, nonprofit organizations, and city agencies. In areas that were not directly related to education practices, such as finance and purchasing, more than 60% of the appointees came from outside the school system. In Philadelphia, the city-state appointed school board moved rapidly to apply

district-wide standards to all schools, including those that were contracted with EMOs. The board and the CEO launched a $1.5 billion capital plan to build new schools, modernize facilities, and reduce overcrowding.

The education mayor also institutes a broader climate of fiscal accountability across local governmental agencies, including school districts. By sharing financial, management, and auditing expertise with the school system, city hall can improve capital projects, balance the budget, and even support union-management negotiations. A key effort is to contain the escalating labor cost, which is in part driven by medical cost as well as collective bargaining agreements. Mayors have cautiously taken steps to leverage incremental concessions from the school employees unions. Many cities are contracting services to competitive bidders who in turn must show results. The lessons municipal agencies have learned by outsourcing various services are transferable to many services that school districts provide in-house, such as transportation, food service, information technologies, human resource management, and safety services, among others.

Taking into consideration both the academic and management performance, our analyses generally support the claim of integrated governance that mayoral appointed school boards can have a significant, positive effect on district performance. Mayoral control has proven that integrated governance is a viable policy reform in urban education. The success of mayoral control is beginning to attract the attention of many mayors who are dissatisfied with their cities' independent school systems.

Implications for Governance Redesign

Because the No Child Left Behind Act identifies takeover as an option in restructuring low-performing districts, it is likely that we will see a growing number of cities where mayors will

seek control over the school boards. Even in cities that may not allow the mayor to exercise direct control, mayors seem to become more active in school board governance. For example, in San Francisco, Mayor Newsome successfully backed his education advisor to run for a seat on the school board. Mayor Antonio Villaraigosa in Los Angeles, having failed to gain control of the district, gains substantial control as his close allies forms the majority bloc in the elected school board.

As this paper suggests, mayoral control has led to measurable progress in urban districts. First, city-appointed school boards have been effective in raising student achievement, particularly when the mayoral control system has been instituted for over two years. Second, mayoral control improves financial and administrative management because these districts are able to broaden the pool of management expertise, institute fiscal discipline, and deploy innovative strategies. Third, mayoral control is more likely to institutionalize pressure and support, implementing oversight and direct intervention to improve school accountability.

While districts vary in their reform effectiveness, we see that the education mayor generally assumes a stronger institutional mandate as compared to an elected school board. As an institution, the office of the mayor can play an instrumental role in improving district performance. The institutional form of charisma does not depend on a charismatic person for its foundation. Instead, "corporate bodies—secular, economic, governmental, military, and political—come to possess charismatic qualities simply by virtue of the tremendous power concentrated in them."[11] Because the office of the mayor carries stature and respect, independent of the particular person who occupies the position, mayoral involvement can add substantial value to the school reform process.

From the perspective of "institutional charisma," the office of the mayor *holds a broader mandate* than the city's elected school board. For example, a typical mayoral election receives a 45 to 55 percent voter turnout, which is several times more than a typical non-partisan school board election. In New York City, just prior to the passage of the state legislation that granted Mayor Michael Bloomberg control over the school district, fewer than 5 percent eligible voters turned out to cast ballots the local community school board elections. Similarly in Chicago, there was a continuous decline in turnout for the election of Local School Council members: between the first LSC election in1989 and the last election in 1993, prior to the mayoral takeover of the district, there was a 68 percent drop in parent turnout.

By contrast, when a mayor is granted the power to appoint the school board, he or she can focus on mobilizing electoral support for school reform. In Boston, for instance, when Mayor Thomas Menino named seven members to the first mayoral-appointed school board in 1992, he proclaimed himself an "education mayor." Voters validated his strong platform on education in 1996, when 54 percent of the electorate opposed the referendum that called for a shift back to an elected school board. That 1996 election saw an unusually high turnout of 68 percent. Mayor Menino and his appointed superintendent, Thomas Payzant, established an unusually long and stable working relationship until the latter retires in 2006.

