

School Finance Redesign Project

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SPENDING CHOICES AND SCHOOL AUTONOMY:

Lessons From Ohio Elementary Schools

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The School Finance Redesign Project

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Jacob Adams, Principal Investigator

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Introduction

A quick scan of education news coverage points to a revival of interest in school-based decisionmaking. Districts in Chicago and New York have devolved authority to some schools, and what started as a pilot program decentralizing authority in Boston has grown steadily. Houston also has decentralized some level of authority to all schools and Massachusetts recently granted increased autonomy to some of its lowest performing schools. At the time of writing, proposals afoot in Connecticut, South Carolina, and Nevada would enable more school-based resource decisions. And to many, the growth of charter schools looks like another example of the movement toward freeing schools from central office rules and moving decisions down to the building level.

Devolving authority to schools reflects the notion that school personnel are better equipped than district administrators to make efficient and effective use of their resources to meet student needs. As state and federal reforms move accountability for student performance to the school level, some policymakers have suggested that new accountability should be accompanied by more school-based authority. When building leaders are able to make decisions, the reasoning goes, those decisions can be tailored to the unique needs of their students, thereby resulting in more efficient and effective use of resources (Goertz and Stiefel 1998)¹.

But decentralization was tried before, in the 1980s, without much effect. Analysts suggest that the earlier efforts had limited results in part because decisions about resources (budgets, personnel, and staffing) were retained under central management (Bimber 1994; Hansen and Roza 2005). Lack of authority over these critical matters inherently limited the decisions school leaders could make, according to these analysts.

Conditions today may be more sympathetic to deeper, thoroughgoing decentralization than they were a generation ago. The development of the standards-based reform movement, the creation of new federal and state accountability systems, and changes in finance formulas at the federal, state, and local levels all create a new context for decentralization. In particular, school-based funding formulas in place of district-based allocations allow education leaders to think differently about how resource decisions are made at the school level. The federal Title I program allows for whole-school funding. Some districts use or are considering weighted budget allocation policies that focus on student and school needs, rather than allocating funds according to district-determined formulas. Given this new policy context, it makes sense that policymakers are again considering reforms that would devolve decisions to schools. Of key interest this time are policies that would provide schools greater autonomy over key resource decisions.

For policymakers, several questions remain: If school leaders had more autonomy over resource decisions, would that result in any real difference in how schools use resources? When

¹ Recent research on decentralization, accompanied by greater school control over resources, provides some evidence of a positive effect on student performance. A 1996 study of schools in Texas concluded that principals who carefully and steadily applied resources to interrelated organizational changes could bring about gains in achievement (Murnane and Levy 1996). A study of Chicago's decentralization effort in the 1990s found that principals were able to inventively deploy resources in ways that appeared to boost achievement (Bryk, Camburn, and Louis 1999). A study of Boston's Pilot School Program found pilot students (in schools with greater authority over budget, curriculum, staffing, and governance) performed better than students in other Boston public schools (Tung, Ouimette, and Feldman 2004).

provided with greater spending autonomy, what kinds of choices do school leaders make? Are those choices meaningfully different from current practice? What kinds of constraints continue to serve as barriers to change?

Answers to such questions could help policymakers design more effective school autonomy policies. While policymakers will ultimately want to know how autonomy relates to student achievement, what is needed today is some idea of what school leaders would do if given freedom from spending restrictions.

Research Literature

The theory of action at play in proposals to decentralize decisionmaking and provide greater autonomy at the school level is that when building leaders have control over their resources, they use them differently and are able to improve student performance. Findings thus far about student performance are mixed, at best, but as some analysts have claimed, almost none of the early decentralization initiatives gave school-level leaders control over money and staff. Researchers have found that without control over resources, the likelihood that decentralized decisionmaking will lead to improved student performance is inherently limited (Steifel et al. 2003; Olson 1997). Bimber (1994) identified specific policy decisions that remained centralized, including: (1) salaries and benefits; (2) size of the teaching staff; (3) allocation of personnel to responsibilities/positions; and (4) selection of teachers.

In a study designed to determine the amount of flexibility that principals preferred when implementing site-based budgeting, Clover et al. (2004) found that principals themselves also identified district rules on how resources can be used as a barrier to change. Principals wanted a higher level of flexibility with their spending, particularly in the area of employee salaries and benefits—the area in which they had the least flexibility at the school level.

This time around, decentralization efforts differ, with some devolving more authority over resource decisions than others. Yet with these new initiatives, analysts are interested in the intermediate step—in what ways do building leaders use resources differently when constraints are lifted? Here the literature provides some insights.

Goertz and Steifel (1998), in their study of decentralization in four districts, found that building leaders used flexible resources in very traditional ways—reducing class size, expanding pre-school, and purchasing professional development and materials for new curriculum—and that no new innovations emerged. A General Accounting Office report (1994) on site-based management in three districts reported that school leaders chose to use their flexibility to add full-day kindergarten, extended-day programs, special education and gifted/talented programs, and new courses. Changes in budgeting included adjustments to spending on staff, supplies, and equipment. Another study found that increasing the share of flexible resources resulted in structural changes, for example offering reading programs within high schools (Carnoy, Elmore, and Siskin 2003).

Interestingly, some research on entrepreneurial, “risk-taking,” or even “rebel” principals suggests that district rules on spending need not serve as real barriers to building-based decisions. Anecdotal reports of building leaders characterized as “non-conformist,” “independent thinkers,” or “creative bureaucrats” often accompany stories of unlikely changes made at schools

(even those that seem to defy real barriers) in spite of the centralized system (Williams 2006). Some reports suggest that these entrepreneurial principals are able to pull together their staff in more creative ways to serve their students. Despite the anecdotal nature of the evidence, it does raise the notion that when push comes to shove, some constraints need not restrict building leaders from doing what they want.

