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Performance Measures and Parental Satisfaction With New York City Schools

Étienne Charbonneau[1] and Gregg G. Van Ryzin[2]

Abstract

The public administration literature has consistently questioned the validity of satisfaction surveys as a measure of government performance, particularly in comparison with more objective official measures. The authors examine this objective-subjective debate using unique data from a large survey distributed to nearly 1 million parents of children in the New York City public schools along with officially reported measures of school performance for about 900 schools. Their results suggest that the official measures of school performance are significant and important predictors of aggregate parental satisfaction, even after controlling for school and student characteristics. They conclude that public school parents form their satisfaction judgment in ways that correspond fairly closely with officially measured school performance. The results can also be interpreted as suggesting that the official performance measures reflect, at least in part, aspects of public schooling that matter to parents.

Keywords

Citizen satisfaction, performance measurement, education, schools

In an era of growing demands for performance improvement, government agencies around the world have increasingly relied on citizen or customer surveys to gauge the quality of public services (Miller & Miller-Kobayashi, 2000). Morley, Bryant, and Hatry (2001) contend that "[s]urveys of customers have begun to be perceived nationally, if not internationally, as a major source of evaluation feedback for public services and as an important component of public accountability" (p. 53). Clearly, public education represents a major domain of public service provision and expenditure, with U.S. school districts spending about US$500 billion annually (U.S. Department of Education, 2009). And thus it is not surprising to find that school systems across the United States, as well as those in other countries, have begun surveying parents regarding their satisfaction with the education of their children. Notably, New York City has begun distributing surveys each year to nearly 1 million parents and guardians of public school students and incorporating the results as a part of each school's performance report.

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The public administration literature, however, has tended to question the validity of the kind of subjective measures of performance captured by citizen or customer surveys. It has been argued that performance gains, even large ones, commonly go unrecognized by the average citizen (Glaser & Hildreth, 1999; Stipak, 1979). Stipak's (1979, 1980); early and insightful articles on the complexity of using and interpreting satisfaction surveys as performance measures have had an especially large influence on the prevailing skepticism in the field. And reviews of the empirical literature have tended to agree with the view that citizen surveys do not sufficiently represent objective performance, as measured by public agencies (Brown & Coulter, 1983; Kelly & Swindell, 2002, 2003; Stipak, 1979, 1980; Swindell & Kelly, 2005).

But recent evidence has begun to emerge supporting a stronger link between subjective and objective measures of government performance (James, 2009; Licari, McLean, & Rice, 2005; Van Ryzin, Immerwahr & Altman, 2008), at least in some areas of public service provision such as park conditions and street cleanliness. This recent evidence comes from studies that were able to use outcome measures, rather than input or output measures, and to disaggregate both objectively measured performance and satisfaction to a smaller geographic or institutional level. One implication from these studies is that the objective-subjective link, when tested with better measures and more disaggregated data, may be stronger than previously assumed. And some scholars question the presumed superiority of official performance measures, which tend to be labeled as objective simply because they reflect the perspective of administrators as opposed to citizens (Schachter, 2010).

Citizen satisfaction with public schools has received much less scrutiny in the satisfaction literature than other public services, such as policing (Chandek, 1999; Mawby, 2009; Poister & McDavid, 1978; Wells, 2007). A number of studies have included public schools as one of a number of items in a basket of local government services respondents evaluate, and these studies have tended to find that citizen satisfaction with public schools is an important variable in determining overall satisfaction with government and other evaluative outcomes (Poister & Henry, 1994; Roch & Poister, 2006; Shin, 1977; Van Ryzin, Muzzio, Immerwahr, Gulick, & Martinez, 2004). But the focus in these studies was not specifically centered on satisfaction with public schools per se. Voting can be seen as a proxy of citizen satisfaction with government, and a study by Berry and Howell (2007) found that school performance and related media coverage predicted local school board elections. Similar evidence of a link between local election results and performance (including school performance) was found by Boyne, James, John, and Petrovsky (2009) although only poor performance had an effect.

