

WHAT EFFECT DID THE NEW ORLEANS SCHOOL REFORMS HAVE ON STUDENT ACHIEVEMENT, HIGH SCHOOL GRADUATION, AND COLLEGE OUTCOMES?



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Overview

The New Orleans school reforms represent the first time in the last century that the traditional U.S. government-driven system of K-12 schooling has been completely replaced by a market-driven one. In 2005, in the wake of Hurricane Katrina, the state took over almost all of the city's public schools from the local school district and then turned them over to non-profit organizations. These charter schools had autonomy over personnel decisions and almost all other matters and were held accountable to the state through performance-based contracts. Instead of assigning students to schools based on the neighborhoods they lived in, the new system allowed families to choose schools from across the city, and schools began receiving funding based almost entirely on the number of students they attracted.

Corresponding technical paper: Douglas N. Harris and Matthew F. Larsen. "The Effects of the New Orleans Post-Katrina Market-Based School Reforms on Student Achievement, High School Graduation, and College Outcomes." Education Research Alliance for New Orleans, 2018.

This study builds on our earlier analysis where we estimated the effect of the entire package of market-based reforms on test scores through 2012. Our method entails essentially subtracting the improvements in New Orleans from those in a carefully matched comparison group of students, schools, and districts elsewhere in Louisiana, and adjusting the result for any remaining demographic differences between the groups. Here, we use this method to examine a wider range of outcomes through 2014. We find that for New Orleans:

- The reforms increased student achievement by 11-16 percentiles (depending on the subject and analysis method).
- The reforms increased the high school graduation rate by 3-9 percentage points.
- The reforms increased the college entry rate by 8-15 percentage points.
- The reforms increased the college persistence rate by 4-7 percentage points.
- The reforms increased the college graduation rate by 3-5 percentage points.

For high school graduation and college outcomes, the effects are all in the range of 10-67% over where New Orleans stood just before the reforms. The reforms also improved all outcomes for disadvantaged students and reduced educational inequities for high school and college

measures. It is very unusual to see programs and policies improve all of these outcomes.

We caution that these substantial effects are unlikely to arise in most other school districts because New Orleans had several advantages over other districts in making the reforms work. Nevertheless, the fact that New Orleans improved so much, in such a short period, on so many measures means that the city's experiences are worthy of attention.

BACKGROUND

Before Hurricane Katrina, the New Orleans Public Schools operated very much the way districts have across the nation for most of the past century. An elected board set district policies and selected superintendents, who hired principals to run schools. Principals hired teachers, who worked under union contracts and were subject to district, state, and federal laws. Most students attended the schools within their neighborhoods, specifically, the schools the district assigned them based on where their families lived. For much of that history, this centralized, government-driven approach succeeded in providing a stable, uniform level of education to essentially all the nation's children.

During the past quarter-century, however, traditional public schools have been a subject of controversy. Critics contend that schools have fallen behind the times and become constrained by government bureaucracy and union rules. Costs of educating students have consistently increased above the rate of inflation, and expectations for student achievement have risen with competition from other countries that have surpassed American schools on some measures.

While school districts clearly work better in some places than others, there is little debate that this approach was failing in New Orleans just prior to Katrina. In the 2004-05 school year, Orleans Parish public schools ranked 67th out of 68 Louisiana districts in math and reading test scores. The high school graduation rate was 56 percent, at least 10 percentage points below the state average.

While some of this could be attributed to the challenges faced by students outside of school—more than 83% were eligible for free or reduced price lunch—there were broader signs of dysfunction. In 2003, a private investigator found that the district, which had about 8,000 employees, inappropriately provided checks to nearly

4,000 people and health insurance to 2,000 people. In 2004, the Federal Bureau of Investigation (FBI) issued indictments against 11 individuals for criminal financial mismanagement. Eight superintendents served between 1998 and 2005, lasting on average just 11 months.

As a result, some reforms were already under way before Katrina hit in August 2005. An emergency manager had been hired to address financial irregularities and massive debt. The state-run Recovery School District (RSD) had already been created to take over low-performing New Orleans schools.

After the storm, almost all the city's schools were taken over by the state, which eventually turned them into autonomous charter schools where educators were at-will employees who could be fired at any time. In principle, families could choose essentially any school in the city without regard to neighborhood.