The office of the mayor is uniquely positioned in leveraging commitments and resources from non-partisan institutions, such as universities and museums, to improve public schools. While varying in scope and visibility, City Hall-university collaborations often result in additional political benefits to the mayor's office. For instance, in Providence, Mayor David N. Cicilline, who appoints his city's school board members, asked the president of Brown University to lead the search for a new school superintendent in 2005, thereby broadening the

legitimacy of the search process and outcome. Mayor Cicilline also negotiated successfully with Brown University and other higher education institutions to make additional voluntary contributions to local property taxes. In Chicago, the mayor's office, city council members, and the University of Chicago collaborated in an effort to restructure a set of low-performing schools on the city's South Side. Many mayors also have encouraged universities and non-profit organizations to establish charter schools in low-income neighborhoods. Mayors and their appointees often invite academic researchers to conduct evaluation studies on a wide range of educational problems.

Further, successful mayoral control tends to be associated with several factors: establishing clear and attainable strategic goals, expanding community and parental engagement, ensuring city's willingness to put financial and political resources to leveling up failing schools, working together with the existing administration for a smooth transition, recruit managers who bring diverse expertise, implementing innovative strategies and diversifying service providers, and making the administrative heads as well as the principals, teachers and students accountable for results. When these factors are in place, mayor-appointed boards are ready for raising education performance. In light of these findings and the enormous policy challenge in large urban systems, mayoral control offers a viable strategy that is likely to benefit students, parents, taxpayers, and the district as a whole.

Table 1. Percent of Students Proficient on State Assessment in the lowest 25th Percentile of Elementary Schools, Selected Districts, 1999-2003

			Reading					*Math*				
District	**Grade**	**No. Schools**	**1999**	**2000**	**2001**	**2002**	**2003**	**1999**	**2000**	**2001**	**2002**	**2003**
Baltimore	3	27	5.6	11.2	11.1	9.5	32.7	1.6	4.8	13.5	8.2	34.9
Baltimore	5	27	5.9	13.9	15.9	13.8	41.8	3.1	10.2	18.1	14.8	26.1
Boston	4	20	0.0	3.1	17.6	22.2	22.6	2.5	8.4	6.6	8.7	7.1
Chicago	3	113	13.7	18.3	20.4	20.2	24.0	20.4	20.6	31.1	29.5	35.3
Chicago	5	112	19.1	19.1	21.9	22.9	26.1	10.4	13.5	18.2	18.9	27.5
Cleveland	4	21	19.6	19.3	22.1	26.6	-	14.8	18.4	22.8	30.5	-
Detroit	4	41	-	-	16.2	19.8	46.5	-	-	23.5	26.6	34.2
New Haven	4	7	6.6	10.9	12.4	10.8	13.7	11.0	19.6	21.6	26.8	31.9
New York	4	84	13.9	24.9	28.0	30.2	37.5	25.4	25.8	33.1	34.8	55.4
Oakland	3	17	14.2	18.6	21.8	23.7	16.5	16.5	22.5	27.6	23.3	24.7
Oakland	4	15	11.9	13.3	13.0	19.5	8.9	11.8	17.9	19.8	22.6	19.7
Philadelphia	5	48	3.8	9.4	9.6	12.2	-	1.6	5.5	6.9	11.0	-
Providence	4	6	27.4	25.1	34.7	32.3	29.2	0.4	2.3	10.4	16.5	14.0
Washington, D.C.	3	26	34.7	41.5	39.6	40.9	-	35.6	45.8	48.1	47.3	-
Washington, D.C.	4	29	35.4	41.2	42.6	43.0	39.5	34.4	42.0	43.6	45.3	42.2

NOTES: Achievement can be compared year-to-year within a given district, but without proper statistical controls, cannot be directly compared to each other because different tests are being used in each district. When within-district comparisons are not appropriate (e.g., change of test from one year to next), we report a missing value. Scores for all districts and all grades are reported in appendix tables. See discussion in chapter for methods used to identify lowest 10th percentile. All achievement measures are % Proficient, with two exceptions. Achievement measure in Detroit is % Satisfactory + Above, and measure in Washington, D.C. is Normal Curve Equivalent.