New research on charter and private schools provides more insight into how resources get used when outside rules on spending are reduced. A study by the American Federation of Teachers on resource allocation in charter schools found that charters employ less experienced teachers. They also spend a smaller portion of their funds on instruction and a greater share on administration. A study comparing Edison schools to their local public schools found similar patterns, but noted that the lower salaries Edison pays allowed for more teachers per pupil than their counterparts even though instructional costs were lower. This study noted too that Edison schools had a complicated staffing structure where different staff members played multiple roles (Hannaway and Sharkey 2004).

Data from the NCES Schools and Staffing Survey support this evidence of salary differentials between traditional public, charter, and private schools. Salaries are over 40% higher at traditional public schools than at private schools with charter schools falling somewhere in between.² This could be driven in part by higher experience levels and greater proportions of teachers with higher levels of education at traditional public schools.³

Recent reports on teacher compensation (Kowal, Hassel, and Hassel 2007) show that charter and private schools make greater use of pay innovations and that strict salary schedules play a smaller role in determining base pay. Charter schools and private schools are more likely to use higher pay to fill hard-to-staff positions, and to make use of non-financial rewards to draw in the best teachers.

While information about private schools' resource use has been available for some time, some have questioned its applicability to public schools given the parochial nature of many private schools, which may lead to differences in objectives and student populations. For instance, reports of lower teacher salaries have been accompanied by proposed explanations that teachers are willing to work for less in private schools to support their religious missions or because of fewer student problems.

So, while the literature provides some evidence that schools with greater autonomy may indeed use their resources differently, policymakers are far from having the answers they need to design more effective school autonomy policies. Ultimately, policymakers will want to know how autonomy relates to student achievement, but what is still needed today is some idea of what schools would do if given freedom from specific spending restrictions.

² Average annual salaries for full time teachers were \$44,500, \$37,000, and \$31,700 for traditional public, charter, and private schools, respectively, for the 2003-2004 school year.

³ The percentages of teachers with more than 4 years of full time teaching experience are 82.5%, 56.6%, and 68.3% and the percentages of teachers with master's degrees or higher are 48.3%, 32.6%, and 35.3% for traditional public, charter, and private schools, respectively.

Research Design

In this paper, we ask how school flexibility and autonomy are related to how schools spend their funds, determine trade-offs among competing demands for resources, and make decisions about what proportion of their resources should be devoted to staffing. In order to investigate differences in resource use by school type, this study utilizes resource data from different types of schools, differentiated by the degree of autonomy school leaders have over resource use.

Ohio served as a suitable study site in large part because of our access to publicly available finance data on district and charter elementary schools. The database includes school allocations, staffing patterns, and salaries for all public and charter elementary schools in the state and provides data for the 2004-05 school year. In addition to the availability of the database, Ohio provided a rich setting for this study because it has multiple mid-sized city districts, each of which includes charter and private schools, allowing for comparisons among different school types in the same labor markets. Further, one of the city districts—Cincinnati—is one of the early-decentralized reform districts where schools were given some resource autonomy beginning in the 1999-2000 school year. Selecting all public and charter elementary schools in Ohio's eight largest districts (Akron, Canton, Cincinnati, Cleveland, Columbus, Dayton, Toledo, and Youngstown) produced a count of some 449 publicly funded schools, including:

- 311 regular public schools in traditional centralized districts;
- 57 regular public schools in one decentralized district (Cincinnati); and
- 81 charter schools in the eight cities.

Since we were also interested in understanding whether resource allocation patterns differed under “entrepreneurial” school leaders in centralized school systems, we sought out nominations of particularly entrepreneurial principals from state and district officials. These principals were identified as “doing things differently despite their centralized district setting.” Of the 311 schools in centralized districts, nine were classified as schools led by entrepreneurial leaders.

To get similar data for private schools, we surveyed 196 private schools (85% were parochial) in the same eight cities and 68 completed surveys reflecting 2005-2006 school year data.

Added to the 449 public schools, the 68 responding private schools provided the project with more than 500 elementary schools which we placed in this five-way classification:

- Schools in centralized districts (302 schools).
- Schools in centralized districts with “entrepreneurial” principals (9 schools).
- Schools in a decentralized district (57 schools).
- Charter schools (81 schools).
- Private schools (68 schools).

The five types of schools differ in the amount of autonomy they enjoy in allocating various school-level resources identified in the literature, as indicated in table 1.

Table 1. School-Level Resource Autonomies Differ Among School Types

School Types	Key Areas of School-Level Resource Autonomy			
	Control over allocation of personnel to responsibilities	Control over allocation of resources across functional categories (e.g., pupil support, administration, etc.)	Control over number of teachers	Control over teacher compensation
Schools in centralized districts				
Schools in centralized districts with “entrepreneurial” principals	✓			
Schools in decentralized districts	✓	✓	✓	
Charter schools	✓	✓	✓	✓
Private schools	✓	✓	✓	✓

To investigate differences in spending and staffing decisions, the project assembled enrollment, staffing and expenditure data for each of the following, by school:

- Non-categorical expenditures broken out by function (administrative, building operations, instructional, pupil support, and staff support).
- Student enrollment.
- Average teacher salary.
- Number of full time equivalents (FTE) in each of 39 publicly defined job titles.

Unfortunately, in piloting the private school survey, it became apparent that respondents could not reliably separate costs by function (that is to say by administration, building operations, pupil support, and instructional and staff support). The final survey, therefore, did not seek this information and the findings below do not provide any estimates for private schools across functional categories. (Appendix A provides the brief questionnaire to which the private schools responded.)

Findings

Based on these data, what can be said about how expenditure decisions differ across the five categories of schools (regular public, decentralized public, entrepreneurial leadership, charter, and private)? Do schools with different levels of autonomy make different trade-offs in staff hiring and responsibilities? Between teachers’ salary levels and the number of fulltime equivalents (i.e., between paying higher salaries and employing fewer people, or paying lower

salaries and having more adults in the classroom)? Do higher salaries drive higher instructional costs and higher costs per pupil?

This section of the paper reports our findings in each of these areas.