“*After the storm, almost all the city's schools were taken over by the state, which eventually turned them into autonomous charter schools...*”

These changes represent arguably the most radical school reforms ever conducted in the United States. The Education Research Alliance for New Orleans was created in part to study their effects, especially on the students they were intended to serve.

HOW DID WE CARRY OUT THE ANALYSIS?

Researchers often study sudden changes in policy, such as that in New Orleans, using a technique called “difference-in-differences.” The idea is, first, to take the difference between student outcomes before and after the policy, in the place where it was implemented. For our purposes, we look at New Orleans students in publicly funded schools.

However, the simple difference between pre- and post-reform outcomes in New Orleans is insufficient because other factors may have affected New Orleans students—and their outcomes—at the same time. We address this challenge by making the same before-and-after comparison for another group that was on a very similar path, but was unaffected by the school reforms. We then subtract the second difference (between the comparison group’s pre- and post-storm outcomes) from the first difference (between New Orleans’ pre- and post-storm outcomes). The final step involves adjusting this difference-in-differences estimate for any change in student characteristics between the two groups. These steps yield a credible estimate of the policy effect, and for that reason, the approach is now a standard method for studying changes in all types of public policy.

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We carry out two main versions of the difference-in-differences strategy:

- 1) *Returnees-only analysis.* We start by studying only those students who returned to New Orleans after Hurricane Katrina. The advantage of this approach is that it compares the same students over time. One disadvantage of this approach is that we can only study returnees over a short period of time. After 2009, students no longer have measurable outcomes to study. Also, for one-time events like graduation, there is no “before” outcome to compare with the “after,” and it is more difficult to find a reasonable comparison group.
- 2) *Cross-cohort analysis.* Given the limitations of the returnees-only analysis, we also consider the outcome growth of different cohorts of students before and after the reforms—

for example, students in 3rd grade in 2005, and students in 3rd grade in 2014. A key advantage of this approach is that it can be useful for a wide range of outcomes and to study outcomes into the indefinite future. However, future students may be different from past ones in ways that affect their outcomes.

In both strategies, our data set includes all publicly funded schools in New Orleans, including those governed by the state RSD and those under the control of the district. Studying all publicly funded schools is important because they were all influenced by the reforms. Also, with school choice, it allows us to mostly avoid concerns about “selection bias,” that is, the possibility that outcomes look better because some schools select high-performing students, making those schools appear better than they are. The potential for selection bias is much more limited when studying an entire city.

Our main comparison group starts with other districts in Louisiana that were affected by Hurricane Katrina. Since no other district in Louisiana is just like New Orleans, we limit our comparison group further to those students and schools within other hurricane-affected districts that are similar to those in New Orleans. For example, in the analysis of returnee test scores, we identify specific students in the comparison districts with demographics and pre-reform test scores similar to New Orleans students. These steps are intended to provide the most reasonable comparison possible—the one that best represents what would have happened in New Orleans if the reforms had not occurred, which we compare to what happened with the reforms.

In the cross-cohort analysis, it is not possible to match individual students, but we identify whole *schools* in the hurricane-affected districts that had pre-reform outcome trends similar to New Orleans schools at that time. For example, when examining the effects on high school graduation, we look for schools that had similar pre-storm graduation rates and graduation rate trends as New Orleans.

We apply these methods using data provided by the Louisiana Department of Education (LDOE) for the years 2001-2014. The exact years we analyze vary based on the outcome studied. Below, we discuss some specific data issues that arise with each outcome measure. We show results only for the cross-cohort analyses in the figures below and discuss differences between this and other methods in the text.

WHAT EFFECT DID THE NEW ORLEANS REFORMS HAVE ON STUDENT ACHIEVEMENT?

The hope with a difference-in-differences analysis is that the policy-affected location (in this case, New Orleans) and the comparison group follow a parallel path in the pre-reform period. This would be represented in the figures below by a flat line located at zero on the y-axis. A flat line of this sort would provide confidence that we have a good comparison group. If the line goes up after the policy change (indicated by the vertical line in the figures), then this means the policy-affected group's outcomes started increasing faster, providing evidence of a policy effect.

