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Abstract

Purpose: While an abundance of school choice literature focuses on student achievement outcomes, little has been done to determine the mechanisms involved in producing such outcomes. We present a comparative analysis of private and public school principals using data from the School and Staffing Survey (SASS) 2011-2012. We add to the literature by examining the differences in private and public school principals' abilities to influence important decisions at their schools. **Research Design**: We use ordinal logistic regressions to study differences in self-reported decision-making ability of public and private school principals. We report marginal effects for two models: one that controls for principal background characteristics and one that does not. **Findings**: We find that in comparison to principals in public schools, principals in private schools are more likely to report to have a major influence on six out of seven school-level activities. We conclude that private schooling may have a systematic advantage over public schooling since private school leadership exhibits more autonomy in influencing relevant decisions.

Keywords: Private school principal, public school, school leadership, school management, School and Staffing Survey, SASS, decision-making

Introduction

"While the public school principal is bound most by red tape, the private school principal is bound most by his or her conscience."

—John E. Chubb and Terry M. Moe, 1988, p. 1076

School choice has emerged as a key demand-side intervention in school reform globally. Evidence suggests that private schools outperform public schools for advantaged and disadvantaged students within the US as well as internationally (Greene et al., 2005; Tooley, 2009; Forster, 2016; Shakeel, Anderson and Wolf, 2016). School choice studies have mostly focused on student achievement (e.g. Witte, 2001; Wolf et al., 2013; Witte et al., 2014; Mills and Wolf, 2016). Others have examined impacts on the long-term outcomes of students such as attainment (Booker et al., 2008; Zimmer, 2009; Cowen et al., 2013) and criminal activity (Deming, 2011; DeAngelis and Wolf, 2016).

Though many studies have examined whether private schools outperform public schools, few have looked at why there are differences in student academic performance. The goal of private schools can vary from maximizing profit to creating values based on their ideological foundations (especially for religious and charitable institutions). Public schools, on the other hand, are more likely to focus on traditional public values and maintaining employment for their staff and faculty. It makes sense to think that the principals in private schools should be setting goals and making decisions differently than those in the public schools. The difference in the decision-making abilities of principals across the sectors could account for differences in school quality.

Rousmaniere (2013) studied the social history of the American school principal but did not examine the differences between public and private school principals. Interestingly, many of

her discussions of schools in the mid-1800s were of private schools since, at the time, there was an unclear distinction between public and private schools. In this paper, we examine the differences between the public and private school principals' background characteristics, and more importantly, their ability to influence the important decisions in their school. Since public institutions are liable to their constituents, public school principals should aim to maximize the larger social purposes of public education. These social purposes could include moral training, discipline, uniformity, equity and overall citizenship skills. On the other hand, a private school principal has the incentive to maximize utility in form of services in exchange for payment to satisfy their customers. The utility maximization for a private school may change if it is heavily subsidized from outside or if it is run by a philanthropy. In such a case, the school's principal would still tend to satisfy the consumers but the primary emphasis would be tied to the utility maximization of the philanthropy or the funding agencies' education goals. Nevertheless, students and parents should always occupy a dominant position within the private school model.

Since private schools also face the constraint to satisfy and meet the demands of their clients (parents and children), dissatisfied clients can always opt to leave the private school, making them prone to loss in market value. The loss for a private school is not only monetary; it can also cause several chain reactions: damaged brand name, threat to teachers' jobs and threat of change in the perception of existing as well as future clients. Moreover, for each client leaving the system, the time lost in internal evaluation and accountability would come at a cost of motivation and teaching. The alternate view could be that for every successive loss of a client, the school would be able to reorganize itself and come up with a new strategy to satisfy the clients in better ways. Whatever the view may be, the decision-making ability of the private school's principal would play a key role. In particular, if a private school principal is able to

make the decisions necessary to adapt to the signals transmitted by his or her clients, the quality of their schooling should increase. The public school principal would face the constraint to impose the high-order values. He or she would provide schooling that aims at the satisfaction of the public, which may not necessarily coincide with an individual clients' satisfaction.