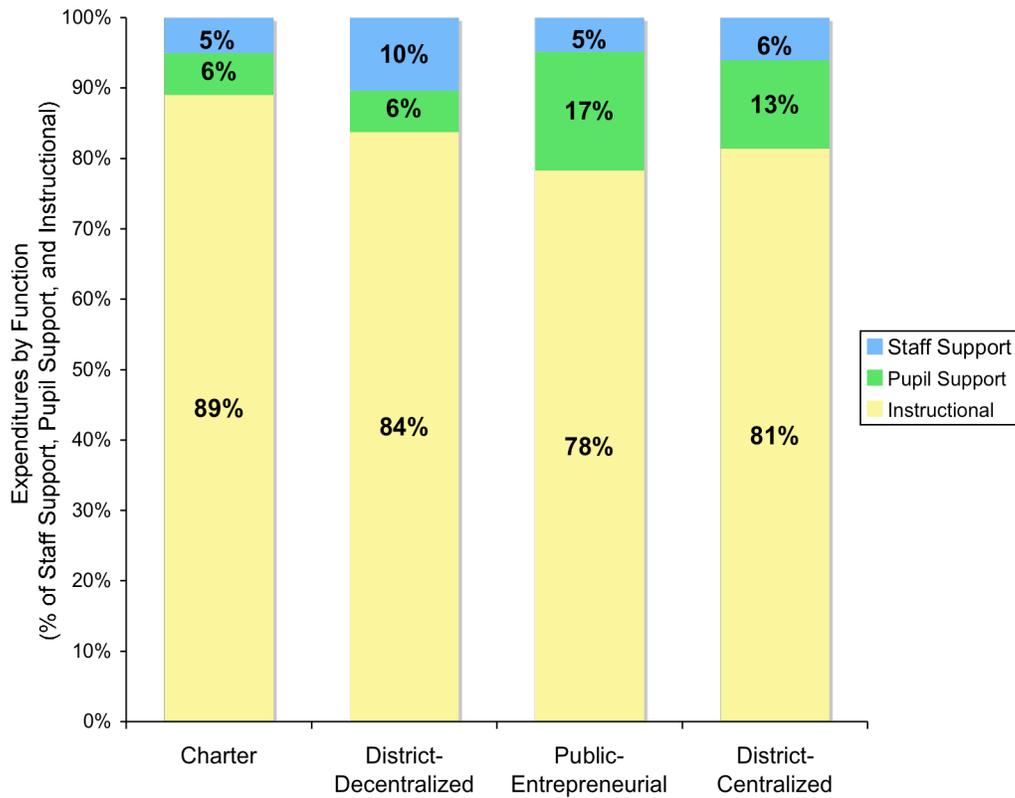
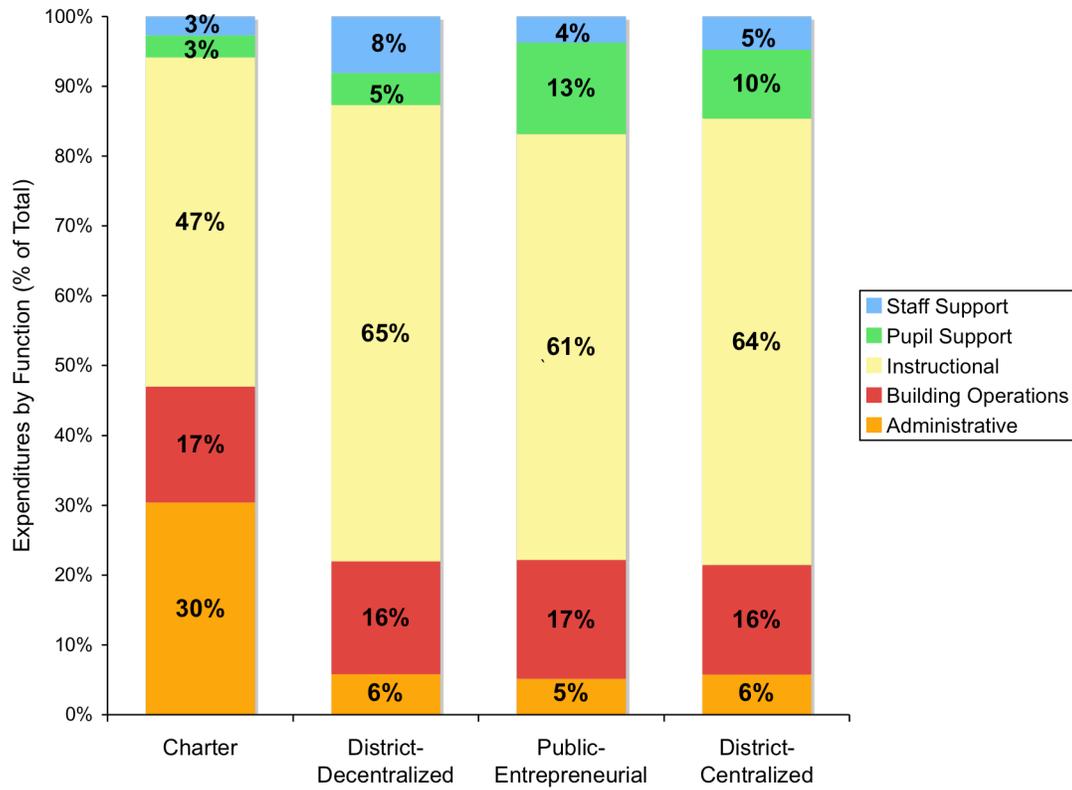
Resource Allocation Across Functional Categories Differs in District and Charter Schools, Although it is Not Clear How These Differences Relate to Autonomy

Recall that the survey provides no information about resource distribution across functional categories for private schools. Therefore, looking at schools in the remaining categories, it is apparent from the analysis of the public database that there are differences among school types in their distribution of resource costs across functional categories (see figures 1a and 1b).

