# ELECTED VS. APPOINTED SCHOOL BOARDS

by

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Abstract

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Educational governance has garnered attention recently in school reform

literature. One main question is whether appointed school boards can improve education

performance where elected school boards have failed to produce good outcomes. This is

essentially a question of regulatory control. Economic theory suggests that how public

officials and regulators are chosen will affect the outcomes within the regulated industry.

Using demographic and school finance data from 1992 to 2008, I show that while there

are some differences in resource allocation between school districts governed by boards

with appointed members and those governed by wholly elected boards, these governance

structures do not have an observable impact on education quality, as measured by the

school district's market share.

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#### Introduction

Education reform has been a perennial concern of politicians and researchers for the past century. In the early 1900s, allegations of cronyism and corruption in the management of schools led to efforts to take politics out of education and increase the "professionalism" in the education management and teaching professions. After many waves of reform efforts, the focus of education reform has circled back to the question of how to manage the education system.

As part of this focus, a growing number of politicians, educators, and researchers have suggested that mayors, through appointed school boards, may be more able than elected school boards to make substantial improvements to school districts across the country. This paper provides evidence that this claim is likely overstated and that districts run by mayors do not outperform those run by elected school boards. This paper also analyzes district finances and performance and finds that those districts with appointed board members allocate resources differently than those with wholly elected boards. The governance structure does not seem to effect the quality of education provided.

This paper contributes to two strands of literature. The first is the literature that addresses the issue of elected versus appointed regulators/officials. Stigler (1971)

brought to light the importance of how industries are regulated. Since regulators are not benevolent beings but are self-interested and respond to incentives like most people, the type of regulation they introduce may not be welfare maximizing. In fact, the regulated industry may "capture" the regulator, and the regulation that follows will likely favor the industry and may not be optimal.

The issue that arises is how to properly incentivize regulators. One incentive scheme is to subject the regulator to popular election. There is a broad literature demonstrating that there is a difference in outcomes when regulators are appointed as opposed to when they are elected. These results appear in a variety of areas, from health insurance and electricity rates to judicial rulings. My findings suggest that in the current environment, there is not much difference in performance of school districts governed by elected boards and those districts governed by appointed boards.

The second strand of literature to which this paper contributes is concerned with the effects of education governance on education outcomes. This is a small but growing literature. The majority of this literature consists of case studies of individual cities, and there are only a few quantitative analyses that study multiple districts. The literature is a mix of results, with some papers finding positive effects for mayoral control on student performance while others find negative or no effects. The few quantitative analyses that have been conducted have ignored performance measures and have mainly focused the fiscal outcomes districts controlled by mayors.

I add to the literature on budget outcomes by utilizing an expanded data set created from the Census Bureau's survey of public school finances. While case studies in

this field have focused on test scores as a measure of performance, there are not sufficient test data to perform a broad quantitative analysis on test scores. Instead, I use each district's "market share" of students as an implicit indicator of quality. I provide evidence for the lack of effect of mayoral control on student performance.

The paper is organized as follows: Section II reviews the literature on the issue of elected versus appointed officials. Section III provides a short overview of education reform in the United States along with a review of the literature on the effects of mayoral control. Section IV describes the data and methodology I used in my analysis. Section V presents the results, and in Section VI I provide concluding remarks.

### Elected vs Appointed Regulators

An important question in economics concerning government action is what industries to regulate and how to regulate them. Industries, such as telecommunications, electricity, and water, that exhibit the properties of natural monopoly (e.g. high fixed costs and falling average cost) have been the subject of intense study. Key questions in this literature have been whether the government should directly provide the service or good or regulate the industry; how to set prices (use marginal cost pricing, open contracts up for bids and let regulated firms set the price, etc.); when technology changes, should the industry be liberalized; how much competition should be allowed; etc. Because regulators choose (within the bounds of a legal framework) how to regulate an industry, one important component in the analysis of regulated industries is the incentive structure in which the regulator operates. The method of choosing regulators will, in part, determine the incentives under which a regulator operates.

Stigler (1971) showed that the regulated industry may "capture" the regulator, and the regulation will not be optimal, benefiting the industry. This comes about from the fact that the benefits that accrue to the industry are concentrated while the costs to the

<sup>&</sup>lt;sup>1</sup> See Armstrong and Sappington (2006) for a review of economics of regulation and liberalization.

public are dispersed. Because the cost of the suboptimal regulation to any one individual is small, there is not much incentive for citizens to collectively lobby for better regulation. Much of the theoretical literature on regulatory incentives, however, has focused on incentives of regulators, as such, without taking into account whether the regulators are elected or appointed, though there has a growing body of empirical literature that studies the effects of elected versus appointed regulators. Let us first review the normative analyses that have addressed the issue.

In what circumstances should elected politicians decide policy and in what circumstances should appointed officials have authority over policy? In policy-making, there are some decisions that are much more technical than others, and presumably the public would want the decision-maker to have the requisite knowledge and experience that the policy task requires. So how do we balance the concern of the public wanting officials with appropriate skills with the concern of holding officials in charge of policy accountable for their performance? Accountability through election can induce representatives, who may be otherwise inclined, to act in the public interest, mitigating any moral hazard problem that may be associated with appointment. Elections also allow the public to filter out those officials who may not have the same preferences as the public, mitigating problems of adverse selection. There are downsides, however, to holding officials accountable through elections: elected officials may choose to pander to the public and make the most popular, rather than the best, decisions. Elections may also give the majority too much power over the minority (Maskin and Tirole 2004). The

normative analyses attempt to weigh these concerns and provide recommendations that should be implemented at the formation of a constitution.