There are a few prior studies focused specifically on school performance and satisfaction. For example, Friedman, Bobrowski, and Geraci (2006) surveyed 27,605 parents with children attending 121 elementary, middle, and high schools, representing 27 school districts across the United States and looked at racial and ethnic differences in the correlates of parental satisfaction. In a related article using the same data, Friedman, Bobrowski, and Markow (2007) found that communication and involvement, school resources, and the quality of leadership and budget adequacy "significantly and meaningfully predicted parents' overall satisfaction even after controlling for variance due to the district in which the children attended, district characteristics and parent demographics" (p. 286). But these studies did not consider standardized test scores or other official outcome measures in their analysis, so they do not shed much light on how parental satisfaction responds to good or poor performance.

A study by Pride (2002, p. 169), however, tracked citizen satisfaction with public schools in Nashville–Davidson County over several years and found that "the performance of the school system seems not to have been the proximate cause of the changes in public opinion toward the schools." He also observed that critical events like a tax-increase referendum, a school violence incident, and court-ordered busing were all more influential than test scores as predictors of citizen satisfaction. "Objective signs of system stress, as indicated by sharp movement in per pupil

expenditures, suspensions, or test scores, did not correlate with the shifting ratings of the quality of the public schools in Nashville" (Pride, 2002, p. 175). It should be pointed out, however, that this study assessed general public opinion, not the views of public school parents, and looked only at aggregate satisfaction over time. It would be useful to be able to focus more precisely on parental satisfaction and to consider school-level variation in both performance and satisfaction.

Finally, although thus far we have been discussing the validity of subjective satisfaction ratings as a performance measures, it is worth noting that there is much debate within the education field on the best ways to measure and assess the performance of schools. Many have criticized the heavy reliance on standardized test scores as the focus of educational performance measurement, to the exclusion of other outcomes (Au, 2007; Booher-Jennings, 2005; Hursh, 2005). Driven in part by the federal No Child Left Behind Act (NCLB), states must use test scores—and, importantly, progress in test scores from year to year—to rate schools as being "in good standing" or in need of improvement or even restructuring. Some states and school districts have augmented test scores with additional methods and measures to form a fuller, more multidimensional picture of school performance. In New York City, for example, the Department of Education produces Quality Review Scores for each school, based on site visits and detailed peer assessments of educational practices, school leadership, and strategy. Although this is not the place to debate the strengths and weaknesses of these various official performance measurement systems, it is worth noting that parental satisfaction with public schools provides one potential criterion for assessing the larger, societal validity of these official measures of school performance.

Thus, our aim in this study is to test the link between official objective measures of public school performance and the subjective satisfaction of parents. We test this link to help inform the debate about the validity of subjective measures as a valid indication of actual government performance in a policy area, education, that has not been as well studied in this regard as it should be. But we also view this test of the objective-subjective link in the education context as contributing to a better understanding of the validity of various official measures of educational performance. Furthermore, we seek to test the strength of the objective-subjective link, controlling for demographic and socioeconomic characteristics of students shown to be related to objective measures of educational performance (Boyne & Meier, 2009; Hamidullah, Wilkins, & Meier, 2009; Pitts, 2007) and to parental satisfaction (Bond & King, 2003; Friedman et al., 2007).

Data and Method

To address these questions, we employ data on New York City public schools that come from three sources: school-level results of the 2008 New York City Department of Education (NYCDoE) *Survey*, a large mail survey sent to parents or guardians of the more than 1 million public school students in the system; the 2007-2008 NYCDoE *Progress Report*, which is related to state and NCLB standards; and the 2007-2008 NYCDoE *Quality Review Report*. We will say more about each of these data sources shortly. These data aim to represent all 1,459 public schools in New York City. However, we restrict our analysis to elementary and middle schools because the official performance measures are more comparable and, importantly, because parents are more likely to have direct contact with and involvement in elementary and middle schools. Four combined elementary/middle/high schools, 69 combined middle/high schools and 34 transfer schools were excluded from the sample. Of the remaining 1,057 elementary and middle schools, 122 have incomplete data on the variables needed for the analyses (see Table 1), leaving 937 schools with complete data.