This study is relevant to educational leadership as public and private leadership structures should theoretically differ from each other. The private sector has higher stakes in its business decisions, as it faces more direct pressures to adapt to the preferences of its consumers. Thus, the enhanced competition may cause an increased incentive for private sector leaders to have more actual influence in decision-making than in the public sector. Therefore, this also may be true in schooling, or for differences between private and public school principals. Chubb and Moe (1988, p. 1065) found that the public and private schools were "distinctively different in environment and organization" and that private school principals had more teaching experience than public school principals. They also theorized that greater autonomy would exist in private schools with respect to their structure, goals and school operations. Even though the performance and organization of schools can be largely explained by the student and teacher demographics and the surrounding environments, the school principal can play a large role in determining school effectiveness. In his or her capacity as the school leader, the principal is responsible for the goal setting, encouraging teacher participation in decision making, ensuring a healthy and orderly school climate and ensuring that the desired student outcomes are met.

A good principal can set the key goals and implement those goals. Thus, the decision making capacity of a principal should be largely captured and explained by their ability to influence key academic activities related to student performance, establishing curriculum, evaluating teachers, hiring teachers, setting the discipline policy, and making school finance

decisions. Ouchi (2009) and Hess (2013) point out that student learning cannot be improved unless school leaders have control over these areas. As the public and private school principals maximize different utilities, their orientation towards the education of their students will differ. The private school principal is likely to have more influence in decision-making since the private schools have fewer political constraints and enjoy more autonomy in selection of students and daily administration than public schools.

Apart from this, the evidence for differences between public and private school principals also comes from management perspectives (Allison, 1984). Public sector management emphasizes equity whereas the private sector emphasizes efficiency and performance. Thus, the private sector management enjoys fewer personal constraints and more autonomy. More leadership autonomy should lead to an increased ability for an organization to adapt to environmental changes.

In schooling, leaders that are free to influence important decisions may be better able to change their approach to curriculum, instruction, or professional development practices if their leaders notice inefficiencies. However, schools with constrained leadership will not be able to capitalize on the benefits associated with needed reform strategies. Branch, Hanushek and Rivkin (2013) point out that highly effective principals increase student learning by two to seven months within a single school year. If a principal is constrained in influence over school policies, they will also be constrained in their effectiveness. Grissom, Loeb and Master (2013) find that principals that can spend time on things such as the school's education curriculum can positively influence student achievement. Conversely, they find that principals that spend more time on activities such as simple classroom walkthroughs may have a negative impact on student growth.

We attempt to test the hypothesis that the private schooling sector allows for more leadership autonomy by using nationally representative survey data. We compare the reported differences between public and private school principals' influence on decision-making activities within their schools. We do not examine subcategories of private schools (such as Catholic) and public schools (such as charters) since we simply want to make overall comparisons between the two types of institutions. There is tremendous heterogeneity in charter school laws across the states and there are many types of private schools with distinct missions. Our comparison of school principals across sectors provides a purer estimate of the differences occurring due to the differences in market-orientation across sectors.

Data

The data for the public and private school principals comes from the School and Staffing Survey (SASS) 2011-2012 questionnaires. SASS was developed by the National Center for Education Statistics (NCES) and it has been administered seven times since 1987-88 to 2011-2012. Table 1 lists the question categories and what they measure[2]. The public school principal data file contained 7,510 records while the private school principal data file contained 1,720 records. There were some additional questionnaires for public school principal and in this paper we compare only the common questionnaires related to decision making. The questionnaire for the private school principal referred to the respondent as "principal or school head."

Our dependent variables come from questions 16-A through 16-G on decision-making in SASS 2011-2012. This section asks the principals to rate their ability to influence seven school

[2] For more information, see http://nces.ed.gov/surveys/sass/pdf/1112/SASS2A.pdf (for public school principals) and http://nces.ed.gov/surveys/sass/pdf/1112/SASS2B.pdf (for private school principals).

related activities on a four-item Likert scale (no influence, minor influence, moderate influence and major influence) and it also includes a *not applicable* option for each activity (Table 1).