Table 2. Percent of Students Proficient on State Assessment in the lowest 25th Percentile of Middle Schools, Selected Districts, 1999-2003

MIDDLE SCHOOLS

			Reading					*Math*				
City	**Grade**	**No. Schools**	**1999**	**2000**	**2001**	**2002**	**2003**	**1999**	**2000**	**2001**	**2002**	**2003**
Boston	8	9	1.0	2.2	5.1	4.7	8.6	11.1	18.6	27.1	-	-
Chicago	8	111	2.6	6.9	10.4	14.8	15.1	35.1	44.7	32.1	42.7	38.2
Cleveland	6	6	3.0	4.3	12.4	15.0	-	6.8	7.7	9.3	8.3	-
Detroit	7	17	-	-	15.2	15.1	20.6	-	-	-	4.8	9.9
New York	8	31	5.3	8.8	7.2	18.4	24.1	14.5	16.9	16.7	14.8	19.3
Oakland	6	5	11.0	13.3	16.8	23.3	14.3	9.5	11.4	13.3	15.7	15.8
Oakland	8	5	4.2	8.8	12.0	19.5	14.8	14.2	11.5	16.0	16.6	16.0
Philadelphia	8	25	2.4	5.6	8.0	7.3	-	5.0	9.7	11.3	14.6	-
Washington, D.C.	6	24	41.4	48.4	47.3	47.4	-	38.9	43.1	41.9	42.8	-

NOTES: Achievement can be compared year-to-year within a given district, but without proper statistical controls, cannot be directly compared to each other because different tests are being used in each district. When within-district comparisons are not appropriate (e.g., change of test from one year to next), we report a missing value. Scores for all districts and all grades are reported in appendix tables. See discussion in chapter for methods used to identify lowest 10th percentile. All achievement measures are % Proficient, with two exceptions. Achievement measure in Detroit is % Satisfactory + Above, and measure in Washington, D.C. is Normal Curve Equivalent.

Table 3. Inequality Ratios of Mayoral Control Districts (75th Pctile / 25th Pctile), Selected Elementary Grades, 1999-2003

		Reading					*Math*				
City	**Grade**	**1999**	**2000**	**2001**	**2002**	**2003**	**1999**	**2000**	**2001**	**2002**	**2003**
Baltimore	3	2.47	2.608	2.427	2.157	1.631	4	4.17	3.827	3.592	1.63
Baltimore	5	2.337	2.461	2.121	2.257	1.429	3.639	3.261	2.752	3.513	1.797
Boston	4	3.667	5.5	1.867	2.538	2.846	3.333	3.667	4.5	4.6	4.333
Chicago	3	2.316	2.368	2.043	2.146	2.15	2.16	2.409	2.032	2.155	1.903
Chicago	5	1.8	2	1.909	2.091	1.929	2.313	2.6	2.389	2.717	2.071
Cleveland	4	1.815	2.146	1.869	2.17	-	1.874	2.349	2.299	2.5	-
Detroit	4	1.369	1.323	1.6	1.498	1.299	1.383	1.264	1.36	1.546	1.563
New Haven	4	3.5	2.8	2.206	2.404	1.857	2.714	2.412	2.516	1.923	1.645
New York	4	2.102	1.944	1.924	1.775	1.668	1.819	1.971	1.765	1.735	1.409
Oakland	3	2.353	2.538	2.571	2.588	2.5	2	2.556	2.333	2.333	1.96
Oakland	4	3	2.5	2.75	2.125	2.875	2.429	2.625	2	1.905	2.056
Philadelphia	5	3.525	2.934	3.375	2.951	-	6	5.12	4.475	3.988	-
Providence	4	1.429	1.69	1.435	1.44	1.306	3.5	4	2.548	1.881	2.099
Washington, D.C.	3	1.316	1.244	1.256	1.282	-	1.35	1.318	1.267	1.289	-
Washington, D.C.	4	1.289	1.293	1.268	1.275	1.297	1.289	1.326	1.279	1.267	1.262

NOTES: Ratios can be compared year-to-year within a given district, but without proper statistical controls, ratios cannot be directly compared to each other because different tests are being used in each district. When within-district comparisons are not appropriate (e.g., change of test from one year to next), we report a missing value. Ratios for all districts and all grades are reported in appendix tables. See discussion in for methods used to calculate 75/25 Ratios. All achievement measures are % Proficient, with two exceptions. Achievement measure in Detroit is % Satisfactory + Above, and measure in Washington, D.C. is Normal Curve Equivalent.