To find the proper balance for these concerns, Maskin and Tirole (2004) provide a model in which officials have two motivations: legacy building and the value of holding office. The legacy motive is most likely to dominate the office-holding motive when the effects of policy are broad. In the model, pandering is a potential outcome of election accountability because the public has imperfect knowledge about the optimal policy. The amount of knowledge the public has depends on the technicality of the issue and the public's familiarity with the issue, with knowledge decreasing with technicality and increasing with familiarity. The authors' general result is that when the legacy motive dominates the office-holding motive, election dominates appointment. This result follows from the implication that if the legacy motive is important, the official does not have to be induced to pursue the policy, but election will protect the public from officials who do not have preferences congruent to the public.

The potential benefits of electoral accountability will also depend on the cost of information gathering and how quickly the public gains knowledge about the outcome of a policy. A more technical task requires an official to gather more information in order to make the appropriate policy choice. This increases the cost of making an informed decision for the official in charge of policy. Because the task is technical, the public will have less information and familiarity with it. Thus, an elected official will not have the incentive to gather information and will pander to the public, so in the case of technical tasks appointing dominates election. If the feedback on the effects of a policy is quick,

the public will know whether the official is acting in accord with the public's preferences, so if feedback is quick election dominates appointment.

While Maskin and Tirole address some key concerns regarding election versus appointment, the model lacks depth when addressing the incentive structure of officials. The officials in the model, whether they are elected or appointed, have the same motivations. They find that if the legacy motive dominates, officials should be elected because this will not lead to pandering, but this kind of analysis only focuses on the incentives of elected officials without considering why an appointed official would make the optimal policy decision. Alesina and Tabellini (2007, 2008) offer a model that aids in this aspect of the normative analysis concerning election versus appointment.

Alesina and Tabellini note that different accountability mechanisms will produce different incentive mechanisms; thus, elected politicians and appointed bureaucrats do not have the same motivation. Ideally, we would want to set up contracts based on policy performance, but because policy performance is observable but not contractible, first-best contracts are impossible (Alesina and Tabellini 2007: p. 171). The official can also not be made a residual claimant since those claims are neither well defined nor transferable. In the model Alesina and Tabellini construct, winning elections motivates politicians and career concerns motivate bureaucrats. Because the voters hold the politician accountable, politicians want to maximize the probability of achieving a certain threshold of votes. Because the bureaucrat is motivated by career concerns, he is concerned about the perception of his ability and effort by "industry peers." What the bureaucrat tries to maximize is a function of expected policy outcome and the market value of his labor.

The policy goals of the bureaucrat's agency must, therefore, be well defined. With difficult tasks in which the variance of ability is high, Alesina and Tabellini find that the incentive structure favors appointing a bureaucrat rather than electing a politician. If the market value of a bureaucrat's talent is undervalued, this will favor electing a politician. In terms of redistributive policies, allowing a bureaucrat to decide on redistribution is risky because, *ex ante*, his type (fair or unfair) is not known. But if the politician is in charge of redistribution, his equilibrium effort will be lower. If the politician is in charge of redistribution policy, he will never delegate this power away because it creates an incumbency advantage.

Alesina and Tabellini (2008) expand their model to cover circumstances in which officials have control over multiple policy areas. They find that politicians are preferred when flexibility is valuable due to unstable or uncertain social preferences or policy environments (e.g. foreign policy) and when side payments to compensate losers are desirable. Bureaucrats are preferred when social preferences are time inconsistent and when stakes for organized groups are large and corruption is not widespread (Alesina and Tabellini 2008: 427).

For both Maskin and Tirole and Alesina and Tabellini, the decision to appoint officials over given policy areas is decided at the constitutional level behind a "veil of ignorance." What neither set of authors takes into account is the process of appointment. While Alesina and Tabellini include career concerns in the bureaucrat's motivation, the bureaucrat will also be accountable to those who appointed him and will have other incentives besides those provided by the assumed peer oversight process. The appointed

official may have the same time horizon as the elected official who appointed him; the appointed official's decision may, therefore, not have the optimal time horizon. This consideration would seem to mitigate, at least to some degree, the advantage that bureaucrats would have in policy areas in which social preferences are time inconsistent. Without taking this very important aspect into account, welfare effects predicted in the models must be taken with a grain of salt. What is also ignored is how society, at the constitutional stage, chooses the policy areas over which officials are given dominion.

Researchers have noted in several empirical analyses that elected regulators tend to introduce more pro-consumer regulation in comparison to appointed regulators. Formby, Mishra, and Thistle (1995) find evidence for this using data on electric utility bond ratings, with elected regulators having a negative effect on bond ratings. Fields, Klein, and Sfiridis (1997) find that elected insurance commissioners are more consumer-friendly, finding that market values of insurance companies fell after the selection of commissioners in California switched from appointment to election. Smart (1994) finds that elected regulators coincided with lower telephone rates. Besley and Coate (2003) find that states with elected regulators have lower electricity rates and less pass-through of production cost increases. Related to the subject of elected and appointed regulators, Helland and Tabarrok (2002) find that in tort cases, elected judges rule more favorably for in-state plaintiffs than for out-of-state defendants.

Besley and Coate (2003) provide a positive analysis to explain these empirical findings. We expect to see elected regulators implement the regulatory preference of the median voter. As long as consumers outnumber industry stakeholders (i.e. the median

voter is a consumer), we would expect the median voter to have pro-consumer preferences. But if the regulator is appointed and the median voter elects the politician who appoints the regulator, why do we not also observe the median voter's pro-consumer regulatory stance under an appointed regime? Besley and Coate (2003) provide a model in which issue bundling plays an important role.