Perceived Performance

Since the 2007-2008 academic year, the NYCDoE annually surveys students, parents, and teachers on their satisfaction with the city's public schools. To measure parental satisfaction, we use data

Table 1. Descriptive Statistics

	n	min	max	*M*	*SD*
Dependent variable					
Parents' satisfaction index	1,057	2.432	4	3.249	0.176
Independent variables					
Survey response rate	1,057	0.02	1	0.508	0.237
School type (elementary only)	1,016	0	1	0.584	0.493
Enrollment	1,016	60	2054	634	334
Percent English language learners	1,016	0	0.915	0.138	0.128
Percent Black or Hispanic	1,016	0.06	1	0.743	0.296
Percent Title I (low income)	1,016	0.52	1	0.689	0.219
Percent special education	1,016	0	0.485	0.169	0.065
Student performance score	974	0.059	1.193	0.618	0.162
Student progress score	974	–0.128	1.25	0.526	0.164
State accountability status	1,006	0	1	0.679	0.467
Quality review score	937	1	5	3.648	0.553

from the 2008-2009 academic year survey of parents, which had an overall response rate of 40%. It is important to note that, in the publicly available data, only school-level frequencies are available and not individual parental responses. Thus our measure of parental satisfaction must remain at an aggregate, school level. From a total of 13 main questions on different aspects of the school (including academic expectations, communications, engagement, safety, and respect), we selected three questions that we judged to be the best indicators of parental satisfaction with the overall academic performance of their children's school (for the full questionnaire, see New York City Department of Education, 2008a). The three questions read as follows:

> (5a) How much do you agree or disagree with the following statements about your child's school or teacher?—The school has high expectations for my child. Response categories: 4 = *strongly agree*/3 = *agree*/2 = *disagree*/1 = *strongly disagree*/*don't know (missing)*.

> (5b) How much do you agree or disagree with the following statements about your child's school or teacher?—The school clearly communicates its expectations for my child's learning to me and my child. Response categories: 4 = *strongly agree*/3 = *agree*/2 = *disagree*/1 = *strongly disagree*/*don't know (missing)*.

> (13e) How satisfied are you with the following things about your child's school?—The education your child has received this year. Response categories: 4 = *very satisfied*/3 = *satisfied*/2 = *unsatisfied*/1 = *very unsatisfied*.

Based on the relative frequency distribution for each question reported at the school level, we constructed school-level means and then combined the means of the three questions into a scale of parents' satisfaction with school performance (the descriptive statistics for the scale appear in Table 1). The scale has very good internal reliability (Cronbach's $\alpha = .95$) and, we would argue, has good face validity as a measure of parental perceptions of the academic performance of the schools. It should be noted that the high alpha can be attributed in part to the fact that the survey data is aggregated to the school level, thus averaging out individual-level measurement error.