These figures represent expenditures as a percentage just of school budgets (which represent a only a portion of expenditures on behalf of district schools), so one should be careful in jumping to conclusions about the results. As the figure 1a indicates, charters spend less than half of total expenditures on instruction and instructional support, while each of the public school types exceeds 60 percent in the share of expenditures devoted to instruction. The proportion of charter expenditures devoted to administrative support is also about six times the proportion of each of the other public school categories, while each of the public school types outspends charters on staff support (e.g., professional development and training).

In many ways the broader pattern described above is unremarkable. Regular public schools, no matter how centralized or decentralized, receive a lot of administrative support from district expenditures, which are not considered in this analysis. Somebody has to keep the books, raise funds, pay teachers, recruit them, and report to the public. In the absence of a district structure to handle these responsibilities, the onus falls on charter leaders. (And a similar onus probably falls on private school leaders.) As a proportion of outlays, therefore, administrative support eats up a larger share of school-level expenditures, simply because administration is supported at the school level in charter schools and at the district level in regular public schools. As the proportion of budgets devoted to administration goes up in charter schools, the proportion devoted to all other areas declines.

It is not clear that the differences are significant—or related to autonomy. District decentralized schools spend slightly more on instruction and instructional support than centralized schools, but the difference (1.5%) is relatively small. It is something of a surprise to see entrepreneurial schools spending a lower proportion of school budgets on instruction than their regular public school peers, but the number of schools reported here is so small (nine), that the results are at best indicative and call for further research.



Figures 1a and 1b. Proportionate Expenditures Differ by Function Across School Types

Schools With More Autonomy Have More Teachers Per Pupil

Examination of staff patterns among school types suggests both trade-offs between classroom teachers and other positions, and among the types of other positions. Figure 2 provides the data on staffing patterns among the different school types. What is most significant is that private schools, charter schools, decentralized schools, and schools led by entrepreneurs all hired more teachers per 300 students than regular centralized public schools. That is to say, schools with greater hiring flexibility tend to use it to hire classroom teachers. Everything else being equal, this should translate directly into smaller class sizes. Further, schools with even more autonomy (charters and privates) had even more teachers than schools with less (decentralized schools).

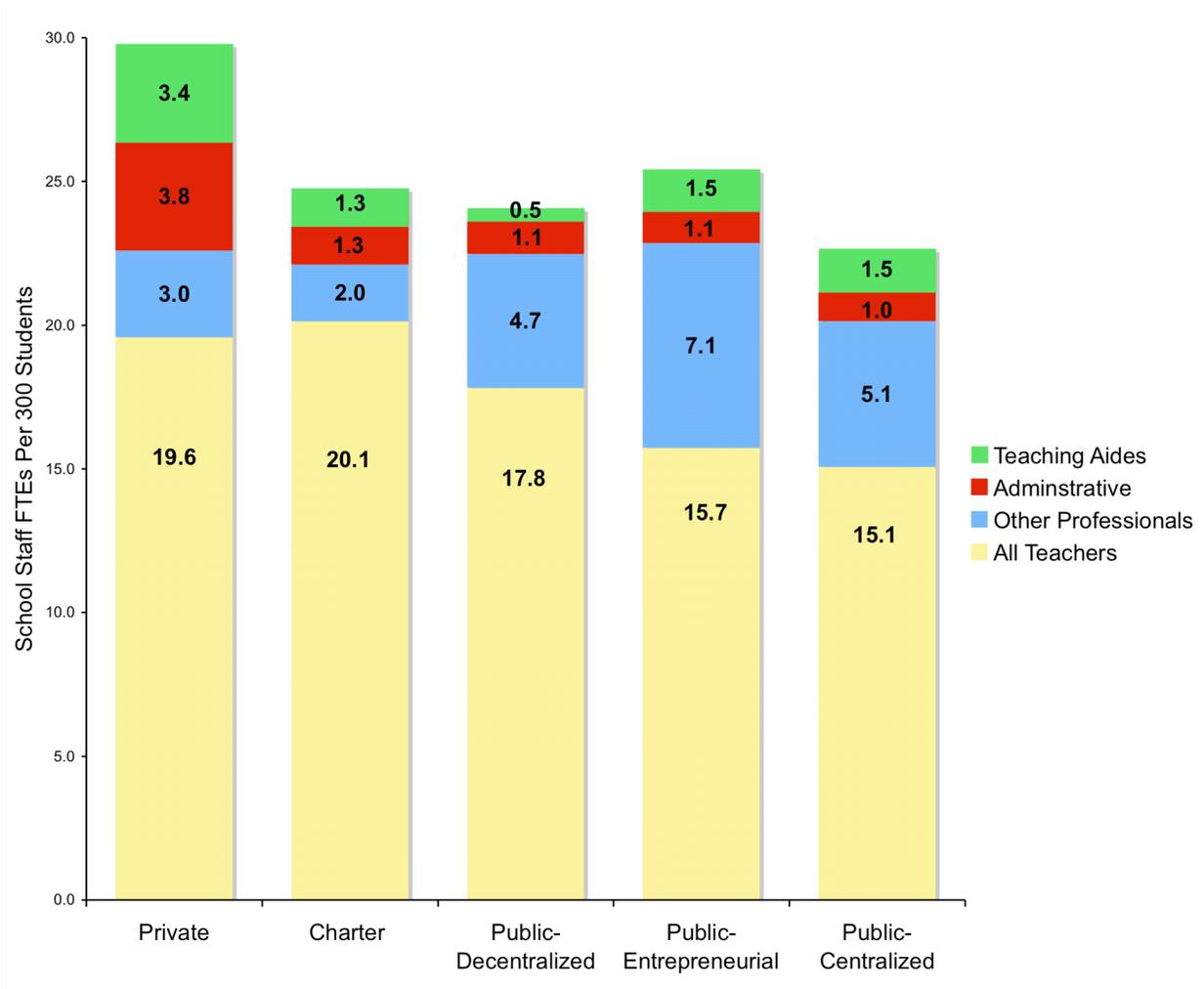


Figure 2. Schools With Fewer Constraints Have More Teachers Per 300 Students

Schools With More Autonomy Use Fewer Non-Teaching Professionals

The patterns for “other professionals” represent the opposite trend in that schools with greater autonomy opted for fewer non-teaching professionals (such as librarians, counselors, nurses and other professionals). As figure 2 suggests, there is almost a direct trade-off between teachers and other professionals: private and charter schools had more teachers at the expense of other professionals whereas schools in centralized districts and schools with entrepreneurial principals used their resources to purchase a greater number of other professionals at the expense of some teachers. Interestingly enough, the nine entrepreneurial principals hire the largest number of “other professionals.” These “other professionals” account for seven FTE slots in entrepreneurial schools.