In their model, Besley and Coate have two groups: consumers and stakeholders, and consumers outnumber stakeholders (thus, a consumer is the median voter). The policy space has two issues: government spending and regulation. The salient issue for consumer-voters is government spending, while the salient issue for stakeholder-voters is regulation. If the regulator is elected, then voters elect a pro-consumer regulator and a governor who implements the median voter's government spending preference. If the regulator is appointed, then voters elect a governor who implements the median voters preferences for government spending, but in order to maximize the support from stakeholders, both parties in the model will run a candidate with a pro-stakeholder regulation policy.<sup>2</sup> Parties will not lose consumer votes from this strategy because public spending is consumers' policy priority. What is driving the results in this model is not concentrated benefits and dispersed costs but the bundling of policies. Without policy bundling, median voter preferences determine policy outcomes. Only with policy bundling are pro-stakeholder policies implemented.

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<sup>&</sup>lt;sup>2</sup> This requires the share of voters who are stakeholders to be non-negligible. Besley and Coate justify this aspect of the model via campaign contributions.

#### **Education Reform**

It seems that at one time or another, schools have been the object of reform efforts. Before the Progressive Era (1890-1920), urban schools, functioning as departments of city government, were generally under the direct control of mayors (Henig 2009). Rural school districts were generally a loose confederation of small schools and the boards had control over a handful of schools (Howell 2005). Yet by the end of the nineteenth century, reformers perceived the education system as a structure of doling out political favors, riddled by cronyism, and dominated by political machines. School board elections were also a venue of ward-based politics, and made schools at that time particularly prone to corruption (Kirst 2004).

In order to take politics out of education and introduce a more professional and accountable bureaucracy, school boards were made relatively autonomous governing bodies with dedicated revenue streams. Reformers also made school board elections off-cycle (so that they were not held with elections for other offices) and nonpartisan (Hess 2008). These reformers also made school board elections at-large or citywide rather than ward-based, while also decreasing the number of school board members (Kirst 2004). By reducing the number of board members, reformers reduced the amount of work that could

be taken care of strictly by board members,<sup>3</sup> necessitating the hiring of a professional manager. There was also a wave of consolidation of schools and school districts across the country. From around 1930 to 1970, the number of school districts decreased from approximately 100,000 to 16,000. This resulted in shifting the control of education from the school community to distant bureaucracies, from elected school boards to superintendents (Berry 2005). The decrease in the school board size along with the increase in the size of school districts led to a further separation between school administrators and the public they served.

These changes brought with them changes in those wielding power. Because the old boards were elected by ward, immigrants had substantial influence over the outcome of elections. The boards were also overwhelmingly made up of lay people. After the changes, much of the boards were made up of "native-born, Anglo-Saxon Protestants" (Kirst 2005). As an example, in St. Louis, between 1897 and 1927, the representation of professionals increased from 4.8 percent to 58.3 percent and representation of "big business" managers increased from 9 percent to 25 percent. The proportion of wage earners on the board decreased from 28.6 percent to zero.

With the Russians "beating" the Americans into space and the gap between the public and school officials growing larger, there were cries that education, and the structure that governed it, was not doing enough to prepare students for the future, spurring much more federal involvement in the education system (Howell 2005). In

<sup>&</sup>lt;sup>3</sup> Apparently, some sub-committee board members took it upon themselves to be in charge of doorknob purchases (Kirst 2005).

1957, Congress authorized the National Defense Education Act, and in 1965, Congress passed the Elementary and Secondary Education Act, boosting the federal government's role in education. These moves coincided with increased state aid to school districts, and the state aid structure to localities seemingly mirrored that of the federal aid structure to the states. By the 1970s, states provided 40 percent of school funding, up from 17 percent in 1930 (Kirst 2005: 27). The rise of state funding brought with it the desire of governors to control the state educational bureaucracy. In 1930, 33 states elected the state's chief school officers; now, only 14 are elected. Governors also now appoint some or all of the state education board members in 39 states (Kirst 2005: 28). These efforts of state and federal governments tended to focus on increasing education spending, especially for poorer students, and influencing, to large and small degrees, the curriculum taught in classrooms.

After the 1950s, education saw the rise of teachers' unions. The local central offices signed collective bargaining agreements, restricting individual principals' flexibility in managing personnel. These unions engaged in politics at all levels of government. Teachers' unions have used their political clout to influence curriculum outcomes, keeping home economics, physical education, and drivers' education in the schools. Their political clout at the national level eventually led to more school funding and a cabinet-level Department of Education in 1979 (Kirst 2005).

At the beginning of the 1980s, the government report, *A Nation at Risk*, was published, drawing attention to the perceived decline of the American education system with these starting sentences: "Our Nation is at risk. Our once unchallenged preeminence

in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world" (National Commission 1983). This spurred more attempts to reform the education system with multiple subsequent federal legislative efforts. As in the past, these efforts increased spending and attempted to encourage more rigorous academic standards. Along with these federal efforts, other reforms focusing on different governance systems were tried, such as vouchers, site-based management, and vouchers, but there is no conclusive evidence to suggest that these reforms have been unambiguous successes.

Charter schools are publicly funded but independently run schools, which generally must accept all students who apply for admission. If the demand for admission is more than can be accommodated by the school, a lottery admission is generally introduced. Site-based management (also known as school-based management) "involves the decentralization of decision-making authority and control from the school board and central administration to individual schools" (Land 2002). Charter schools and schools under site-based management generally have authority over personnel, budgetary, and curricular decisions.