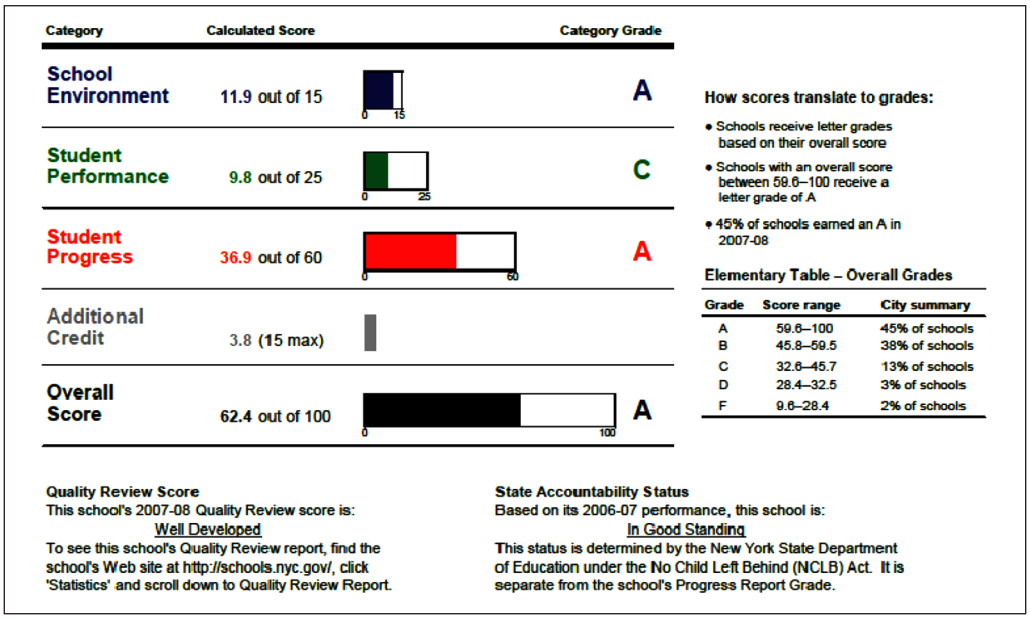

Figure 1. Excerpt from an elementary school AY2007-2008 progress report

Officially Measured Performance

We use data from the city's Progress Report for the academic year 2007-2008 for the official (objective) measures of performance, which we define as indicators gathered by government agencies to monitor and report on their performance. Figure 1 shows an example of the summary information in the Progress Reports, which are released publicly in the middle of the following school year (about 6 months or more after the completion of the parent survey). Thus it is impossible for the current reports to influence responses to the parent survey although of course past reports could have an influence on survey responses. We will have more to say in the discussion section about the influence of the reports themselves on parental satisfaction. We chose four key performance measures from these official reports: the *Student Performance Score*, the *Student Progress Score*, the *Quality Review Score* and the *State Accountability Status*. The School Environment Score was left out, as it is based in part on parent, student, and teacher surveys and is thus endogenous.

We chose to use the numeric scores, rather than the categorical letter grades, because the scores provide more information and allow for more precise distinctions in performance among schools. According to the NYC Department of Education (2009a):

> Student Performance measures the number of students at a school that have reached the crucial goal of proficiency in English Language Arts (ELA) and mathematics. These indicators provide a snapshot of the ELA and mathematics proficiency levels of all students at a school in a given year . . .
>
> Student Progress measures how student proficiency has changed in the past year. Progress indicators track the yearly gain or loss in ELA and mathematics proficiency of the same students as they move from one grade to the next at the school . . .

It is important to point out that both the Student Performance score and the Student Progress score are adjusted and weighted to reflect performance relative to peer schools (.75 weight) as well as schools citywide (.25 weight). Peer schools are identified by the NYC Department of Education as follows:

> . . . those New York City public schools with a student population most like this school's population. Each school has up to 40 peer schools. For Elementary and K-8 Schools, peer schools are determined based on the percentage of students at each school that are English Language Learners, Special Education, Black/Hispanic, and Title I eligible. For Middle Schools, peer schools are determined based on the average ELA and Math proficiency levels of the school's students before they entered Middle School. (NYCDoE, 2010, p. 1)

In our analysis, we chose also to use the Quality Review Score, which comes from a more managerial, onsite assessment of the school by an expert review team. Here is how the NYC Department of Education defines this particular measure of performance:

> The [Quality Review Score] represents the quality of efforts taking place at the school to track the capacities and needs of each student, to plan and set rigorous goals for each student's improved learning, to focus the school's academic practices and leadership development around the achievement of those goals, and to evaluate the effectiveness of plans and practices constantly and revise them as needed to ensure success. (NYCDoE, 2009a, p. 2)

The Quality Review Score has a 5-point scale: Outstanding, Well Developed, Proficient, Underdeveloped with Proficient Features, and Underdeveloped. For the needs of our regression models, we coded this ordinal scale from 1 = *Underdeveloped* to 5 = *Outstanding*.