Private Schools Have (By Far) More Administrative Staff Per Student Than Any of Their Public School Brethren, Including Charter Schools

Private schools (that is to say primarily parochial schools) clearly hire more administrative FTEs. One might anticipate the administrative hires, given the lack of a central office to support administration, but one would also expect to see the pattern in figure 1a, in which charter schools spent a larger share of their budgets on administration, repeated here in figure 2. Charter schools, lacking a central district to support administration, should look more like private schools than public schools in figure 2. But the reverse is true.

Schools of Different Types Make Different Trade-Offs Between Teacher Salaries and FTEs

In public schools, whether centralized or decentralized, teacher salaries are on fixed schedules; they cannot be varied at the school level. For charter and private schools, salaries are included among resource decisions that school administrators can make. Figure 3 demonstrates the trade-offs that charter and private school officials make between salaries and number of positions.

Charter and private school leaders seem to opt for lower salaries and more staff, while the opposite pattern evident in centralized and decentralized schools. While there are fewer teachers per pupil for public centralized schools, salaries are higher at public schools than at charter or private schools. Across the board in public schools, whether centralized, decentralized, or entrepreneurial, teachers receive higher pay than they do in either private schools or charter schools. In the schools we studied, where there are higher salaries, there are fewer teachers per pupil. Teacher salaries in the centralized schools averaged \$53,970; private and charter teachers averaged salaries more than \$20,000 less, with private school teachers at \$29,910 and charter teachers at \$31,350. Meanwhile, the public decentralized category averaged the highest salaries at \$56,911, but this set represents just the 57 schools in Cincinnati. Conceivably, the small sample, or district-specific factors (such as higher cost of living, union negotiations, or other district characteristics) drive this average up beyond that of other districts.

Teacher pay is, on average, \$5,050 per teacher lower at the nine schools identified as being led by entrepreneurial principals than their centralized counterparts from the same districts. This finding suggests that these entrepreneurial principals have a smaller share of more senior (and more highly paid) teachers. What is not self-evident is whether the principals chose these teachers, or senior and mid-career teachers self-selected away from these schools.

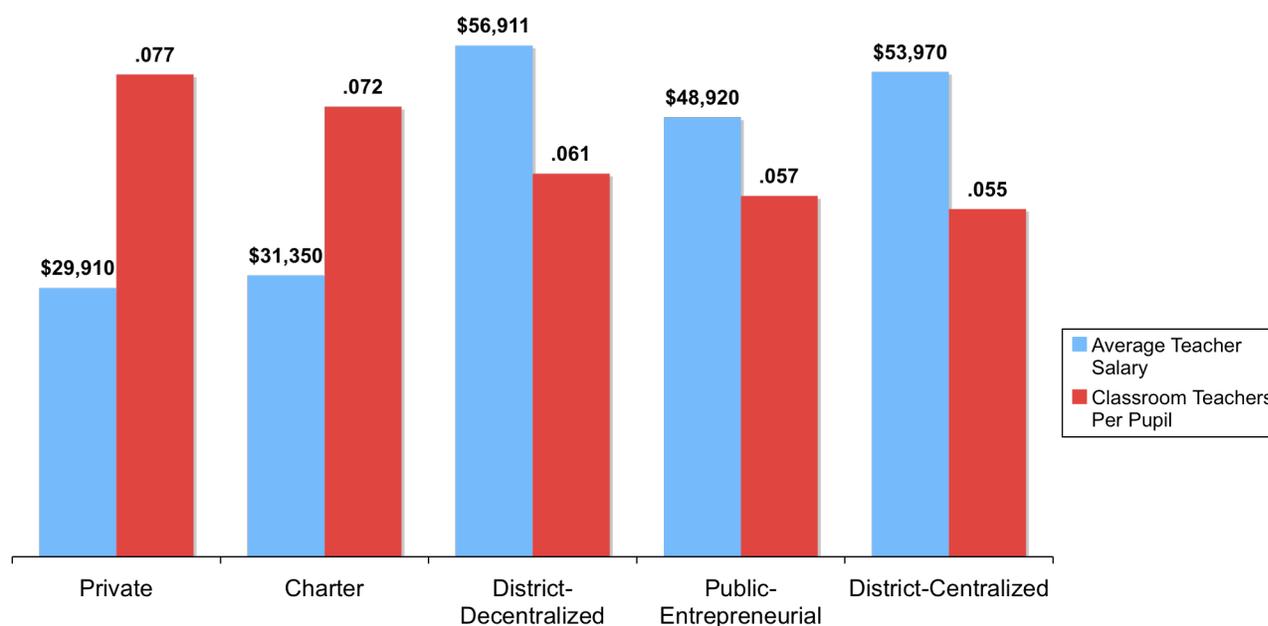


Figure 3. School Types Make Different Trade-Offs Between Teacher Salaries and Number of Classroom FTEs Per Pupil

How is it that charter and private schools can recruit teachers at such lower cost? Clearly this study didn't directly address this question, yet the data do lend themselves to hypotheses about the link between class size and teacher salary. Or, as has been supported by the literature, it may be that charter and private schools recruit teachers at lower cost by relying on younger and less-expensive teachers.

