

CAN PRIVATE INCENTIVES IMPROVE PUBLIC EDUCATION?

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Many scholars and education reformers believe that infusing financial incentives into the public education system will improve outcomes and reduce costs. Attempts to introduce private incentives into public education include school choice, charter schools, teacher merit pay, and administrative performance contracts. Each of these mechanisms falls short for at least one of three reasons: inability to generate innovation, lack of incentives to encourage best practices, and failure to identify the lowest marginal cost improvements. This article argues that third-party Pay for Performance contracts implemented on a district level might do all three. As a result, they could create the most efficient improvement in public education quality.

INTRODUCTION

Are successful public schools producing their high levels of achievement at the lowest possible cost? What contributes more to low student achievement: a lack of resources, or failures of management? The increasing significance of education and the amount of money flowing into public education should make every taxpayer concerned about whether our resources are being used effectively and efficiently.

Putting aside for the moment the question of quality, there is evidence to suggest that public education is produced inefficiently.^[1] Most people would agree that public schools should seek to conserve costs, but educators are not financially motivated to do so.^[2] Moreover, educators and administrators might not understand the true production functions of public education and, as a result, might not maximize outcomes relative to inputs.^[3] Both these factors contribute to inefficiency.

This has led some to suggest that the solution lies in the simple premise that “it’s the market, stupid.” Infusing financial incentives into the system will in theory improve outcomes and reduce costs. However, as my first economics professor emphasized, “Anyone who says it’s simple either is themselves or thinks that you are.” This article will compare different mechanisms that create financial incentives for the improvement of public education, and provide support for one new alternative: Pay for Performance Contracts (PPCs). PPCs can foster innovation, encourage better educational program evaluations, and promote the spread of proven technologies.

EXISTING MECHANISMS FOR SCHOOL COMPETITION

One strategy for improving public education is to increase competition among schools. If parents have the choice of where to send their children, they will select the highest quality schools available. As a result, poor quality schools will close and be replaced by better schools. Three mechanisms for competition in public education are Tiebout sorting, school vouchers, and charter schools.

Tiebout Sorting and the Current “Market” for Education

In his article, “A Pure Theory of Local Expenditures,” Charles Tiebout argued that local jurisdictions compete for residents based on taxes (price) and services (quantity).^[4] Residents move to localities that match their preferences for a market basket of local services, which includes public education. Parents choose a place to live based in part on the quality of the schools in the area. Therefore, if schools underperform relative to the cost of living in the locality, parents will move to other jurisdictions and demand better services.

However, even if parents make part of their housing consumption decision based on the quality of education, it is unlikely to be a strong enough signal to local educators to change their production of public education. The signal is further weakened because the quality of schools is only one of many important factors shaping people’s decisions about where to live.^[5]

Furthermore, families must have a certain level of financial resources to be able to “vote with their feet” in this way. This has two effects. The first is that public schools in rich districts might be required to be more efficient, since their “customers” have the most elastic demand; schools in the poorest districts might be the least efficient (and lowest quality) because their customers have the most inelastic demand. The second effect is that there will be a sorting of children into schools based on income. This major equity concern has led people to discuss options for disentangling school choice from housing choice.

School Vouchers

School vouchers represent an attempt to separate housing and school choice. In their simplest form, vouchers are given to students in a district for one spot in any school in the district. Parents choose schools for their children based on the quality of the school. While it is reasonable to assume that parents will choose the best schools for their child,^[6] school

vouchers do not eliminate the equity concerns of Tiebout sorting. Students are only able to switch schools if they have the transportation resources to attend another school. Therefore, the poorest students will often be unable to leave the worst schools. The additional costs of providing district-wide transportation to ensure equity significantly reduce any efficiency gains relative to other proposed solutions. Since there is limited evidence that school vouchers improve educational outcomes, it is unlikely that they are worth the price.

Another question surrounds how failing schools will be improved or transitioned. It is unreasonable to expect that existing high quality schools can support unlimited demand. Therefore, the mechanism for improving education must create a method for reforming failing schools. School voucher programs do not offer an intuitive rationale for how this should be done. What can occur is simply a resorting of students into different schools without any real improvement.

Charter Schools

As an alternative to school vouchers and Tiebout sorting, some school districts are trying to create competition in public education through charter schools. Proponents of charter schools argue that charter schools improve education outcomes of both the students enrolled in the charter school and students enrolled in public schools in the area.^[7] Students will be drawn to charter schools that achieve higher student outcomes. This pressure will cause local public schools either to improve to keep enrollment, or to shut down because of insufficient enrollment.

Charter schools do not eliminate the equity concerns of Tiebout sorting or the other problems described above in assessing the vouchers approach. Also, school districts need to build a great deal of excess capacity in order for there to be sufficient competition. According to Michael Kirst of Stanford University, 15% of students in a district will need to switch to charter schools in order to see the promised benefits of charter schools.^[8] The extra cost of this capacity needs to be compared to other methods of generating improvement.