Finally, we also use the State Accountability Status, which reflects the status of each school under New York State's implementation of the federal government's No Child Left Behind Act. This State Accountability Status assesses "the number and characteristics of students in a school who have attained the goal of proficiency in literacy and mathematics" (NYCDoE, 2009a, p. 2). Although there are at least seven different possible categories of performance in the State Accountability Status, all categories but one—in Good Standing—suggest suboptimal performance (and do not have a clear rank order in terms of performance). Therefore, we created a dummy variable coded 1 for "in Good Standing" and 0 for all the other possible statuses. More than two thirds of the schools in the sample are rated in Good Standing (see Table 1).

These official government performance measures have their advocates as well as detractors, and it is not our aim here to judge their validity as such. Rather, we simply take these as the key official measures of school performance reported and used by the New York City Department of Education and seek to compare them to parents' subjective judgments of school performance, as measured by the survey data described earlier. But it is important to keep in mind that these official measures of performance may well have their own limitations in terms of capturing true academic performance.

Control Variables

Because both officially measured academic performance and parental satisfaction have been shown to be influenced by various school and student characteristics, we need to account for these influences in our analysis. The definitions and descriptive statistics for our control variables can be found in Table 1. Thus we control for the percent of English language learners (ELL), as schools with higher percentages of ELL students are less likely to perform well on standardized tests and other measures of academic performance. For similar reasons, we control for percentage of Title

I students (a proxy for poverty), percent of black or Hispanic students, and percent of special education students. Because the size of the school may influence parental satisfaction, as well as performance, we control for student enrollment. And, finally, we control for the type of school, specifically whether or not the school includes only elementary grades (coded 1) or is a middle school or combined middle/elementary school (both coded 0). Parents tend to be happier with elementary schools than middle schools, which often face more social and educational challenges, and there may be performance differences between school types as well.

In addition, we control for the survey response rate at each school, which varied widely from a low of only 2% to a high of nearly 100%. Because low response rates are likely to be associated with low levels of parental satisfaction, and high response rates with high satisfaction, it is important to account for this variable in the analysis. Moreover, because of concerns about the quality of the survey data in schools with low response rates, we decided to drop 79 schools with response rates lower than 20%, resulting in a trimmed sample of $n = 856$ schools for purposes of analysis. (The 79 schools dropped from the analytical sample were much less likely to be elementary-only schools and had a somewhat higher percentage of black and Hispanic students as well as a higher percentage of low-income students.)

Analysis and Results

We use OLS regression, with our parental satisfaction index as the dependent variable, to estimate a series of models: (a) a response rate–only model, (b) a student characteristics–only model, (c) a performance-only model, and (d) a combined model. The results are presented in Table 2. We report the results in the form of standardized regression coefficients, to facilitate a comparison of effect sizes across variables and models, and employ robust standard errors for purposes of significance testing. Regression diagnostics indicated no problems at all with multicollinearity (with VIFs ranging from 1.07 to 3.18).

Model 1 in Table 2 shows that response rate alone has a strong, positive relationship with parental satisfaction scores, explaining fully 18% of variance. Schools with dissatisfied parents responded to the survey at lower rates than schools with satisfied parents. This clearly suggests that, despite trimming the sample to eliminate the very low response–rate schools (as explained above), potential nonresponse bias remains and thus needs to be controlled for in the full model.

Model 2 includes just the school and student characteristics, which combined explain about 15% of total variance in parental satisfaction. Interestingly, schools with a higher percentage of black and Hispanic students report more, not less, satisfaction with their public schools, controlling for other factors. However, low income and percent special education both appear negatively associated with parental satisfaction, with other factors held constant.

Model 3 includes just the official performance measures, which on their own explain about 17% of the total variance. It should be pointed out that, although not a remarkably high percentage, it is still more explained variance than what is accounted for by the school and student characteristics combined. The Student Performance Score is the strongest predictor of parental satisfaction in Model 3, followed by the State Accountability Status and the Quality Review Score. The Student Progress Score, however, has a weak and statistically insignificant coefficient. In the discussion section below, we speculate on some possible reasons why this impact or value-added measure of performance is the only score that does not correlate with parental satisfaction.