We find that the New Orleans reforms increased standardized test scores by 11-16 percentiles, depending on the academic subject and analysis method. The four panels of Figure 1 below show the results for the four academic subjects for which we have test scores—math, English Language Arts (ELA), science, and social studies, using the

cross-cohort method. In most cases, we see that New Orleans scores and those of the comparison group were following a similar pattern before the reforms (Math is a possible exception). A sharp break in that pattern emerges right after the reforms.

“ We find that the New Orleans reforms increased standardized test scores by 11-16 percentiles, depending on the academic subject and analysis method. ”

The results are similar for ELA, science, and social studies. Overall, the effects range from 0.39-0.45 standard deviations or even larger. This is equivalent to moving from the 50th percentile to the 66th percentile, a substantial improvement.

Figure 1a. Reform Effect on Math Test Scores

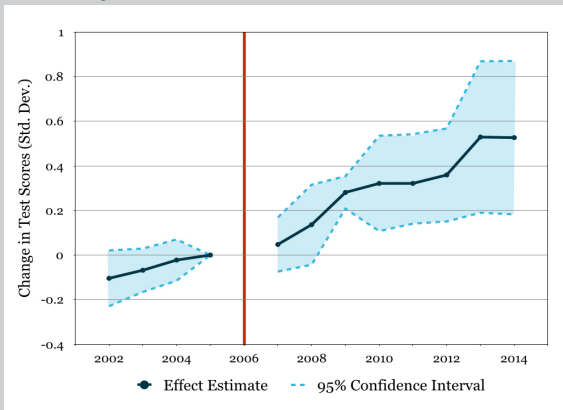


Figure 1b. Reform Effect on ELA Test Scores

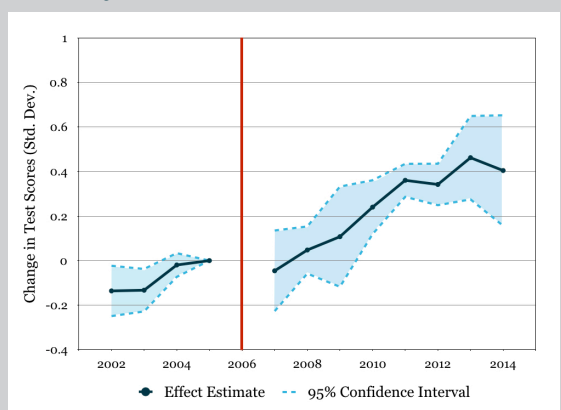


Figure 1c. Reform Effect on Science Test Scores

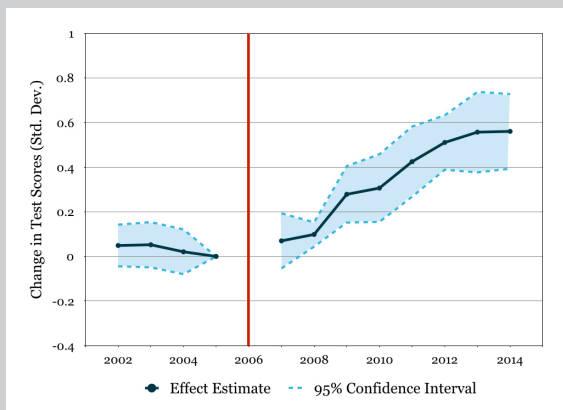
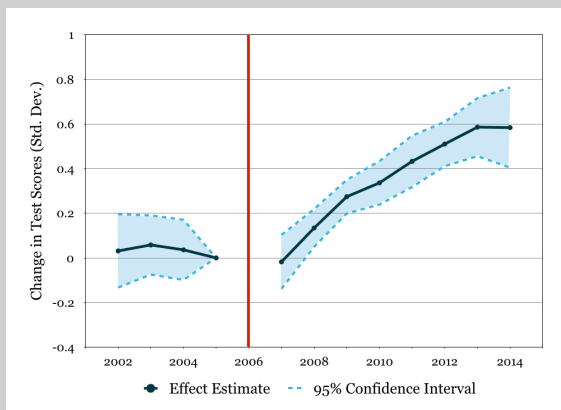