The overall evidence for these reforms' effectiveness in raising students' academic achievement seems to be neutral. Reviews of evidence for vouchers (Rouse and Barrow 2009) and site-based management (Leithwood and Menzies 1998) find little evidence for positive and significant effects of these reforms on student academic achievement. The evidence for charter schools is mixed with the majority of charter schools nationwide performing similarly to traditional public schools (Raymond 2009),

though there do seem to be pockets of achievement (for example, New York) (Hoxby, et al., 2009).

The evidence on whether increases in per pupil expenditure increase student performance is also mixed.<sup>4</sup> Hanushek (1996) concludes that the evidence of flat NAEP scores and the increase in spending suggest a prima facie reason for concluding that increases in expenditure do not lead to increases in student performance. When the NAEP scores are disaggregated, there does seem to be gains for minority and disadvantaged students from the late 1970s to the early 1990s (Krueger 1998). These gains have flattened out since then. Hanushek (1989) and Hanushek and Rivkin (2006) have concluded in their reviews of the literature that the inconclusive nature of the evidence suggest that expenditure does not have a significant effect on student performance. Hedges, et al, (1994) come to the opposite conclusion: that expenditures have a significant and positive effect on student outcomes.

What some researchers suggest is that expenditures can significantly affect student performance but only under certain conditions. This idea comes out somewhat in Hanushek and Rivkin (2006), when they discuss the weaknesses of education production function studies, especially the fact that per pupil expenditure does not provide any information about the allocation of resources. Others have argued that expenditure will matter more in poorer, disadvantaged communities. Kruger (1998) lends evidence to this hypothesis, but it is made explicit by Grissmer, et al. (1994) and Grissmer, et al. (1998).

<sup>&</sup>lt;sup>4</sup> As will be seen below, some proponents of mayoral control favor this method of reform because of predicted increases in per pupil spending.

These studies suggest that the increased expenditure acts as a substitute for the lack of social and family capital in poorer communities where single parent homes are more common and families lack the funds for additional educational opportunities for their children.

With the mixed results on past school reform efforts, a new wave of education reform started in the early 1990s: mayoral control of schools. Questions have been raised as to whether elected school boards are up to the task of reforming the schools. School boards have been criticized for a variety of reasons: the public is largely uninvolved in school boards due to low voter turnout (5%-15% of eligible voters) for school board elections, school boards have tended to engage in micromanagement and encroaching on the central administration's authority, and school boards fail to collaborate with the superintendents (Land 2002: p. 237). With the ever-increasing portion of local budgets consumed by education and the clout that mayors bring when negotiating with state and federal authorities over reform efforts, mayoral control of the school system has become an increasingly popular reform strategy. In the next section, I review the theory and evidence concerning this reform strategy.

### Mayoral Control

## Theory

To understand how the literature on elected versus appointed officials can apply to education, we must understand the structure of the education system. It is important to note that the administrator in charge of the school district (referred to as the superintendent, CEO, or chancellor) is always appointed. So with, for example, a state insurance regulator, either the governor will directly appoint the regulator or the voters will directly elect the regulator. In contrast, if the school board is elected, the voters will cast their ballots, and then an elected board will appoint the superintendent. If the board is appointed, the process is much more similar to appointing regulators in other industries, because the mayor either appoints the superintendent along with appointing the school board or appoints board members who will choose the mayor's preferred superintendent. Thus, the pro-consumer status of an elected regulator will be slightly moderated in the case of an elected school board.

The structure of school financing is also of particular interest. Under an elected board, the funds come from the local, state, and federal governments. The local government appropriates the local portion of the funds. Thus, the school board and

superintendent only have the power to allocate what they have been given. Under an appointed board, with the mayor wielding most of the power, the person deciding on the appropriation of funds also has authority over the allocation of funds.

The education system also provides a different kind of good than other regulated industries. With electricity or gas, the consumer will incur some cost with each unit she consumes. With education, the consumer is not the only person paying for the good. Not only does virtually everyone in the locality provides some tax revenue that is spent on education but taxpayers across the state and country also provide some amount of funding for the provision of education, and not everyone who is providing tax revenue consumes education. The consumption of the good is limited to a subset of the population (i.e. children), and consumers do not get to choose how much K-12 education they consume due to truancy laws. Thus, cost of education is incredibly dispersed and there is mandatory consumption of education. These two factors limit the ability/incentive for elected school boards to respond to consumer preferences.

With the nature of the education product and the structure of the education system in mind, let us examine the possible merits of mayoral control vis-à-vis elected school boards. From the normative perspective, the knowledge that voters have of education plays a role in whether the school board should be appointed or elected. As Maskin and

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<sup>&</sup>lt;sup>5</sup> To be very technical, the student is the actual consumer and pays nothing for his public education.

<sup>&</sup>lt;sup>6</sup> According to the Department of Education, for 2005, the composition of education funding coming from local, state, and federal sources was 37.1 percent, 45.6 percent, and 8.3 percent, respectively, with the remainder made up by private sources.

<sup>&</sup>lt;sup>7</sup> While truancy laws vary, there exists some age through which children must attend school.

Tirole (2004) note, knowledge of a policy issue is a function of familiarity and technicality. Almost all voters will have gone through some form of public education and will thus be very familiar with the subject. Additionally, the voters that have children or other family members in the public school system will have added familiarity of the current state of education. And while education management may be technical in nature, the ability of parents to closely monitor the education system decreases the concern of the agency cost of elected school boards. The reforms necessary for improving education, however, may take some time to appear. As Maskin and Tirole (2004) suggest, an appointed official may be better at carrying out a policy task with slower feedback, as in the case of education, because it would reduce the incentive to pander. Also, this feature may make education policy subject to time inconsistent preferences, making education more appropriate for an appointed official, by the criteria set out by Alesina and Tabellini (2008).