[Table 1 about here]

We utilize questions from the survey that relate to principal's demographics, academic and professional background for summary statistics. Tables 2A and 2B show the population weighted summary statistics expressed as percentages for the principals in public and private schools. Overall, private school principals report more years of principal experience but lower education levels in comparison to the public school principals. This is consistent with the findings of Hill et al. (2016). The proportion of private school principals reporting greater than 10 years of experience as a principal or school head is almost double that of public school principals. The proportion of private school principals involved in teaching in addition to their task as a principal or school head is also about twice that for public school principals.

A higher proportion of public school principals report having previous experience as a department head, assistant principal or program director and participation in a school training or development program in comparison to their private counterparts. The proportion of public school principals holding a school administration license is about twice as large as private school principals. Almost all of the public school principal earned a MA or higher degree while only 76% of the private school principals report so. The racial composition of principals is largely white in both the sectors (86% in public schools and 90% in private schools; this excludes mixed race hence it is a lower bound). Lastly, private schools have a larger share of females in their leadership in comparison to the public schools.

[Table 2 A about here]

[Table 2 B about here]

Methods

Since the survey responses related to decision-making are ordinal (from "No Influence" to "Major Influence"), the analytic technique we employ is an ordered logistic regression of the form:

$$DM_i = \alpha_0 + \alpha_1 Private_i + \mu_i$$

The dependent variable of interest, *DM*, is the reported decision-making ability of a given principal *i*, for the following school-level activities: setting student performance standards, establishing curriculum, determining teacher professional development content, evaluating teachers, hiring new full-time teachers, setting discipline policy and deciding how the budget will be spent. This variable takes the value 1 for the least influence and value 4 for the highest influence[3]. $Private$ is a dummy variable of value 1 if the principal is in a private school, and 0 if the principal is in a public school. The coefficient of interest, α_1, measures the mean difference of the decision-making influence reported by private school principals relative to public school principals. The constant, α_0, measures the average principal decision-making influence reported by public school principals.

Since we want to examine the differences between principals based solely on the type of institution they are in, this initial model does not control for any principal-level differences. Controlling for the differences in types of principals hired by the different institutions would control away the treatment and therefore bias our effect estimates downward. In order to construct a conservative estimate of the association between institution-type and decision-

[3] Since the dependent variable is ordinal, we report average marginal effects from the ordered logistic regression. We do not report the result for the fifth category of the dependent variable, not applicable, since it is not systematically related to the decision making ability of the principal.

making freedom, we construct the following model which also includes principal characteristics as controls:

$$DM_i = \alpha_0 + \alpha_1 Private_i + \alpha_2 PC_i + \mu_i$$

The variable PC is a vector of controls for the following principal characteristics: race, gender, education level, years of experience as a principal or school head, years of experience as a teacher in elementary or secondary school, any experience as a department head, any experience as an assistant principal, participation in professional development or training programs, management experience outside of education, and whether the principle holds a license in school administration. This second model includes principal-level controls in order to examine if the treatment effects are significant after accounting for differences in the types of principals hired across the two institutions. We choose not to include school-level controls since they are an essential result of our treatment of interest. The school-level characteristics are inherent sectoral differences. For example, private schools are typically smaller for market niches while public schools are typically larger in order to take advantage of alleged economies of scale.

The restricted use data provided by the NCES are imputed and adjusted for non-response. Based on the stratified probability proportionate to size (PPS) sampling strategy used by NCES in the SASS, we use the balance repeated replication (BRR) bootstrap methodology[4] so that the results reflect the true population values and not just the sampled units. This methodology does not change our final estimates, but rather corrects the formula for the calculation of the standard errors.

[4] Details can be found in the User's Manual for the 2011–12 Schools and Staffing Survey.