Figure 1d. Reform Effect on Social Studies Test Scores



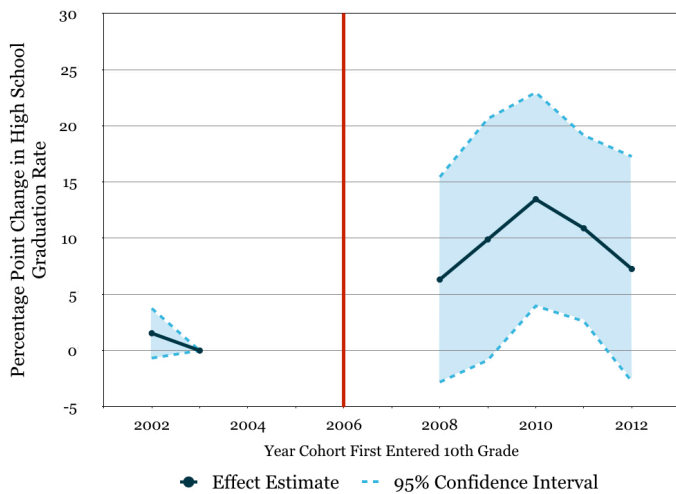
Note: The above figures show difference-in-differences estimates (dark lines) with 95% confidence intervals. The analysis uses the typical research practice of standardizing test scores to a statewide mean of zero and a standard deviation of one. In the text, we also translate these effect sizes into more intuitive percentile terms.

The effects are smaller for the returnees-only analysis in the first three years after the reforms where we can carry out that analysis. Extrapolating the effect trend from 2009 to 2014, the last year used in Figure 1, we see effects as small as 0.28 standard deviations (11 percentile points), still large by most standards. A third entirely different type of analysis yielded similar results to those in Figure 1; therefore, the 0.28 estimate is likely conservative. Note, however, that we are only able to study through 2014 with our data, and there are some signs that scores have flattened out or declined slightly over the past few years. This is something we will explore in future analyses.

WHAT EFFECT DID THE NEW ORLEANS REFORMS HAVE ON THE HIGH SCHOOL GRADUATION RATE?

High school graduation is an important outcome because it is a strong predictor of long-term life outcomes and a precursor to college. Figure 2 shows the effects of the reforms on high school graduation rate (including students who do not graduate on time).

Figure 2. Reform Effect on High School Graduation for 10th-grade Cohorts



Note: The rate in this case allows for late graduation.

As with student test scores, the comparison group and New Orleans students were on an approximately parallel path before the reforms, and we find that New Orleans improved faster after the reforms. Unlike the test scores results, where the improvement was gradual and steady, the graduation results show an immediate effect followed by an inconsistent trend.

Analyzing graduation is complicated by two factors, however. The first is that it requires many years of data to calculate a single graduation rate. Graduation rates are usually calculated as the share

of 9th graders who graduate four years later. In addition, we need an additional year of data to determine whether students are in the 9th grade for the first time and therefore belong in a given cohort. In total, then, we need 5 years of data to calculate a single graduation rate.

The challenge in this case is that we only have enough years of data to calculate one graduation rate prior to the reforms and therefore cannot test whether the comparison group was on a parallel path based on the standard graduation rate definition. Instead, Figure 2 shows the graduation rate for first-time 10th graders, which requires one fewer year of data and allows us to test for a parallel path. (For this reason, the years on the x-axis of Figure 2 reflect the year that students first entered 10th grade, e.g., the last point is for students who were 10th graders in 2012 and would have been expected to graduate in 2014.)

A second challenge is that high school graduation, like student test scores, are high-stakes for schools, especially in New Orleans where schools can be closed for low performance. Moreover, schools have some control over the data used to calculate graduation rates. Specifically, school leaders can raise their graduation rates by reporting students as transfers, which removes those students from the graduation rate calculation. Some of these transfers are difficult for the state to verify (e.g., transferring out of state).

To address this concern about the validity of the graduation rate data, we used three different definitions of high school graduation. The first one, reflected in Figure 2, focuses on regular diplomas. The second definition also focuses on regular diplomas, but treats students with “hard to verify” transfers as being dropouts to address the above concern about misreporting. The third definition treats transfers as transfers, as in the first definition, but allows different types of graduation, such as GED.