The fact that an elected school board is made up of multiple members will mitigate the effect of pandering that would be predicted by Maskin and Tirole (2004) for a policy with slow feedback. With every decision that has to be made by the school board, the board members must overcome a collective action problem. Because decisions are generally made by majority vote, the ability of individual school board members to pander to interest groups is low. This structure has also, however, been a reason that some reformers have supported mayoral control.

Under elected school boards, if particular policies are thwarted, then each board member can claim that he or she tried to improve the education system but was held back

by other board members. Under an appointed board, with the mayor generally wielding the power, policy changes can be implemented much more quickly. As noted above, the time-horizon of the appointed official is likely to converge on the time-horizon of the politician in charge of appointments. Thus, under strong mayors with few political opponents, pandering may not be an issue due to the mayor's longer time-horizon. If the mayor is politically weak and has many political opponents, pandering may be more of an issue. This addresses the issue of whether bureaucrats can carry out the socially optimal policy. As Kydland and Prescott (1977) made clear, discretionary policy rarely leads to optimal social policy when expectations are rational and time consistency is a concern.

Also under elected school boards, municipalities (i.e. mayors) set the appropriation for the school district, but the school board and superintendent decide how to allocate the funds. Thus, there is a further coordination problem for funding the schools, resulting in the lack of a focal point of responsibility, which may make monitoring and enforcement by the public harder. As mentioned above, it seems difficult to make an official a residual claimant to policy outcomes, but the parents of children in public schools may be thought of as those who already have a residual claim on public education. Those parents and their children are the primary beneficiaries of public education, and as the primary beneficiaries, a system that places more discretion in their hands is likely to improve education outcomes. Whether that system is an elected or appointed school board depends on the saliency of education as an electoral issue for

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<sup>&</sup>lt;sup>8</sup> Excluding employees of the education system.

voters, the level of influence wielded by education industry stakeholders, and the level of coordination between the elected school board and mayor.

Switching from an elected to an appointed school board would also change the amount of influence stakeholders (e.g. district employees)<sup>9</sup> hold vis-à-vis other voters. In order for stakeholders to exercise influence on policy, the majority of the school board must be pro-stakeholder. Under an electoral regime, stakeholders must spend resources trying to influence multiple officials, but because the school board has control over one policy area, there is less competition for influence among interest groups. In contrast, under mayoral control, the pro-stakeholder interest group only has one official to influence, but the mayor must also balance the preferences of multiple interest groups within his electoral coalition (Land 2002).

Here, we must consider how salient of a policy concern education is for voters. If education is one of the more salient issues for voters, one need not worry about the education regulator being captured if the mayor controlled the schools. On the other hand, if education were not a salient issue for voters, then it would not seem to matter whether the school board is elected or appointed. This is because of the sequencing of school board elections. Because the school board elections are often off-cycle, if education were not a salient issue for voters, then they most likely would not take the time to go vote, resulting in the election of a pro-stakeholder candidate. Also, as would be predicted by Besley and Coate (2003), if education were not the salient issue for

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<sup>&</sup>lt;sup>9</sup> One could also make the argument that parents with children in school are more appropriately called stakeholders who are trying to extract rents via higher education spending.

voters, then giving the mayor the power to appoint the board would result in a prostakeholder school board.

There may be reason to think that education is the salient issue for voters with mayor-controlled schools. For the mayor to gain control of the schools, special legislation or a referendum is needed, so if a school district switches from an elected school board to an appointed school board, this can serve as a signal that voters view education as a salient issue. A school district remaining under an elected school board, however, does not tell us anything about how salient education is for voters. Current voter preferences are not the only thing that matters, however. While education may be a salient issue for voters when the mayor takes over the schools, education will not necessarily always be a salient issue with voters. Thus, stakeholders may capture the education regulators in the future if other issues become more salient for voters.

Proponents of mayoral control see the fact that the mayor is a multi-issue official as a good thing. They claim bringing education into a central bureaucracy result in the efficiencies from coordination and economies of scope (Henig and Rich 2004b and Land 2002). Others claim that the school district may be able to benefit from the clout mayors bring to education by garnering more intergovernmental (e.g. state and federal) funds (Meier 2004).

These claims of efficiency for mayoral control of schools have been summed up in a theory of integrated governance (Wong et al 1997 and Wong and Shen 2005).

Schools are generally one of the largest employers in a community and account for approximately half of a city's expenditures. Because schools have a dominant position in

a community, having the mayor control the schools would allow for better coordination of services and, therefore, make a city more competitive in a Tiebout sense of the term (Tiebout 1956). Because the schools play a large role in communities, the business community will also be important in the governing coalition (Wong and Shen 2005 and Henig and Rich 2004a). As stated above, the mayor has control of appropriation and allocation, and the central decision makers would therefore have much more flexibility. The mayor would be able to reduce central office inefficiency and allocate more resources towards instruction. If mayors are "successful," we should see more per pupil expenditure on instruction, student support services, and school (rather general) administration services (Wong and Shen 2005: 88).