There is also little evidence linking charter schools to overall improvement. Research on the effects of charter schools suggests that student outcomes (as measured by test scores) “do not improve and might actually decline, relative to those of public school students.”^[9]

CREATING BETTER INCENTIVES FOR TEACHERS AND ADMINISTRATORS

As an alternative to competition among schools, some localities such as New York City have implemented mechanisms for motivating teachers and school administrators. Teacher merit pay and administration performance contracts have emerged as options for improving school quality.

Teacher Merit Pay

Improving education by motivating teachers is intuitively appealing because teachers are arguably the most important

factor within a school’s control for shaping students’ educational achievement. Currently, teacher earnings, promotions, and job security are not linked to performance. Therefore, there is little financial motivation for teachers to improve educational outcomes. Teacher merit pay infuses financial motivation in the form of salary bonuses tied to the academic outcomes of students. The most common form of merit pay is a bonus for teachers if a certain percentage of the students in the school meet annual performance requirements. This presents two problems. First, rewards are not tied to performance improvements; therefore, some teachers will be rewarded for the performance of students when that performance was unrelated to their teaching. Second, some teachers will be penalized for being at schools where other teachers do not perform. In this scenario, a teacher might improve the outcomes of her students, but is penalized for the inability of other teachers at her school to improve their students’ scores. If this occurs, merit pay will cause teachers to abandon low-performing schools and head to high-performing schools, thus reinforcing existing performance differences.

Some teachers oppose the implementation of merit pay because of the underlying assumption that individual teachers are not working hard enough and that the incentives will get them to work harder. If individual teachers are doing all they can to improve the educational outcomes of their students, then there is no reason to suggest that merit pay will improve outcomes. This might, in fact, be the reason for the empirical result that “there is no U.S. evidence of a positive correlation between individual incentive systems for teachers and student achievement.”^[10]

Even if it were proven that merit pay did in fact improve educational outcomes for students, it still has flaws. While it would create incentives for individual teachers to generate and implement new ideas to improve student outcomes, it would not create incentives or methods for spreading best practices to other classrooms.

Administration Performance Contracts

Another method for rewarding positive outcomes is administration performance contracts. This idea has gained traction in New York City, where Mayor Bloomberg introduced several incentives into public education. It is too early, however, to gauge the results of New York’s reforms.

Several of the same theoretical concerns with teacher merit pay exist with administrator performance contracts. They can reward administrators at schools that are currently performing at a high level and they might create a disincentive for administrators to work at low-performing schools. As with teacher merit pay, if one assumes that these concerns do not hold and that some administrators will find ways to improve their schools if properly motivated, administration performance contracts still might not be the most efficient method for improving outcomes. As with merit pay, it rewards innovation but it does not create an incentive for information spreading.

Administrators are tied to one school and have no incentive to spend additional time disseminating information about how other schools can replicate their results. This will lead to the under-provision of information to all schools about methods for improving student outcomes.

A NEW MECHANISM FOR IMPROVEMENT: PAY FOR PERFORMANCE CONTRACTS

An ideal mechanism would both foster innovation and create incentives for the dissemination of successful practices. One promising method for achieving these goals is Pay for Performance contracts.

Under this mechanism, each school would be allocated a specific budget for educational improvement in the form of a standard contract for a third party firm. This contract would have a fixed cost and an incentive structure paying the third party firm for specified improvements in the mean or median education attainment of a school's student body. The fixed cost plus incentives is the total price offered to firms. If the offered price exceeds the true cost of improving a school, firms will enter the market to make a profit by accepting a contract with that school at the price offered by the district. Firms will compete for those schools that they can improve, bidding down the value of the contract and reducing the price charged to the district for improving that school. Firms will also be able to negotiate the length of the contract for delivery of services. However, longer contracting periods are preferred to shorter ones to ensure that "quick fixes" are not employed.

Competition in this form offers a number of benefits. It would identify those schools that can improve simply by real-locating current resources. In order to ensure that these improvements are achieved at the lowest cost, the mechanism fosters competition between firms. In addition, PPCs will limit disruptions to current students and ensure that all students (and not just those of a particular socio-economic status) benefit from improvements. As with most performance contracts, there is obvious importance in making sure that the incentives are correct.^[11]

Assumptions

The theoretical success of Pay for Performance contracts depends on several underlying assumptions. The first is that a method of assessing student achievement is available and valid, and that improvements in student achievement can be measured and tracked over time. This does not, however, imply that standardized test scores are the only or the best way to measure outcomes. Districts could base contracts on any measurable metric deemed important to student outcomes. This could include various forms of testing, graduation rates, student participation in criminal activity, drug use, college admissions, post-graduation employment and earnings, or report cards from parents and the community.