The results turn out to be very similar across these three definitions. The effects for 9th graders are somewhat smaller than those for 10th graders (see the accompanying technical report), though still generally positive in direction. Overall, we find that the reforms increased the high school graduation rate by 3-9 percentage points.

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WHAT EFFECT DID THE NEW ORLEANS REFORMS HAVE ON STUDENTS' COLLEGE OUTCOMES?

Starting with test scores and high school graduation rates makes sense partly because these are the outcomes that schools are held accountable for and expected to focus on. However, there is wide agreement that the purpose of schooling is to improve students' long-term life outcomes. Moreover, the fact that test scores and high school graduation are high-stakes gives rise to concerns about the validity of the data.

College is in many ways the ideal measure of the reforms' success. College entry is an important student outcome that is within the control of schools. Also, for schools, the stakes are low, and they have no control over collecting these data. In short, there is neither an incentive nor an opportunity to distort measures of college outcomes.

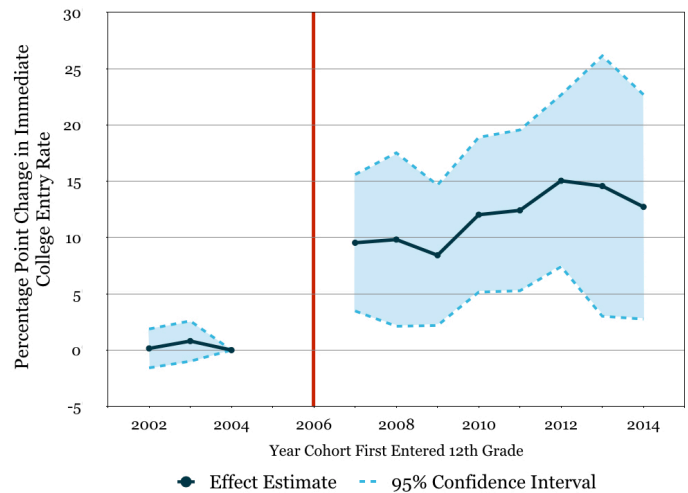
In what follows, we focus on the college entry, persistence, and graduation of 12th grade cohorts. While analyses of college outcomes usually start with high school graduates, anecdotal evidence suggests that some schools in Louisiana and other states push students to go to college as a part of their mission. To test the degree to which this affects our results, we focus on cohorts of 12th graders instead of high school graduates. (The fact that schools are not held accountable for college outcomes, and that we see a positive effect on high school graduation, means that this is very unlikely, but our approach limits any effect this may have on our results.)

College Entry

Figure 3 shows the results for on-time college entry—that is, the percentage of 12th grade students who proceed directly to college after graduating high school. As with the high school graduation numbers, we see an immediate spike of 10 percentage points, which increases to about 15 percentage points for New Orleans' college entry rate after the reforms, a 67% increase over New Orleans' pre-Katrina level.

“... we see an immediate spike of 10 percentage points, which increases to about 15 percentage points for New Orleans' college entry rate...”

Figure 3. Reform Effect on College Entry



In additional analyses, we found that almost the entire effect comes from more students attending 4-year colleges. The effect on 2-year college attendance was generally either zero or even negative. Given the pattern of results, it appears that some students who would not have attended any college without the reforms instead attended a 2-year college, while students who would have attended a 2-year college elected instead to attend a 4-year college. This is also consistent with the idea that schools were encouraging students to attend 4-year colleges. Walking into many New Orleans high schools, the college banners of teachers and prior students that hang in the halls and on classroom walls almost exclusively represent 4-year colleges. It is also possible that there was really no change in 2-year college attendance and that some students who would not have gone to college at all are now going to 4-year colleges, but this seems less likely.

One potential concern is that schools might strongly encourage students to go to college, but then they may quickly drop out. While research suggests that students benefit from having any experience in college, this can also come at a cost, especially if students take on college loan debt in the process. For this reason, we also consider effects on college persistence and college graduation.