Higher Salaries in Schools With Constraints on Teacher Compensation Drive Higher Classroom Teacher Costs Per Pupil

While public centralized and decentralized schools have fewer teachers per pupil, the higher salaries drive up costs beyond what's caused by FTEs (see figure 4). Since classroom teacher salaries comprise the bulk of instructional expenditures, it makes sense that centralized schools spend more per pupil on instruction (\$2,361 per pupil) than do charters (\$1,970) or private school (\$1,683). A note of caution when interpreting the high per-pupil cost associated with the public decentralized schools (\$3,062), all schools in our sample come from the same district, and thus the higher salaries in this set may indeed be a function of higher cost of living, union negotiations, or other district specific characteristics, which then create the highest classroom teacher costs per pupil.

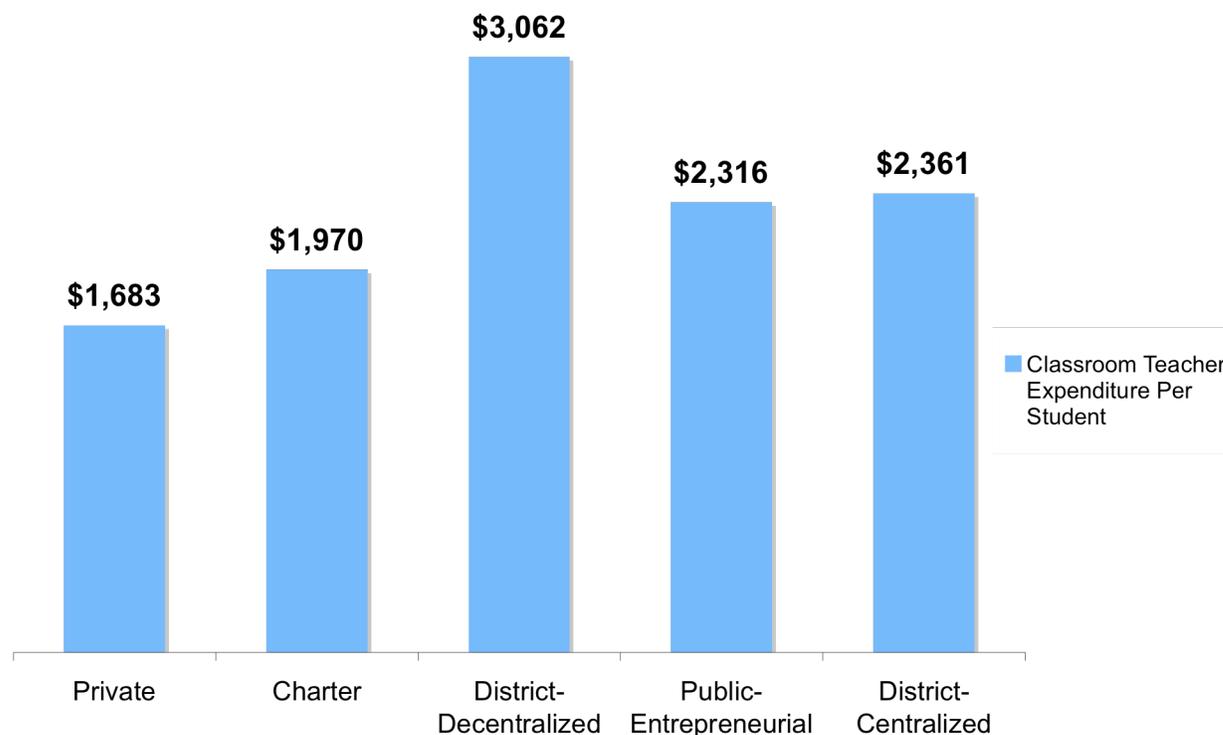


Figure 4. Higher Salaries Drive Higher Classroom and Instructional Costs Per Pupil

Centralized Schools Use Fewer Partial FTEs

The pilot survey of private schools revealed that some schools use individuals in multiple roles (for example, a vice principal who also teaches algebra.). To further investigate how staffing patterns differ among schools with different constraints, the final analysis examined the use of “partial FTEs” to fill different roles. Figure 5 provides the results.

The results are quite striking. It seems apparent that private schools and the 57 decentralized schools in Cincinnati use “partial FTEs” in various roles at rates three to four times higher than charter, entrepreneurial, or centralized schools. The differences could not be more apparent. This seems to be a case in which the hiring and spending autonomy afforded to school leaders in private and decentralized schools is used to obtain maximum flexibility in the use of human resources.

One would expect that charter schools would look more like private and decentralized schools on this dimension, but they do not. The rates of “partial FTE” use for charter schools are only slightly higher than the rates from centralized school principals. And while the difference may have something to do with the fact that charter schools are still relatively new, it isn’t clear how or why that works. This finding is difficult to explain and deserves further research.