Results

We now present the results for our models with and without controls below. The dependent variables (Tables 3 A-G) refer to the variables on decision making (A-G) as in Table 1. The change of sign in the coefficient from column 1 through 4 and column 5 through 8 is indicative of the ordered logistic regression model working in the expected way. Columns 1 through 4 report the results for the model without controls and columns 5 through 8 do so for the model with controls. We focus on columns 4 and 8 where the principal chose the option of 'Major influence' on that activity. Results from column 4 shows that private schools principals have a higher likelihood of reporting to have a major influence in setting student performance standards, establishing curriculum at the school and determining teacher professional development program content. These results indicate that private schools principals have more autonomy in the decision-making activities at their schools. However, private school principals have a 6.4 percentage point lower likelihood of reporting to have a major influence on the evaluation of the teachers in their school. It could be that private school principals are less likely to have mandatory evaluations of their teachers. The results are not statistically significant for the last three outcome measures, though they are all positive. This model simply examines overall differences of leadership autonomy across the two types of institutions. Though data indicate that private school principals have more leadership autonomy, it could be that private institutions choose to hire principals that are more experienced and therefore more in control. It could be that the institutions foster the same environment for their leaders, but that the leaders are just different. To minimize selection bias, we examine results with many principal-level controls as well.

When controlling for principal differences across sectors, we find more robust evidence that private school principals exercise significantly more influence over decision-making activities. In addition to the previous model, results in column 8 show that the private school principals also have a higher likelihood of reporting to have a major influence on hiring teachers and setting discipline policies. The coefficients in this model all increase in magnitude except for the evaluation of teachers. This coefficient drops to about half the size, indicating that private schools principals have a 3.4 percentage point lower likelihood of having a major influence on the evaluation of teachers. Since private school principals have a 5 percentage point higher likelihood of having a major influence over the hiring of teachers, they may not need to provide as much direct feedback. Also, since private school principals have a 14 percentage point higher likelihood of having a major influence on the content of their teacher professional development programs, they may provide feedback through that channel instead. Notably, private school principals have a 26 percentage point higher likelihood of reporting that they have a major influence on establishing their school's curriculum and a 15 percentage point higher likelihood of reporting that they have a major influence on their students' performance standards. This is especially important for the ability of the principal to positively impact student achievement.

[Tables 3 A-G about here]

Our results imply that either principals with better decision-making characteristics self-select into private schools or that private-school leadership does a better job in identifying and hiring principals with better leadership characteristics. It could also be that the smaller regulatory burden found in private schools grants the principals the ability to exercise more influence

related to school activities in comparison to the public school principals. To explore this further, we examine the coefficients on the control variables for the case of reporting major influence as a principal or school head on decisions concerning school activities in Table 4.

[Table 4 about here]

The coefficient on the principal's previous experience as a department head is significant and positive in all cases except for the case of teacher evaluation, where it is not statistically different from zero. Hence, previous leadership experience has a systematic positive relationship with the principal's ability to have actual influence on school related activities. However, the presence of negative coefficients for previous principal experience, relative to no previous experience, is surprising. Since the negative estimates are smaller in magnitude as experience level increases, it may be that the principals that stay in the field for longer periods of time are the ones that have not become discouraged enough to leave the field. This appears to be an area for future research.

Having a master's or higher degree seems to be a positive principal characteristic. It could be that education itself improves decision-making ability or that people that choose to pursue more education are also more motivated and confident. The coefficient on *gender* (being male) is negative throughout and statistically significant for four of the seven activities. Females seem to have systematic advantages over males in their influence over school-related activities. Since about three-fourths of all elementary and secondary-level teachers are female, female principals may be more able to have a strong connection with their employees (Goldring et al., 2013). Minority principals have a lower likelihood of reporting that they have an influence over

hiring teachers and setting discipline policy, but a higher likelihood of reporting that they have an influence over student performance standards and curriculum.

Conclusion and Policy Implications

The principals in both sectors seem to significantly differ in decision making abilities when it comes to their influence on school-level activities. The private school principals may have an advantage over their public school counterparts by having significantly more influence on almost all the school related activities. Principal characteristics, like previous experience as a department head and having a MA or higher degree, play a positive role in their ability to exercise higher influence on school activities. Nevertheless, the private school sector may be able to learn from the public school sector in evaluating teachers. Female principals seem to have a systematic advantage over their male counterparts in reporting more decision-making influence related to school activities and the relation is statistically significant for most of the categories.