Model 4 includes all the variables together, which when combined explain 44 of the variance in parental satisfaction across schools. The response rate along with the school and student characteristics continue to have statistically and substantively significant coefficients as before, although the coefficient on special education is attenuated somewhat in Model 4. With these variables controlled, three of the four official performance measures—The Student Performance Score, the State Accountability Status, and the Quality Review Score—remain statistically significant predictors

Table 2. Regression Analysis of Parents' Satisfaction (Standardized Coefficients)

	Model 1	Model 2	Model 3	Model 4
1. Response rate				
Survey response rate	0.427***	—	—	0.367***
2. School and student characteristics				
School type (elementary only)	—	0.253***	—	0.165***
Enrollment	—	–0.234***	—	–0.170***
Percent English language learners	—	0.024	—	0.058*
Percent black or Hispanic	—	0.238***	—	0.465***
Percent Title I (low income)	—	–0.182***	—	–0.281***
Percent special education	—	–0.165***	—	–0.053*
3. Performance measures				
Student performance score	—	—	0.267***	0.300***
Student progress score	—	—	0.047	0.028
State accountability status	—	—	0.149***	0.069**
Quality review score	—	—	0.126***	0.127***
R^2	0.183	0.149	0.166	0.444

Note: $n = 856$.
*$p < .10$. **$p < .05$. ***$p < .01$.

of parental satisfaction. The Student Performance Score in particular exhibits a substantively large effect, judging by the magnitude of the standardized coefficient ($\beta = .300$). The magnitude and statistical significance of the State Accountability Status, however, appears somewhat attenuated in Model 4, and the Student Progress Score is again not statistically significant.

Discussion and Implications

Our study has found that New York City's official measures of school performance—and especially its measure of student performance—are statistically significant, substantively important predictors of aggregate parental satisfaction even after controlling for school and student characteristics. In other words, at the school level, public school parents in the city form their satisfaction judgments in ways that match up moderately well with some of the indicators the school system itself employs to judge its performance. These results can also be interpreted as suggesting that the official performance measures reflect, at least in part, aspects of public schooling that matter to parents. But there are several limitations to our findings, as well as interpretations and implications that deserve to be discussed.

One limitation of this study is that the findings come from only one school system, and New York City is the nation's largest school system and serves an especially diverse, urban population. Thus the results may not be generalizable to other school systems, particularly those that are much smaller or in nonurban settings. Research along similar lines in other types of school systems is needed. Another limitation is that our analysis looked only at aggregate-level parental satisfaction, not individual-level judgments of performance. It is not certain that the same degree of objective-subjective correlation we found at the aggregate level would hold up at the individual level, although it has been suggested that individual parents judge performance fairly accurately, even in the absence of formal knowledge (Schneider, Teske, Marshall, & Roch, 1998). And because we analyzed school-level averages and not individual perceptions, our results do not take into account factors such as parental motivation, involvement, and school choice (Teske & Schneider, 2001).

Our results are limited also by the quality of the available data, both the parent survey and the official performance measures. Although the parent survey was an ambitious undertaking for New York City and largely successful, the overall response rate was only 40% and much lower still in some schools, resulting in potential nonresponse bias (Remler & Van Ryzin, 2011). We attempted to deal with this problem by trimming the sample of schools with the lowest response rates and by statistically controlling for the school-level response rate. Still, some nonresponse bias could remain and thus may have influenced our results. The survey data is also limited by the fact that parents likely give different interpretations to the survey questions, depending on their educational values and perspectives (a problem that Stipak, 1979, and others have pointed out as one of the major limitations of subjective performance measures). We are similarly limited by shortcomings in the city's official performance indicators as gauges of the true performance of schools. Although it is not within the bounds of our study to judge the validity of these official performance measures as such, it must be acknowledged that these measures certainly have their own imperfections.

Although we found a clear correspondence between parental satisfaction and three of the four official performance measures, the relationships were not especially strong, except perhaps in the case of the Student Performance Score. Given the limitations of both the survey and the official performance measures just discussed, there is certainly some attenuation of these relationships due simply to measurement error on both sides of the equation (Remler & Van Ryzin, 2011). It also could be that parents are responding more on the basis of their child's performance and not the performance of the school as well as using different criteria in forming their satisfaction judgments (Schneider, Teske, & Marschall, 2002). It should also be noted that parental perceptions and official measures presumably reflect at least somewhat different dimensions of educational performance and thus they should not be expected to be perfectly correlated.