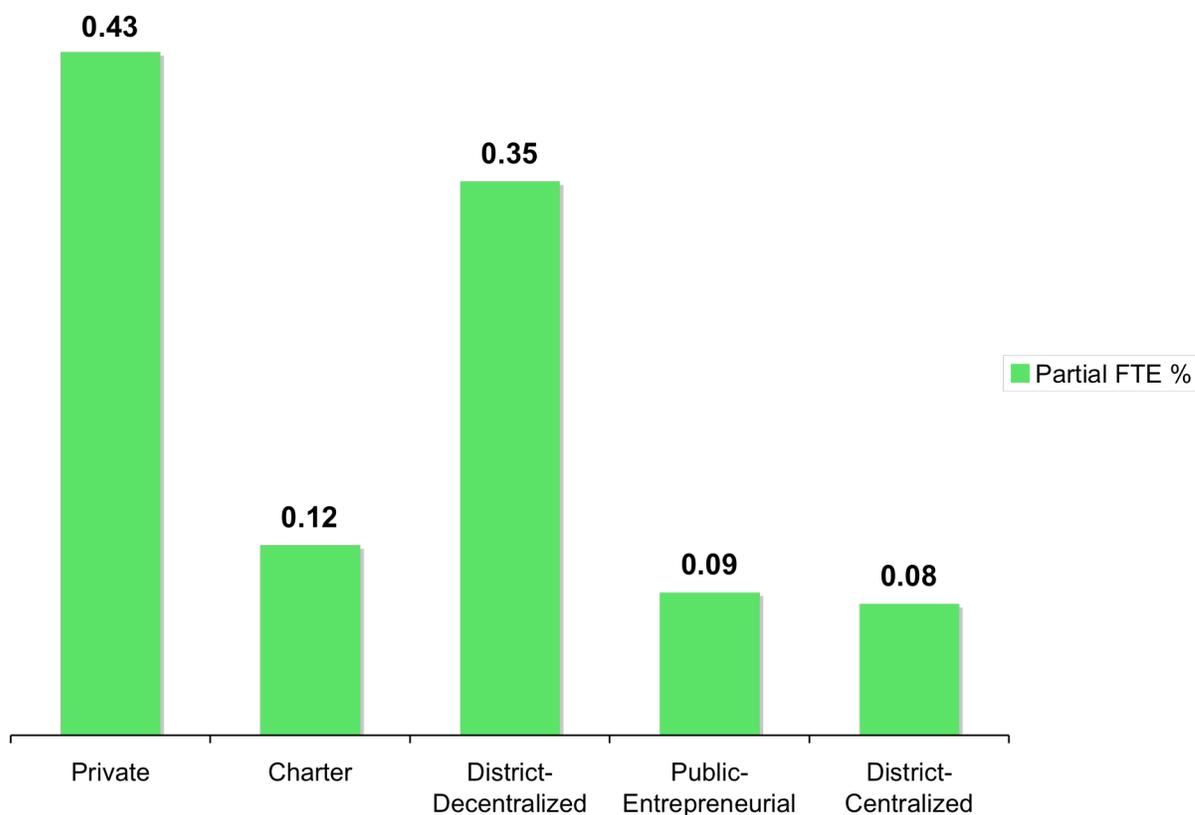


Figure 5. Some School Types Are More Likely to Use at Least One Partial FTE in a Higher Percentage of Job Categories Than Others

Implications and Conclusions

The findings here shed light on how levels of control over resources influences resource allocation patterns. As noted at the outset, different kinds of schools possess autonomy with respect to how they utilize various resources. At the least autonomous end of the spectrum, centralized schools are restricted from the four kinds of relevant freedoms identified in the literature (allocating personnel to responsibilities, allocating resources across functional categories, the number of teachers employed, and teacher compensation). By contrast:

- Schools with entrepreneurial principals enjoy autonomy only over the first category (allocating personnel to responsibilities).
- Schools in decentralized districts enjoy that freedom, plus the autonomy of allocating resources across functional categories and determining the number of teachers employed.
- Charters and private schools can take advantage of all four categories of resource flexibility, including teacher compensation.

Table 2 incorporates these findings with the research literature to demonstrate how findings from this study could be used to predict the relationship between different levels of school-based autonomy over resources and allocation patterns. Of particular relevance is the tendency to try to employ more teachers per pupil and the trade-offs that schools with teacher salary freedoms

make between salary and FTEs. Restrictions on teacher salaries, then, serve as a formidable barrier to some of the resource allocation changes schools might pursue. Schools in decentralized districts typically lack freedom over salaries, which will certainly constrain the scope of their other freedoms.

Table 2. Types of Autonomy and Resource Allocation Patterns

Minimal Constraints On:	Is Associated With:
Allocation of personnel to responsibilities	Smaller increments of staff (partial FTEs), however this is difficult to determine with available data
Allocation of resources across functional categories (e.g., pupil support, administration, etc.)	More classroom teachers at the expense of specialists
Number of teachers	More teachers, as is fiscally feasible (constraints on salaries will prevent the school from making trade-offs between salary and FTEs)
Teacher compensation	Lower, more differentiated salaries

In this study, schools with flexibility in staffing among functional categories chose hiring more teachers and fewer specialists. Evidence on changes resulting from freedoms around personnel responsibilities, however, was more difficult to identify in this data.

Implications for “entrepreneurial principals.” The question naturally arises: what could policymakers expect if resource decisions were devolved to the school level, accompanied by greater autonomy for entrepreneurial principals to vary how these resources are employed along the four dimensions outlined in table 1?

While schools with entrepreneurial principals were described as ones that were doing things differently than other district schools, their staffing and expenditure data did not, in fact, look greatly different from public centralized schools. These schools did have more staff (of all kinds) than other schools in the same districts, as well as teachers paid at the lower end of the salary schedule. Given the data limitations, however, it is difficult to draw conclusions from these findings, except to note that the barriers imposed on schools in centralized districts are real, and

that even with entrepreneurial principals, policymakers should not expect substantial differences in resource allocation patterns without more explicit autonomy for spending decisions at the school level.

Implications for more autonomous schools. What, on the other hand, would happen if individual schools were freed from existing constraints on resource allocation?

Identifying innovations or efficiencies from resource data alone is difficult, yet the patterns prevalent in schools with fewer resource constraints may point to more efficient decisions. First, schools without constraints on teacher salaries operated with lower salaries and higher ratios of teachers to pupils, suggesting that they were able to structure their compensation systems to get more for their salary dollar.

It should be noted that this study was not able to consider differences in teacher quality, which would be important in any full analysis of efficiency. It is possible that schools with fewer constraints (or fewer resources) use fewer specialists and more teachers, which might suggest greater academic focus. However, without definitive answers on the most efficient mix of resources for students, it is impossible to know if such approaches yield better results for students.

Finally, schools with fewer constraints used more partial FTEs to cover different jobs, indicating a more tailored approach to using local capacity to address school needs. For example, one private school principal in our data set described her school staffing in the following way:

We have a very confusing schedule, but it fits our needs and allows us to get the most from our staff. Most of the K-8 grades have one full-time teacher each. The fourth grade teacher does two periods of counseling a day. These two periods are covered by the ESL and Spanish teacher. Fifth grade is split between two full-time staff members, but each spends half time as the grade-level teacher. The other half of their time is spent as a half-time librarian and computer education instructor (respectively). Seventh grade is covered by a teacher part of the day; the other part of her day is spent teaching physical education to all grades. When this teacher is teaching P.E., the seventh grade class is covered by a part-time teacher. This part-time teacher teaches 3 classes/day of social studies and then she teaches music (two periods/week) and art for 3 periods/week. There is another part-time music teacher who comes in two days/week.