Our findings mainly accord with Chubb and Moe (1988). They reasoned that control variables are endogenous in the institutional perspective on the organization of schools. However, we differentiate between controls related to principal characteristics and controls related to the school-level. We add controls for principal characteristics to our model which show that previous academic leadership experience as a department head and educational attainment (master's and beyond) contribute positively to the principal's ability to have a major influence related to school activities.

In terms of policy implications, it seems that private school principals seem to outperform the public school principals on every aspect of decision-making ability except the evaluation of teachers. These findings may point towards the need of training in evaluation activities for the

private sector. However, it could mean that the private school sector has a lower need for direct teacher feedback since they have more autonomy in hiring decisions and more involvement in the schools, as Chubb and Moe (1988) find. This may also reflect the emphasis that recent Race to the Top related policy changes have imposed on traditional public schools (Maranto et al., 2016). Ouchi (2009) has emphasized the importance of principal autonomy and argued that principals know what happens at the school-level while central office employees do not. Perhaps, the relatively short tenure but greater credentialing of public school principals, as well as larger school size may suggest that they are climbers; that is, they see the principal position as a stepping stone to the superintendence and focus on pleasing superiors rather than serving kids (Downs, 1967; Maranto et al., 2016). Cheng (2015) finds that schools where principals have more autonomy over personnel have greater mission coherence, though his sample only includes public schools.

Since we have relied on self-reported measures in school surveys, the results are prone to social desirability bias as well as reference group bias (Dobbie and Fryer, 2015; West et al., 2015). Although SASS is a nationally representative sample and stable results over time can have good external validity, future studies should utilize other measures like value-added measures related to school's graduation rates and teacher turnover to study principal's leadership qualities.

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Table 1: School related activities over which the principal has actual influence

Category	**School related activities**
A	Setting performance standards for students of this school
B	Establishing curriculum at this school
C	Determining the content of in-service professional development programs for teachers of this school
D	Evaluating teachers of this school
E	Hiring new full-time teachers of this school
F	Setting discipline policy at this school
G	Deciding how your school budget will be spent

Table 2. A. Summary statistics for principal characteristics

Measure	Public	Private
*Years principal or school head at this or any school prior to this year**		
no experience	8.32	8.78
low experience 1-3	24.55	18.82
medium experience 4-10	43.79	30.97
high experience 10+	23.34	41.43
Years principal or school head at this school prior to this year		
no experience	16.46	14.52
low experience 1-3	38.83	27.62
medium experience 4-10	36.07	32.92
high experience 10+	8.64	24.94
*Years of elementary or secondary teaching before becoming principal or school head**		
no experience	1.70	18.51
low experience 1-3	2.79	7.99
medium experience 4-10	47.34	32.79
high experience 10+	48.16	40.71
Years of elementary or secondary teaching since becoming principal or school head		
no experience	90.41	49.69
low experience 1-3	5.42	21.87
medium experience 4-10	3.30	15.87
high experience 10+	0.87	12.56
Currently teaching at school	37.37	71.89

Note: Summary statistics presented using population weighted percentages for each italicized category. Number of public schools principal surveys = 7,510 and number of private school principal surveys = 1,720. Italicized measures with * are used as controls in regressions.

Table 2. B. Summary statistics for principal characteristics

Measure	Public	Private
Prior to becoming a principal of school head		
Worked as department head*	40.36	35.33
Worked as an assistant principal or program director*	73.85	43.82
Participated in school training or development program*	55.34	31.41
Previous management experience outside education*	40.28	46.43
Currently holding license in school administration*	95.99	43.36
Having a bachelor's degree	99.94	88.47
Bachelor degree awarded by a university's department or college of education	81.93	67.78
Having a master's degree	97.61	76.34
Master's degree awarded by a university's department or college of education	97.36	85.38
Earned a MA and higher degree*	97.82	68.96
Participated in any professional development activity related to principal or school head in last 12 months*	99.32	89.56
Race (white)*	86.36	90.19
Gender (male)*	48.38	44.64

Note: Summary statistics presented using population weighted percentages for each category. Number of public schools principal surveys = 7,510 and number of private school principal surveys = 1,720. Measures with * are used as controls in regressions. Race summarized above does not include mixed race.