Another assumption is that the most efficient production function for most schools is unknown and that there are

schools that are operating inefficiently. If the most efficient production function were known, the problem would be quite different – it would be a matter of disseminating that information. However, there is sufficient evidence to suggest that educators "do not know how to specify the best set of inputs in order to increase quality."^[12] Educators also have limited incentive to understand true costs since there are no cost minimization or profit maximization incentives.

The final assumption is that each school has a different production function. Schools differ for a variety of reasons, but the most important reasons are that the student populations and the larger environment in which schools operate differ. The inefficiency in one school does not necessarily mirror the inefficiency in another. This eliminates the possibility of identifying one "silver bullet" to fix public education. As a result, it can be assumed that various approaches might be appropriate depending on the school and its setting.

Some differences in schools can best be understood as a difference in economic rents of locations. These rents might be the biggest determinant of educational outcomes; that is, students' parents, neighborhood effects, and peer effects can all contribute considerably to the outcomes of individual students (and certainly aggregate scores) in a given school.

One major implication of this assumption is that some schools might not be producing education efficiently even if their outcomes are high because the inefficiency is masked by the large rents. Some lower performing schools might be performing efficiently, but do not have high scores because they lack the endowments of other schools.

Current Contracting in Public Education

It is important to distinguish this new method for contracting with third party firms from current trends in educational contracting. Primary and secondary schools currently spend approximately \$20 billion per year on purchased services and products.^[13] These services fall into four main categories: "test development and preparation, data management and reporting, content area-specific programming, and remedial services."^[14]

Private contracts have primarily focused on cost-reducing improvements, i.e., cheaper and better standardized testing or delivery of other non-educational services. This indirectly improves educational outcomes in that it frees financial resources that can be used to purchase more inputs that directly affect outcomes.

Anticipated Firm Behavior

By offering these contracts to schools within a given district, firms will evaluate which schools they can profitably improve. If firms can improve student achievement at a cost less than the price of the contract, they will accept the contract with that school. If another firm can improve student achievement at a cost less than the amount offered by the first firm, then it charges a lower contract price. Firms will continue to lower the price of the contract until it is awarded to the firm

that can improve education at the lowest cost. If firms cannot improve achievement at that school for the price of the contract, no firm will take the contract. This will reveal schools whose cost of improved achievement is higher than the contract. This information is as useful as identifying the lowest cost schools to improve. Since firms will maximize profits by selecting the schools where the difference between the cost and the magnitude of improvement are greatest, the lowest cost improvements will happen first. Additionally, firms will become better at identifying the schools with problems that they are confident they can fix. Therefore, as innovations are generated and proven, the market will become more efficient.

The district implementing this plan should limit the number of contracts awarded in the first round. In order to ensure that only the most efficient firms receive contracts, districts should initially limit demand for services by limiting the number of contracts. The market for educational services needs to mature prior to large sums of money flowing into it. In an immature market, firms still do not truly know how to improve education, so firms need to improve their production functions and improve efficiency.

Expected Outcomes

In addition to the efficiency gains explained above, this mechanism fosters innovation and attaches a price for information spreading. Innovation will be generated because the mechanism creates a market for proven methods. Firms will have an incentive to understand the true cost of school improvement and to identify proven methods of improvement because their profit depends on successful outcomes. This should create a market for better research. Also, creating a way for firms to profit from public education will attract education entrepreneurs to the market. By attracting more bright minds to work on the “problem” of public education, PPCs can lead to the creation of new production technologies through innovation.

This mechanism also encourages the knowledge sharing. Firms will maximize profits by rapidly diffusing proven strategies to their clients. Firms have incentives to help all schools that can be improved with efficiency gains. There is also motivation to seek out and to implement the best ideas, which means that firms will spend time identifying and implementing existing ideas for improving education.

Equity Concerns

One concern is that firms might accept contracts only with currently high-performing schools and will ignore low-performing schools, particularly those with large disadvantaged populations. This will only occur if firms believe they can make high-performing schools even better at a lower cost than what it would take to improve low-performing schools. After all, the revenue they receive depends on performance improvements and not absolute scores. If this were to occur, it would reveal important information. By selecting one school over another, firms are signaling to policymakers which schools they believe will cost more to improve. This would give justification for increasing expenditures at the schools ignored by firms while maintaining the level of expenditure in schools that receive contracts and improved scores.

There might also be a concern that within schools, firms will recommend reallocating resources to children who are candidates for improvement and reducing resources for children who are lower candidates for improvement. This could lead to an increase in disparity within schools while still improving the schools’ median or mean scores. The contract could account for this by assigning penalties for the decrease in achievement for any particular subpopulation within a school or it could attach greater incentives for improving the test scores of certain sub-populations deemed most in need.

CONCLUSION

Current mechanisms for improving efficient production of public education are flawed in a variety of ways. The primary reason is weak or misallocated incentives. By offering Pay for Performance contracts to third party firms, school districts can identify the lowest cost improvements to the production of education. This mechanism will foster innovation, encourage analysis of impacts, and promote communication about how to make improvements.

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ENDNOTES

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