Bringing the schools under mayoral control, however, is no guarantee of "success." Because the mayor has appropriation and allocation powers, mayoral control of schools also allows the mayor to dole out more favors than an elected school board. This may manifest itself in higher capital spending, either as a visible signal to voters that schools are being improved or as rents being transferred to the business community. Wong and Shen (2005) suggest that mayors would want to allocate more resources to school employees that have greater contact with students. Because schools are such a large employer, if this resource allocation comes in the form of higher salaries for those employees, we cannot distinguish whether this is an effort to improve schools or is

buying political support of a powerful interest group.<sup>10</sup> The fact that the former bureaucracy remains, even after leadership has changed, will make it difficult for the mayor to overcome the bureaucratic inertia.

Thus theory, while providing ambiguous implications, gives several hypotheses to test. One measure of efficiency is per pupil total administrative cost. If districts with appointed boards are more efficient in providing education services, per pupil total administrative cost should decrease. Also if appointed school boards are more efficient in providing education services, we should see the percentage of the budget dedicated to instructional spending increase. A key argument for mayoral control is that putting the task of improving education in the hands of the mayor centralizes responsibility for the performance of the education system. If this is correct, the mayor will most likely, at the very least, want to appear to be doing something. This may manifest itself in higher per pupil instructional expenditure, lower pupil-teacher ratios, and higher per pupil capital expenditure. The mayor may also possess some clout, as suggested by some, to receive more state and federal funds. This can be tested by analyzing whether districts with mayors have a lower percentage of revenues coming from local sources. Also, if the quality of the schools increases under mayoral control, we should see, as suggested by McCormick et al (1994), an increase in the district's "market share" of students.

Evidence

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<sup>&</sup>lt;sup>10</sup> This latter explanation has been suggested to explain the deal made by the mayor of Los Angeles with the teachers' union when the mayor tried to gain some control of the schools. The California courts ruled the takeover as unlawful (Hess 2008).

Boston and New York City, with rising NAEP<sup>11</sup> scores, have been held up as models of success for mayoral control of schools, though New York's score results have come under criticism based on uneven progress. The educational research, however, provides a mixed and inconclusive picture of the effects of appointed boards and mayoral control on school districts. In her review of the literature, Land (2002) concludes that there is no convincing evidence that appointed boards provide effective governance or produce greater academic achievement relative to elected boards. The Center for the Study of Social Policy (2005) came to a similar conclusion. In a comment on the literature, Hess (2008) concludes that while over 400 books, articles, and papers have addressed the issue of appointed boards and mayoral control, "fewer than a dozen explicitly examine their impact on school reform in more than a cursory manner." Most of the focus in the literature has been on topics such as the difference in racial composition of appointed or elected boards.

In one study, Dye<sup>12</sup> (1967) analyzed 67 school districts (13 of which had appointed school boards) in order to find the determinants of a number of performance outcome measures, such as per pupil expenditure, teacher salaries, graduation rates, and private school enrollment. He found that there were "no significant differences in educational outcomes between school systems with elected and appointed boards" (1967, 373). McCormick, et al. (1994) investigated how a 1984 state education reform law

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<sup>&</sup>lt;sup>11</sup> National Assessment of Educational Progress.

<sup>&</sup>lt;sup>12</sup> Could it be that appointed school boards are found in these cities because appointed boards can better protect heavy property investment from lower socio-economic groups than elected boards? (p. 358)

affected the quality of schools. They measured the quality of public schools by the number of students who were in private school relative to the number of students who were in public school. A decrease in this ratio can be interpreted as an increase in perceived school quality by parents. In contrast to Dye (1967), McCormick, et al, find that those school districts with appointed school boards have higher private school enrollments than those with elected boards.

Wong and Shen (2003, 2005) have performed some of the only recent quantitative analysis on the differences between appointed and elected school boards. In the 2003 article, the authors examined the performance of 14 school districts from 1992-2000 (8 switched to mayoral control and 6 were the subject of state takeovers). They found an increase in elementary student performance, though the effects were weaker in higher grades. Mayoral control may also have positive effects on financial and administrative management, and resource allocation shifts with the introduction of mayoral control. The findings from Wong and Shen (2005) provide less positive findings for mayoral control. Analyzing the 100 largest school districts from 1992-2001, the authors find that mayoral control did not lead to increase financial stability and did not have a significant impact on district staffing.

There have also been studies of responsiveness of elected and appointed school boards. Wong et al (1997) find that after Chicago switched to mayoral control, the school board's performance rating increased by 30 percent. Berkman and Plutzer (2005) report that, among 7885 school boards (approximately 300 of which were appointed), appointed school boards were 17 percent more responsive as measured by the correlation

of public opinion on spending and district per pupil spending. The findings of these responsiveness studies calls into question how much bundling of policies reduces appointed officials responsiveness to voters, as predicted by Besley and Coate (2003).

#### Data and Methodology

In my data selection, I follow Wong and Shen (2005). They note that mayoral control has come to prominence in large, urban school districts. Thus, I restrict my analysis to large school districts. As with Wong and Shen, I selected the 100 largest school districts in the nation as defined in the *Digest of Education Statistics 2008*. To include as many cities with appointed boards, I augmented this list with eight cities that are not in the largest 100. Only two of these are not in the 200 largest. In all, my dataset includes 16 districts that have had at least some members of the school boards appointed. The data on school district finances come from the Annual Survey of Government Finances conducted by the United States Census Bureau. The data cover the years 1992 through 2008. This data set includes total school enrollment, funds received from local, state, and federal sources, and detailed data on school district expenditures.

Most education expenditures are heavily weighted towards labor expense. Given this fact, I use the Bureau Labor Statistics' Employment Cost Index for Elementary and Secondary Schools to index most of the education expenditures to 2005 dollars. The data on the number of teachers, the number of students eligible for free lunch, and the ethnicity of students come from the Common Core of Data's Public

Elementary/Secondary School Universe Survey. I combine these data with income and population data from the Current Population survey. I use the Federal Reserve's implicit price deflator to index income and capital expenditures to 2005 dollars.