Table 3. A. Setting performance standards for students of this school

	(1)	(2)	(3)	**(4)**	(5)	(6)	(7)	**(8)**
Private school principal	-0.008***	-0.015***	-0.050***	**0.072*** **	-0.016***	-0.031***	-0.102***	**0.146*** **
	(0.002)	(0.004)	(0.013)	(0.018)	(0.003)	(0.005)	(0.012)	(0.017)
Controls included					x	x	x	x
Observations	9,230	9,230	9,230	9,230	9,230	9,230	9,230	9,230

Note: Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. B. Establishing curriculum at this school

	(1)	(2)	(3)	**(4)**	(5)	(6)	(7)	**(8)**
Private school principal	-0.039***	-0.112***	-0.110***	**0.247*** **	-0.042***	-0.118***	-0.114***	**0.259*** **
	(0.004)	(0.010)	(0.008)	(0.017)	(0.004)	(0.009)	(0.009)	(0.018)
Controls included					x	x	x	x
Observations	9,230	9,230	9,230	9,230	9,230	9,230	9,230	9,230

Note: Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. C. Determining the content of in-service professional development programs for teachers of this school

	(1)	(2)	(3)	**(4)**	(5)	(6)	(7)	**(8)**
Private school principal	-0.008***	-0.029***	-0.100***	**0.126*** **	-0.008***	-0.032***	-0.112***	**0.141*** **
	(0.002)	(0.005)	(0.016)	(0.019)	(0.002)	(0.004)	(0.012)	(0.017)
Controls included					x	x	x	x
Observations	9,230	9,230	9,230	9,230	9,230	9,230	9,230	9,230

Note: Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. D. Evaluating teachers of this school

	(1)	(2)	(3)	**(4)**	(5)	(6)	(7)	**(8)**
Private school principal	0.008***	0.009***	0.062***	**-0.064*** **	0.005***	0.005***	0.033***	**-0.034*** **
	(0.003)	(0.002)	(0.008)	(0.009)	(0.001)	(0.001)	(0.009)	(0.009)
Controls included					x	x	x	x
Observations	9,230	9,230	9,230	9,230	9,230	9,230	9,230	9,230

Note: Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. E. Hiring new full-time teachers of this school

	(1)	(2)	(3)	**(4)**	(5)	(6)	(7)	**(8)**
Private school principal	-0.002	-0.005	-0.014	**0.019**	-0.006***	-0.014***	-0.036***	**0.050*** **
	(0.002)	(0.004)	(0.010)	(0.014)	(0.002)	(0.004)	(0.009)	(0.014)
Controls included					x	x	x	x
Observations	9,230	9,230	9,230	9,230	9,230	9,230	9,230	9,230

Note: Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. F. Setting discipline policy at this school

	(1)	(2)	(3)	**(4)**	(5)	(6)	(7)	**(8)**
Private school principal	-0.001	-0.002	-0.016	**0.018**	-0.002***	-0.008***	-0.052***	**0.060*** **
	(0.000)	(0.002)	(0.012)	(0.014)	(0.001)	(0.002)	(0.014)	(0.017)
Controls included					x	x	x	x
Observations	9,230	9,230	9,230	9,230	9,230	9,230	9,230	9,230

Note: Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. G. Deciding how your school budget will be spent

	(1)	(2)	(3)	**(4)**	(5)	(6)	(7)	**(8)**
Private school principal	-0.000	-0.000	-0.001	**0.001**	-0.003**	-0.016**	-0.031**	**0.049****
	(0.001)	(0.006)	(0.011)	(0.017)	(0.002)	(0.007)	(0.013)	(0.021)
Controls included					x	x	x	x
Observations	9,230	9,230	9,230	9,230	9,230	9,230	9,230	9,230

Note: Table reports average marginal effects estimated after running ordered logit models. Demographic variables, academic training, professional development and educational attainment levels are included as controls. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1.