That the Student Progress Score, which measures year-over-year gains in performance within a school, was the only nonsignificant predictor of parental satisfaction may shed some light on how such satisfaction judgments are made. In particular, it suggests that parental satisfaction may be influenced more by comparing performance relative to other schools than by how much progress a school is making on its own toward performance goals. If true, even good progress within a school may not result in satisfaction gains unless such progress also leads to a relative boost in standing with respect to other schools. It could also be that year-to-year change in performance is subtle and not easily recognized by parents. Interestingly, the New York City Department of Education recently redesigned its progress score to better capture the value-added dimension of school performance (see New York City Department of Education, 2009b).

Our analysis does not prove that official performance and parental satisfaction are causally related, only that they are statistically associated. However, it is useful to speculate on some possible causal processes that might explain this observed empirical correlation. One is that parents, based on their familiarity with the schools and with their children's learning on a day-to-day basis, develop a fairly accurate sense of how well their local school is actually performing. This sensibility may be enhanced by social interactions with other parents at the school, who talk and share their experiences about the performance of the teachers, other children, school leaders, and other aspects of the school. Thus parental perceptions and official performance measures could both reflect the same underlying educational reality occurring in the schools during a given academic year.

Another causal interpretation is that parents learn about the officially measured performance of their children's schools through the city's published reports—either directly, by reading the reports, or indirectly through the media, school leaders, and others familiar with the reports—and that this knowledge influences their satisfaction judgments. It should be noted, however, that the reports are released publicly about 6 months after the completion of the parent survey, which would logically mean that the report for a given school year could not influence that year's parent survey. But because current performance is in fact correlated with past performance (for example

year-to-year $r = .81$, in the case of the student performance measure), responses to the parent survey could still be influenced by performance reports released in prior years. To explore this question, we ran the same analysis as in Table 2 but using the prior year's official performance measures, which parents could well have seen before responding to the survey. This analysis produced somewhat lower *R*-squares, however, suggesting that current-year (unreported) performance remains a better predictor of parental satisfaction than prior-year (reported) performance. Of course, parental satisfaction could be a result of both processes—direct experiences of current-year performance in their child's school and knowledge of the scores published in prior-year performance reports.

Although the percent black or Hispanic was used in our analysis primarily as a control variable, it is worth calling attention to the somewhat surprising finding that it was a very strong, positive predictor of parental satisfaction. In other words, schools with more blacks and Hispanics reported much higher levels of satisfaction, all else equal. In contrast, the percentage of low income (Title I) students is strongly negatively associated with parental satisfaction, again all else equal. As in most U.S. cities, low-income schools in New York also tend to have a high percentage of black and Hispanic students, so that this finding is somewhat of a statistical artifact (the bivariate correlation between percent black and Hispanic and parental satisfaction is only weakly positive, $r = .04$, and not significant statistically). One possible substantive interpretation is that the diversity of the city's public schools is viewed somewhat negatively by whites but positively by blacks and Hispanics. Another possible explanation is that black and Hispanic parents have different educational options, expectations, or frames of reference than the city's white parents.

Finally, as indicated earlier, the results of our study suggest that the official performance measures used in New York City reflect, to at least some extent, aspects of public schooling that matter to parents. Indeed, it would be a cause of some concern if the key performance measures education officials relied on to direct reforms, allocate resources, and lead improvement efforts exhibited little or no correlation with parental satisfaction. But our results imply that this is not the case. Moreover, our findings indicate that improvement on three of the official performance measures—state accountability, quality review, and especially student performance—may lead to increased aggregate parental satisfaction at the school level, if not systemwide.

It should be acknowledged, in conclusion, that New York City's initiation of comprehensive, subjective measures of school performance are indeed quite remarkable, in scope and sophistication, and commendable in the context of growing demands to expand the definition of educational performance and to improve on its measurement.

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