Summing total general administrative expenditure and total school administration expenditure produced the figure for total administrative cost. For comparability across districts, I provide per pupil amounts for those figures that are given in raw amounts. The appointment process varies across districts. There are some districts that have board members that the mayor appoints but that do not form a majority of the board. There are some districts in which the mayor appoints a majority but not all of the board members. In Jackson, MS, the mayor appoints board members but must have the board approved by the city council before the board can carry out its duties. In Norfolk, the city council appoints the school board. Baltimore and Philadelphia have school boards appointed jointly by the mayor and the governor. In the analysis, I provide the percentage of board members that are appointed. I also label those districts in which the mayor appoints the majority of the board members and/or the superintendent is controlled by the mayor. I also control for how long the board has had appointed members.

The income and demographic data from the CPS are matched to the budget data using a combined MSA/CMSA code for years 1992 through 2004 and the CBSA code for years 2005 through 2008. Because the geographic areas with which these districts are associated are larger than the school district, the income data for each district is imprecise. To provide more information about the income within a particular district, I calculate the number of students in a school district who are eligible for free lunch as a

percentage of the total number of children in the geographic area who receive free lunch at school.

As an implicit indicator of quality, I construct each district's market share of students in the geographic area. Dye (1968) and McCormick, et al (1994) use the enrollment of private school students relative to enrollment in the district as the measure of performance. Here I construct a slightly different performance measure. I use the number of students enrolled in the school district relative to the total number of individuals under the age of 18 in the geographic area. This captures the demand for each district's product as it relates to substitutes within the geographic area, such as another school district, home school, or dropping out.

I estimate the effect of appointed boards on several fiscal variables. These include per pupil administrative cost and the percentage of expenditures dedicated to instruction as measures of efficiency. As measures of provision of service, I estimated an appointed board's impact on per pupil instructional expenditure, per pupil capital expenditure, and the teacher-pupil ratio. I also estimate an appointed board's effect on the composition of revenues from state and federal sources. These are estimated by the following equation:

 $y = \beta_0 + \beta_1 pctapp + \beta_2 mayor + \beta_3 duration + \beta_4 duration^2 + \beta_5 income + \beta_6 pctwhite + \beta_7 freelunch + \beta_8 enroll + \varepsilon$ 

The variable *pctappoint* is the percentage of board members that are appointed; *mayor* is a dummy variable equaling 1 if the mayor controls the district; *duration* is how long the board has had appointed members; *duration*<sup>2</sup> is used to find diminishing marginal effects for the length of time the board has had appointed members; *income* is measured weekly income of the geographic region in which the district is located; *pctwhite* is the percentage of the students enrolled in the school district that are white; *freelunch* is the number of students eligible for free lunch relative to the number of children in the geographic region receiving free lunch; and *enroll* is total enrollment in the school district. Each regression is estimated using fixed effects for district and year.

I also estimate the district's market share of students:

$$marketshare = \beta_0 + \beta_1 pctapp + \beta_2 mayor + \beta_3 duration + \beta_4 duration^2 + \beta_5 income + \beta_6 pctwhite + \beta_7 freelunch + \varepsilon$$

This is also estimated using fixed effects for district and year.

## Results

The results from the regression on the fiscal measures are presented in Table 1. It does appear that the governance structure of a school system has an effect on how a district allocates available resources. In the analysis of per pupil administrative expenditures, the coefficients for percent appointed and mayor are significant at the one percent level. The effect, especially if the mayor controls the school board, is large. If ten percent of a school board were appointed, this would imply an increase in administrative expenditure of \$15 per pupil. For a school district with 100,000 students, this would imply an increase of \$1.5 million in total administrative cost. There seems to be an interesting difference between appointed boards in general and school boards controlled by the mayor. The mayor-controlled school board seems to be able to control administrative cost more than boards with a different appointment structure. Total enrollment also has a negative impact on per pupil administrative expenditure, implying some economies of scale. To make sure my results were not being skewed by New York City, which is the nation's largest school district and is under mayoral control for six years in the data, I ran the regression excluding New York City; the results provide a very similar picture.

Appointment and mayor control do not seem to impact the percentage of a district's budget that is dedicated to instructional expenditure. Those districts with school boards with appointed members spend more on instruction per student than those without appointed members. The effect of mayor control on per pupil instructional expenditure is large and negative. These results are not significantly affected if New York City is excluded. This continues the trend that is seen in per pupil administrative expense: the effect of mayors being in control is negative, while the effect of appointment is positive. Thus, while schools controlled by mayors seem to have some cost savings in administration, these funds are not "reinvested" into the school system. For the full sample, having some appointed members on the board has a statistically significant impact on per pupil capital expenditure, while mayoral control does not seem to affect it. If New York City is excluded, the results do not significantly change.

The districts under mayoral control tend to have a higher pupil-teacher ratio.

Keep in mind that the teacher variable is measured as full-time equivalent, and the pupil-teacher ratio is not equivalent to class size. The higher pupil-teacher ratio may signify a lower level of clout of teachers' unions in districts controlled by mayors. Parents, however, tend to favor lower pupil-teacher ratios, so the higher pupil-teacher ratio may suggest that mayors are less responsive to parent-voters than school boards.