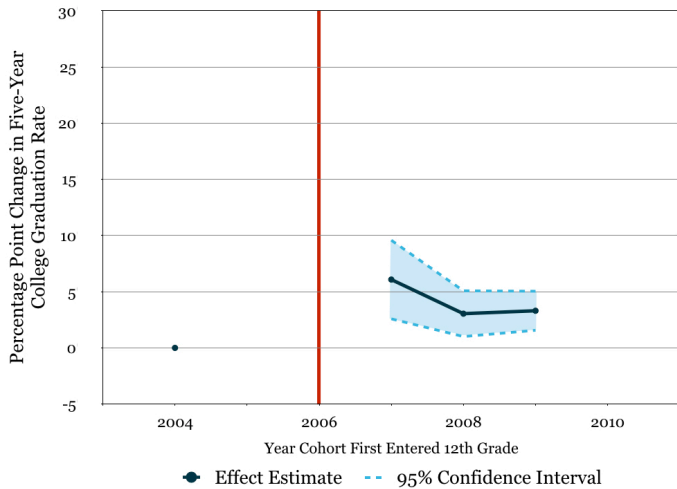
College Persistence and Graduation

We find that the reforms increased the percentage of students who started college and stayed in college for 2+ years by about 8 percentage points. That is, it appears that most students who ended up in college because of the reforms also persisted for at least

two years. We also find that the reforms increased persistence for students attending 4+ years of college by roughly 4 percentage points. These results for persistence can be found in the technical report.

Figure 4 shows the results of a similar analysis for college graduation (again, combining 2- and 4-year colleges). We find a 3-5 percentage point increase in college graduation for students within five years of starting 12th grade. (Our data do not allow us to calculate more than one five-year graduation rate before the reforms. This means we cannot show a trend before the reforms, and instead, Figure 4 shows a dot in 2004. The post-reform differences, however, still reflect changes in the difference between New Orleans and the comparison group.)

Figure 4. Reform Effect on College Graduation



The effects on college persistence and graduation are important because they address the concern that students may drop out with loan debt. However, it is also important to note that these effects are, in other ways, less informative about the reforms because the students in the analysis spent relatively little time in the post-reform schools before leaving for college and this was early in the reform development. The results in Figure 1, regarding test scores, suggest that much of the improvement in schools came after the students in the college analysis had already graduated high school.

The college graduation effects are also noteworthy because students were much more likely to be attending universities and four-year

colleges, which can be more academically challenging and require more years to complete. The fact that more students persisted and/or graduated under these circumstances means that many were up to that challenge.

HOW DID THE NEW ORLEANS REFORMS AFFECT ACHIEVEMENT GAPS BETWEEN ADVANTAGED AND DISADVANTAGED STUDENTS?

Critics of market-based reforms sometimes argue that such reforms may be beneficial for some students, but not the most disadvantaged—that markets are designed for efficiency not equity. This is a particular concern given persistent, and in some cases, rising income inequality in New Orleans and throughout the country, including inequality by race. Education is thought to be the great equalizer to address or offset these problems.

To test whether the New Orleans reforms reduced gaps in education outcomes, we carried out all of the above analyses separately for black and white students, and for low-income students (i.e., those eligible for free or reduced price lunch) and non-low-income students. The results are shown in the technical report, and we summarize them below.

Our first finding is that the reforms clearly benefited black and low-income students. We see positive and statistically significant effects for both groups for all measures—test scores, high school graduation, and college outcomes—and for both types of analysis (returnees-only and cross-cohort). This is not surprising considering that more than 80% of students are black or from low-income families. This means the average effects reported in earlier figures almost have to reflect the results for disadvantaged groups.

“ We see positive and statistically significant effects for both groups for all measures—test scores, high school graduation, and college outcomes—and for both types of analysis...” ”

But did the reforms also reduce the achievement gaps in the city? The results present a somewhat more mixed picture. If we look only at test scores, the results would suggest that the reforms may have increased achievement gaps (the results by family income depend on which form of analysis is used).

The results are consistently positive, however, when we focus on gaps for other, longer-term outcomes. Black and low-income students appear to have experienced larger positive effects than white students with regard to high school graduation and college outcomes, which means the achievement gaps declined. (Note that, while the absolute effects are different from zero for each subgroup, we do not have as much confidence that those effects are different from one another, as would be necessary to draw a strong conclusion that achievement gaps declined. However, the fact that we see similar patterns across almost all of the various analyses still provides some confidence that the gaps did decline.)