Table 4. Major influence as a principal or school head on decisions concerning school activities as reported in tables 3A-3G.

	Performance Standards	Establishing Curriculum	Professional Development	Teacher Evaluation	Hiring Teachers	Discipline Policy	Budget Spending
Private school principal	**0.146*** **	**0.259*** **	**0.141*** **	**-0.034*** **	**0.050*** **	**0.060*** **	**0.049** **
	(0.017)	**(0.018)**	**(0.017)**	**(0.009)**	**(0.014)**	**(0.017)**	**(0.021)**
Low principal experience	-0.063**	-0.051**	0.036	-0.000	0.014	-0.086***	-0.097***
	(0.025)	(0.023)	(0.029)	(0.016)	(0.022)	(0.026)	(0.023)
Medium principal experience	-0.057***	-0.026	0.013	-0.012	-0.045***	-0.044**	-0.066***
	(0.020)	(0.019)	(0.017)	(0.008)	(0.014)	(0.019)	(0.019)
High principal experience	-0.037**	-0.006	0.031*	-0.000	-0.020	-0.022	-0.034**
	(0.017)	(0.016)	(0.016)	(0.006)	(0.012)	(0.015)	(0.016)
Low teaching experience	-0.045	-0.058	0.069	-0.032**	-0.054*	-0.050*	0.031
	(0.037)	(0.043)	(0.076)	(0.015)	(0.029)	(0.028)	(0.043)
Medium teaching experience	0.041	-0.028	-0.027	-0.017	-0.016	0.019	-0.017
	(0.035)	(0.045)	(0.040)	(0.014)	(0.022)	(0.033)	(0.036)
High teaching experience	0.023*	-0.006	0.025**	0.010*	0.002	0.005	0.000
	(0.012)	(0.012)	(0.011)	(0.006)	(0.010)	(0.012)	(0.013)
Department head	0.039***	0.061***	0.042***	0.002	0.030***	0.023*	0.038**
	(0.012)	(0.013)	(0.012)	(0.005)	(0.011)	(0.013)	(0.015)
Assistant principal/ program director	-0.022	-0.060***	0.005	-0.007	0.006	-0.030**	0.044***
	(0.014)	(0.013)	(0.013)	(0.006)	(0.012)	(0.014)	(0.013)
School training/ development	0.046***	0.006	0.019*	0.006	-0.007	0.016	0.020*
	(0.013)	(0.014)	(0.011)	(0.005)	(0.010)	(0.010)	(0.012)
License in school administration	0.038*	0.010	0.024	0.031***	0.010	0.039**	0.022
	(0.022)	(0.023)	(0.022)	(0.009)	(0.014)	(0.019)	(0.031)
Management experience	0.006	0.018	-0.023*	0.002	0.001	0.017	-0.009
	(0.014)	(0.014)	(0.014)	(0.007)	(0.011)	(0.012)	(0.014)
Master's degree or higher	0.068**	-0.011	-0.021	0.004	0.042**	0.052*	0.075**
	(0.030)	(0.028)	(0.048)	(0.011)	(0.020)	(0.027)	(0.033)
Participation in professional development	0.155***	0.146**	0.037	0.017	0.062	0.055	0.073
	(0.046)	(0.060)	(0.126)	(0.019)	(0.055)	(0.035)	(0.062)
White	-0.045**	-0.060***	0.013	0.005	0.059***	0.046***	0.004
	(0.019)	(0.021)	(0.017)	(0.008)	(0.012)	(0.015)	(0.019)
Male	-0.023	-0.005	-0.047***	-0.022***	-0.009	-0.022**	-0.047***

	(0.015)	(0.014)	(0.014)	(0.006)	(0.011)	(0.011)	(0.013)
Observations	9,230	9,230	9,230	9,230	9,230	9,230	9,230

Note: Table reports average marginal effects estimated after running ordered logit models. Estimates use balanced repeated replication (BRR) bootstrap population weights. *** p<0.01, ** p<0.05, * p<0.1. Table 2 A. and 2 B. provide details on the control variables marked with *