The make-up of revenue sources does seem to change as the duration of appointed boards increases. The percent of revenues coming from local sources decreases as the duration of appointed boards increases. Thus, boards with appointed members seem to

Table 1: Expenditure Regressions

Note: Standard errors are provided in parentheses below the coefficients. Those coefficients that are significant at  $\alpha$ =0.05 are indicated with \*, and those coefficients that are significant at  $\alpha$ =0.01 are indicated with \*\*.

are significan	Per Pupil Admin Expense	Instructional Expense	Per Pupil Instructional Expenditure	Per Pupil Capital Expense	Pupil- Teacher Ratio	Local Revenue
Percent	1.1450*	-0.0006	10.0233**	7.8410*	-0.0105	0.0443
appointed	(0.5367)	(0.0234)	(2.1265)	(3.6925)	(0.0118)	(0.0249)
Mayor	-148.10**	0.3285	-441.741**	-31.139	2.337**	-2.5984
	(39.7486)	(1.7351)	(157.4866)	(273.46)	(0.8695)	(1.8454)
Duration	16.0970**	-0.0346	-15.4803	-50.234	-0.1392	-1.392**
	(6.2295)	(0.2719)	(24.6817)	(42.857)	(0.1385)	(0.2892)
Duration <sup>2</sup>	-0.0111	-0.0025	4.8036**	4.0442	0.0115	0.0288
	(0.3243)	(0.0142)	(1.2848)	(2.2309)	(0.0073)	(0.0151)
Income	0.0884	-0.0019	-0.0373	0.0160	-0.0007	0.0006
	(0.0333)	(0.0015)	(0.1321)	(0.2293)	(0.0007)	(0.0015)
Percent	2.3987**	-0.1781**	-5.0760	21.85**	-0.0174	0.127**
White	(0.6586)	(0.0287)	(2.6093)	(4.5308)	(0.0144)	(0.0306)
Free Lunch	0.0103	0.0075	-1.0135	1.9793	0.0019	-0.0084
	(0.1593)	(0.0070)	(0.6312)	(1.0960)	(0.0035)	(0.0074)
Enrollment	-0.0003	0.0000**	-0.0023*	0.0044	0.0000	0.0000*
	(0.0003)	(0.0000)	(0.0011)	(0.0019)	(0.0000)	(0.0000)
Number of observations R <sup>2</sup>	1444	1444	1444	1444	1397	1444
	0.8	0.64	0.95	0.47	0.76	0.76

be able to shift the burden of education expenditure to the state and federal governments.

This result is not sensitive to excluding New York City.

The results of regression on market share are presented in Table 2. Market share is measured in percentage points. The governance structure does not appear to have a significant effect on the district's market share of students. The variables that have a statistically significant impact on the district's market share are the variables measuring income. If the people in the geographic area around a school district had \$100 more in weekly earnings, this would imply a decrease of 0.56 percentage points in a district market share. If a district's share of the students who are eligible for free lunch increased by 10 percentage points, this would imply an increase of 0.45 percentage points in the district's market share. These coefficients are very small, but they do imply that public education is an inferior good.

Because most districts with mayor-control are large urban districts, I also ran regressions excluding those districts in my dataset with less than 20,000 students in 2008. This resulted in dropping Harrisburg, PA, Trenton,NJ, and New Haven, CT, all of which had appointed boards. This had no significant effect on governance or demographic variables in the analysis.

Table 2: Market Share

Note: Standard errors are provided in parantheses below the coefficients. Those coefficients that are significant at  $\alpha$ =0.05 are indicated with \*, and those coefficients that are significant at  $\alpha$ =0.01 are indicated with \*\*.

	Market		
	Share		
Percent appointed	-0.0330		
	(0.0315)		
Mayor	1.2463		
	(2.3265)		
Duration	-0.1188		
	(0.3644)		
Duration <sup>2</sup>	0.0029		
	(0.0191)		
Income	-0.0079**		
	(0.0020)		
Percent White	0.0181		
	(0.0368)		
Free Lunch	0.2055**		
	(0.0094)		
Number of			
observations	1443		
$\mathbb{R}^2$	0.92		

## Conclusion

Education reform has been a perennial issue in the United States for the past one hundred years. One recent focus of education reform has been on the effect of governance on education outcomes. One robust result from the economics of organization is that institutions matter. Can boards with appointed members and boards under mayoral control impact education performance? The answer appears to be no. Thus, while the study of elected versus appointed regulators suggest that these different governance structures have a significant impact on outcomes (e.g. prices), this does not seem to be the case for the education industry. As alluded to earlier in the paper, this could be due to multiple factors, such as the fact that consumers of education do not pay an incremental cost for the service provided or that consumers of education are compelled to utilize the service provided. It may be that governance matters but that change at the local level is not the most effective margin for change.

While there are some differences in the pattern of expenditure between districts that have appointed board members and those that are wholly elected, these differences do not seem to impact the perceived quality of the education provided. While the lower administrative cost under mayoral control indicates some efficiency gains in the

provision of education, this does not mean that these savings are then used in a more productive capacity in the education system. Because per pupil instructional expenditure is lower in mayor-controlled districts in the restricted analysis, the efficiency "savings" do not appear to be reinvested in instructional expenditure. Thus, mayor-controlled districts may be more prone to the mayor "raiding" the education budget to allocate funds toward more favored uses.

As many education researchers have noted, reforming the education system is a difficult task. With the lack of evidence of increased education quality, changing the governance structure may just be an effort in tinkering at margins that do not affect the quality of education. It may also be that the current governance structure of the education system, with multiple layers of bureaucracy and rules, is resilient to changes only at one level. It may be that a more intensive change is needed.

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## **CURRICULUM VITAE**

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