To summarize, the reforms increased outcomes on average and seem to have improved equity as well. Black and low-income students saw higher test scores, high school graduation rates, and college results, and probably reduced gaps on the latter two measures. Only the achievement gaps in test scores may have worsened.

ARE THERE ANY OTHER POTENTIAL EXPLANATIONS FOR THESE RESULTS?

The results here paint a consistently positive picture of the reforms. We find the same general results across a wide range of methods and outcomes. We also carry out additional analyses to see whether these patterns could be explained by factors other than the reforms. In particular, we worried that the apparent effects might be driven by changes in the population or the types of students attending publicly funded schools in New Orleans, distortions in the measures due to high-stakes accountability, or other changes in policy.

We are able to rule out a substantial effect of the change in the student population in four ways:

1. *Difference-in-differences analysis of returnees only.* The returnees-only analysis is designed specifically to address concerns about population changes, as it involves studying the exact same individuals. The effects are smaller though still positive in this analysis.

2. *Comparison of returnees' and non-returnees' pre-reform outcomes.* In addition, we compared the pre-Katrina test scores of returnees versus those who did not return. On average, returning students had lower pre-Katrina scores, suggesting that we may be under-estimating the reform effects.

3. *U.S. Census Bureau analysis.* We worked with the U.S. Census Bureau to measure the changes in demographics of families with children attending publicly funded schools. As in the above analysis, we see little evidence that the post-Katrina public school population was more advantaged and some evidence that they were less advantaged.

4. *Additional difference-in-differences analysis.* We carried out a third version of the difference-in-differences analysis that is not affected by population change and still see positive effects similar to those reported above. (See the technical report for details.)

All four analyses point to the same conclusion—that population change cannot explain the positive effects. While the effects are smaller in the returnees-only case, they are still large, positive, and statistically significant.

Aside from population change, our results could conceivably be explained by high-stakes accountability leading to distorted outcome measures. However, we can rule this out because the results are also quite positive for measures that have no direct stakes at all—that is, college outcomes.

Third, it could be that it was not the “reform package” but some other post-Katrina policy that drove the apparent effects. In particular, some have asserted that the effects may have been driven by the infusion of funding that coincided with the reforms. Revenues for schooling increased from a combination of higher local and federal funding levels, as well as philanthropic support. (Eventually, significant improvements in building facilities were also made, but most of these came after the effects documented above.) While it is likely that the market-based reforms and spending increases worked in tandem, it is also important to recognize that: (1) the Orleans Parish School Board had fallen into corruption and dysfunction before the reforms, meaning that the additional funding probably would not have been used especially well without the reforms; and (2) the public and philanthropic support that facilitated the

increased spending probably would not have been present in the absence of the reforms; in this respect, the increase in funding was actually an effect of the reforms.

Finally, even if the above factors did play a role, student outcomes were also being pushed downward by the trauma and disruption of the hurricanes themselves. This by itself would mean that our estimates may be actually too small.

WHAT DO THESE RESULTS MEAN FOR OTHER DISTRICTS AND SCHOOL REFORM GENERALLY?

To the extent that the goal of the reforms was to increase these commonly measured student outcomes, the reforms have to be judged a great success. Test scores, high school graduation, and college outcomes all increased substantially as a result of the reforms. It also appears that the reforms improved outcomes for disadvantaged students and probably reduced achievement gaps for high school graduation and college outcomes (but perhaps worsened them for test scores). It is very unusual for programs and policies to have such success across a wide range of outcomes. The efforts that schools make to increase test scores, for example, can often make it harder for students to graduate from high school, so that when one measure increases, the other declines. This is not the case in New Orleans where all measures improved.

“*To the extent that the goal of the reforms was to increase these commonly measured student outcomes, the reforms have to be judged a great success.*”

New Orleans is also receiving a great deal of attention nationally, and it is tempting to think that we could expect the same results to arise in other districts. This would be unwise, however. The circumstances in New Orleans were especially well suited to make the reforms work:

- *New Orleans as “school reform central.”* The success of any organization depends on its people. In this case, people came to

New Orleans from all over the country because they wanted to help the city rebuild. Many could also see that New Orleans was going to be a national player in the school reform movement. In this sense, New Orleans had a “first-mover” advantage that attracted ambitious and talented people. Other cities that might adopt these reforms will generally have more trouble attracting the educators they need to make the reforms work.