Implications for traditional fiscal indicators. As was apparent in the literature review, other studies limited to the use of publicly available data focus on expenditures per functional category (instruction, administration and the like). As this study indicates, however, since the total salaries per teacher are lower in schools without constraints on salaries, total expenditures in the functional category of instruction depend heavily on the salaries the school pays. Comparisons of expenditures in each functional category, then, ignore differences in purchasing power and mask potentially substantial differences in purchased resources. Studies of resource comparisons across schools with different constraints on salaries, therefore, should take care to go beyond the traditional indicators of spending on functional categories. Traditional fiscal indicators need to be improved or they will continue to mask differences in purchasing power across schools facing different constraints on their autonomy.

Concluding Thoughts

The first conclusion to be drawn is that constraints on school autonomy matter. The current interest in decentralization offers a new opportunity for exploring the proposition that real improvement in student learning can be achieved within the public school system by radically altering the locus of decisionmaking and shifting authority over key decisions to the school level.

Certainly, the conditions and context are different now than in the 1980s, with standards, accountability, and new funding formulas promising to give new operational possibilities to school-based autonomy. That said, it is important to emphasize that most current decentralization efforts have not yet created all the conditions necessary for fully decentralizing control of resources. As this study indicates, some important constraints on resources remain, including the capacity to set and control teacher compensation.

The second conclusion is that more research on this entire range of questions is necessary. The findings reported here are indicative and suggestive, but not definitive. They may apply in Ohio, but not elsewhere. The implications for secondary schools are completely unknown. And it may well be the case that the results reported here would differ in significant ways if a larger proportion of private schools had responded to the questionnaire, if the questionnaire had been more detailed, and if the study had had access to private school budgetary information as detailed as the information available on Ohio's public elementary schools.

Beyond that, of course, additional research is warranted to rule out the possibility that the behavior of private and charter schools was driven not by decisionmaking autonomy, but by constraints under which they operate or by their efforts to manage budgetary uncertainty.

This study provides insight into resource allocation patterns in elementary schools in one state and how these patterns differ depending, in part, on how control over resources is decentralized to schools. Clearly there are also non-fiscal constraints (hiring and firing of teachers, for example) that may interact with other constraints to affect the ultimate decisions that schools make with school-based decisionmaking. But for district leaders, an outcome that seems certain is that the changes schools make depend, in part, on the autonomy they are granted and on the remaining constraints with which they must contend.

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Appendix A. Private School Survey

SCHOOL RESOURCE QUESTIONNAIRE

For question number 1, we ask for an estimate of the full time equivalent (FTE) count of the staff members in your school. Every staff member that is a full time employee would count as 1.0 FTE. A staff member that works less than full time would be represented in decimal format (e.g., a teacher that works two days a week would be considered 0.4 FTE).

If you have no staff in any category, please place a zero in the box.

1. Based on your staff from the previous school year, please estimate your **SCHOOL'S FTE COUNT** in each of the following categories:

POSITION	FTE
Principal	<input type="text"/> <input type="text"/> . <input type="text"/>
Assistant Principal	<input type="text"/> <input type="text"/> . <input type="text"/>
Classroom Teacher	<input type="text"/> <input type="text"/> . <input type="text"/>
Other Teacher (art, music, P.E., etc.)	<input type="text"/> <input type="text"/> . <input type="text"/>
Administrative Assistant	<input type="text"/> <input type="text"/> . <input type="text"/>
Librarian / Media Specialist	<input type="text"/> <input type="text"/> . <input type="text"/>
Registered Nurse	<input type="text"/> <input type="text"/> . <input type="text"/>
Tutor / Small Group Instructor	<input type="text"/> <input type="text"/> . <input type="text"/>
Counselor	<input type="text"/> <input type="text"/> . <input type="text"/>
Custodian	<input type="text"/> <input type="text"/> . <input type="text"/>
Teacher's Aide	<input type="text"/> <input type="text"/> . <input type="text"/>
Occupational Therapist	<input type="text"/> <input type="text"/> . <input type="text"/>

Appendix B. Descriptive Data

Variable	Private	Charter	Public - Decentralized	Public - Entrepreneurial	Public - Centralized
Number of schools	68	81	57	9	311
Total student enrollment	270	279	409	407	365
Average teacher salary	\$29,910	\$31,350	\$56,911	\$48,920	\$53,970
Administrative expenditures as % of total	-	30%	6%	5%	6%
Building operations expenditure as % of total	-	17%	16%	17%	16%
Instructional expenditures as % of total	-	47%	65%	61%	64%
Pupil support expenditures as % of total	-	3%	5%	13%	10%
Staff support expenditures as % of total	-	3%	8%	4%	5%
Partial FTE %	43%	12%	35%	9%	8%
Classroom teachers per pupil x average teacher salary	\$1,683	\$1,970	\$3,062	\$2,316	\$2,361
Classroom teachers per 300 pupils	16.8	18.6	16.2	14.3	13.2
Other teachers per 300 pupils	2.8	1.5	1.7	1.4	1.8
Teaching Aides per 300 pupils	3.4	1.3	0.5	1.5	1.5
Special Education FTE per 300 pupils	0.7	1.2	2.3	5.3	3.2
Admin FTE per 300 pupils	3.8	1.3	1.1	1.1	1.0
Ed Professional FTE per 300 pupils	0.9	0.4	1.8	1.4	1.5
Other Professional FTE per 300 pupils	1.3	0.4	0.6	0.5	0.4
Service FTE per 300 pupils	1.7	0.1	0.0	0.0	0.0