Table 4. Inequality Ratios of Mayoral Control Districts (75th Pctile / 25th Pctile), Selected Middle Grades, 1999-2003

		Reading					*Math*				
City	**Grade**	**1999**	**2000**	**2001**	**2002**	**2003**	**1999**	**2000**	**2001**	**2002**	**2003**
Boston	8	2.267	2.444	1.519	-	-	5.5	5.5	3	2.4	3.5
Chicago	8	1.558	1.523	1.629	1.473	-	3.429	3.375	3.364	2.877	2.795
Cleveland	6	2.07	2	3.092	3.056	-	2.755	3.145	2.658	3.252	-
Detroit	7	1.425	1.61	1.385	1.665	1.429	1.904	1.602	-	1.702	1.56
New Haven	6	1.933	2.25	2.427	2.703	2.533	2	2.667	2.142	2.418	2.563
New Haven	8	2.133	2.5	1.888	2.298	2.158	3.556	4.286	2.238	2.469	3.1
New York	8	2.044	2.216	2.3	2.389	2.224	2.841	2.87	3.531	2.815	2.319
Oakland	7	2.615	2.727	2.231	2.5	2.385	3.333	2.533	2.647	2.933	2.923
Oakland	8	2.333	2.917	2.214	2	2.357	2.769	4.6	3.077	2.556	2.5
Philadelphia	8	3.4	2.825	3.038	2.528	-	7	4.636	4.569	3.357	-
Providence	8	1.25	3.25	1.403	1.463	1.307	1.833	7	1.852	1.722	1.437
Washington, D.C.	7	1.306	1.103	1.432	1.35	-	1.243	1.3	1.385	1.3	-
Washington, D.C.	8	1.244	1.39	1.2	1.279	1.191	1.175	1.275	1.25	1.35	1.302

NOTES: Ratios can be compared year-to-year within a given district, but without proper statistical controls, ratios cannot be directly compared to each other because different tests are being used in each district. When within-district comparisons are not appropriate (e.g., change of test from one year to next), we report a missing value. Ratios for all districts and all grades are reported in appendix tables. See discussion in chapter for methods used to calculate 75/25 Ratios. All achievement measures are % Proficient, with two exceptions. Achievement measure in Detroit is % Satisfactory + Above, and measure in Washington, D.C. is Normal Curve Equivalent.

Notes:

[1] Lowell C. Rose and Alec M. Gallup. The 30th Annual Phi Delta Kappa/Gallup Poll of the Public's Attitudes Toward the Public Schools, 2007, p. 38.

[2] Diane Ravitch & Joseph Viteritti, eds., New Schools for a New Century: The Redesign of Urban Education. New Haven: Yale University Press, 1997.

[3] Kenneth Wong, Francis Shen, Dorothea Anagnostopoulos, & Stacey Rutledge, The Education Mayor: Improving America's Schools. Washington DC: Georgetown University Press, 2007. In particular, Francis Shen has provided valuable technical assistance to the project.

[4] Paul E. Peterson, City Limits. Chicago: University of Chicago Press, 1981, p.43.

[5] Larry Cuban and Michael Usdan, eds. Powerful Reforms with Shallow Roots: Improving America's Urban Schools. New York: Teachers College Press.

[6] In analyzing the financial data, we construct two general types of variables from the raw Annual Survey of Government data. The first type is a measure of allocation, examining financial sub-categories as a percentage of the whole. The second type is a measure of magnitude, exploring the amount (dollars per student) being spent in various sub-categories. All of our allocation measures are reported as percentages, and all of our magnitude measures take into count enrollment and are therefore reported as dollars per student. For each of the revenue and expenditure measures, we consider both allocation and magnitude.

[7] In addition to this baseline model, we consider models with 5-year lagged governance. We cluster on the school district to provide for robust standard errors. For details, see Wong, Shen, Anagnostopoulos, and Rutledge, The Education Mayor.

[8] We did not reproduce results tables in our book, but readers interested can obtain more detailed information at our online supplement.

[9] Terry N. Clark and Vincent Hoffman-Martinot, The New Political Culture. Boulder, CO: Westview, 1998.

[10] Kenneth Wong, Pushpam Jain, and Terry Clark, "Mayoral Leadership in the 1990s: Fiscally Responsible and Outcome Oriented." Paper presented at the 1997 Annual Conference of Association for Public Policy Analysis and Management, Washington DC.

[11] Edward Shils, "Charisma, Order, and Status," American Sociological Review 30 (1965), p. 207.