- *The low bar.* As a general rule, it is easier to improve on clear failure like that which was happening in New Orleans prior to the reforms. Critics of the reforms acknowledge that some type of overhaul was in order, even if they preferred a different approach. Cities that have successfully adopted other reforms would likely see smaller effects.

- *The urban marketplace.* Prior research suggests that market-based school reform is more likely to work in cities because, for example, families will have more choices and there will be more competition between schools. For this reason, and the fact that urban districts are generally lower-performing, New Orleans-style reforms are probably less likely to work in suburban and rural districts.

New Orleans also provides an important window into the debate about the role of government in school reform. While the New Orleans model is, broadly, a “market-based” reform, it still includes a large and distinctive role for government. The state could decide which schools entered the market, and because schools operated under performance contracts, the state could also force poor performers to close. In these respects, the power of government was different than before and still strong.

Over time, the state Recovery School District also became gradually more involved in student enrollment and transfer, special education, school discipline, and transportation. Charter schools had more control over the curriculum, budgets, schedules, and, critically, personnel, but it was not a free-for-all either. Our findings for New Orleans are therefore relevant to the larger debate about charter schools, where the government has a more active role in oversight, versus school vouchers, which rely almost entirely on market forces.

This evidence comes at a pivotal time in New Orleans as control of the charter schools (specifically, the charter authorizer role) has just shifted from the state government back to the local school district.

Now is the time to consider whether the strategies that the state followed should be continued.

This choice regarding the mix of markets and governments is important in part because it affects the kinds of student outcomes that schools focus on. In this study, we have focused on outcomes that are a typical focus of government agencies. Parents may value other outcomes, including, for example, elements of academic achievement that are not measured by the standardized tests. More

generally, there is a legitimate debate about what outcomes schools should focus on, and there are trade-offs between them.

Ultimately, school reform is about serving students, their families, and the communities in which they live. In this study, we have focused on the first of these—how students were affected by the reforms, both on average and for specific subgroups. We hope this evidence is useful both locally and nationally, as education leaders work to provide all children with the education they deserve.

How is this Research Related to Other ERA-New Orleans Studies?

In our four years of work at the Education Research Alliance for New Orleans, we have sought to understand how the city's reforms have affected students and through what mechanisms those effects emerged. The "Key Conclusions" page on our website provides much more detail on these questions. Below, we highlight three studies that are closely related to the above discussion:

- In their 2015 study *The Effects of the New Orleans School Reforms on Student Achievement*, Douglas N. Harris and Matthew F. Larsen offer a first look at the post-Katrina school reforms' effects on student outcomes based on the test score data available at that time (through 2012). The present study provides more recent data, across a wider range of outcomes.
- In *Does School Reform = Spending Reform?*, Christian Buerger and Douglas N. Harris use a similar difference-in-differences analysis to study school spending. Among other things, the report

documents a 13 percent increase in school spending in New Orleans relative to the comparison group. This effect represents a potential alternative explanation for the reforms, as discussed in the main text.

- In *Extreme Measures: When and How School Closure and Takeover Benefits Students*, Whitney Bross, Douglas N. Harris, and Lihan Liu find that the closure and takeover processes explain a large share of the total improvement documented in the present study. This reinforces the idea that measurable improvement may still be more likely with an active, but different, role for government.

At ERA-New Orleans, we believe it is important not only to understand the reforms' effects on students, but how and why those effects emerged and how schools can be improved further in the future. Please see our website for additional studies on these topics.

About the Education Research Alliance for New Orleans

The mission of the Education Research Alliance for New Orleans (ERA-New Orleans) is to produce rigorous, objective, and useful research to understand the post-Katrina school reforms and their long-term effects on all students. Based at Tulane University, ERA-New Orleans is a partnership between university-based researchers and a broad spectrum of local education groups. Our Advisory Board includes (in alphabetical order): the Louisiana Association of Educators, the Louisiana Association of Public Charter Schools, the Louisiana Federation of Teachers, the Louisiana Recovery School District, New Schools for New Orleans, the Orleans Parish School Board, the Orleans Public Education Network, and the Urban League of Greater New Orleans. For more information, please visit the organization's website.

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