



**STILL SEPARATE & NOT GETTING MORE EQUAL:
The Persistence of Economic and Racial Inequalities in
Education on Long Island**

William Mangino, Ph.D.

Marc Silver, Ph.D.

Hofstra University

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Introduction

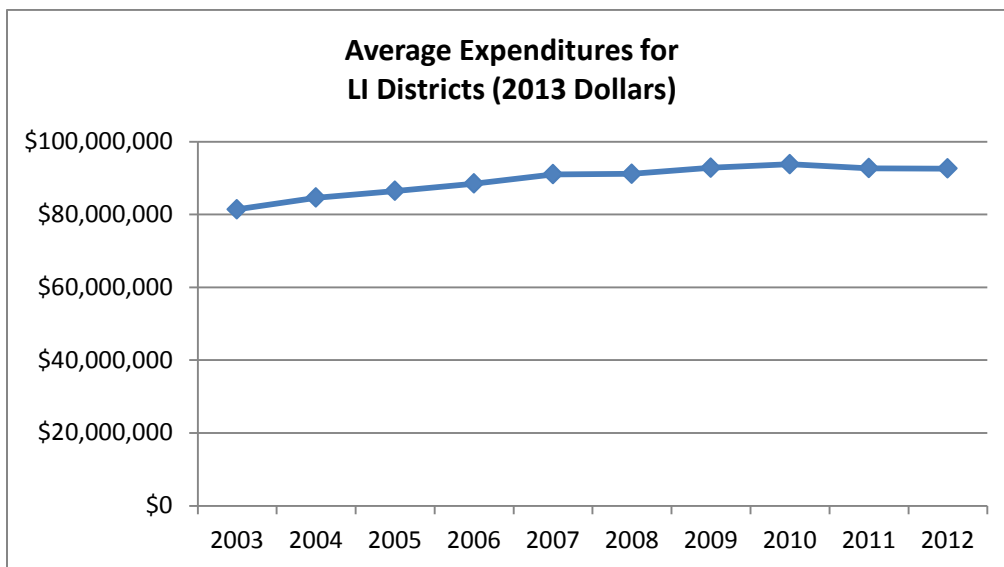
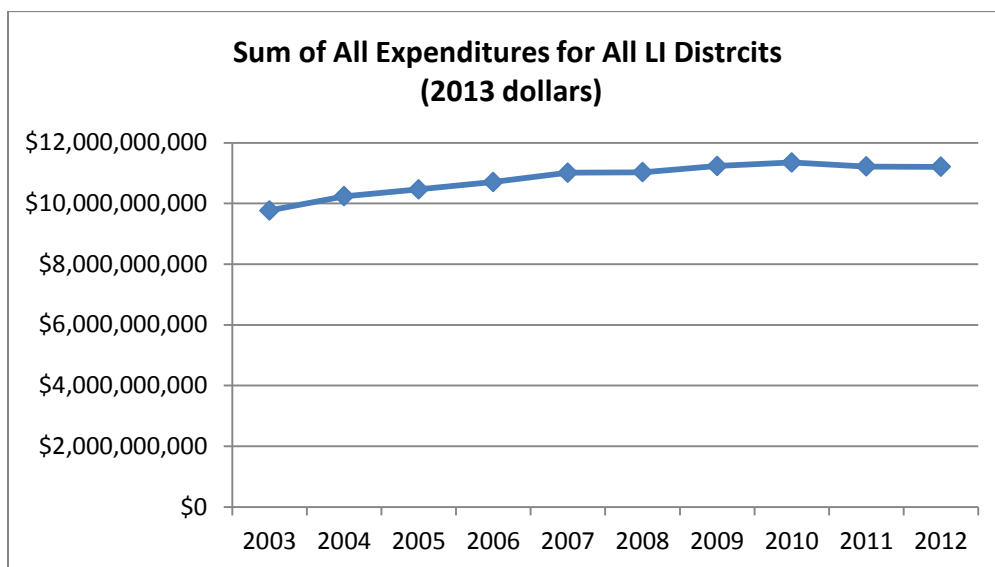
People often think of their education as one of the most important investments they can make to enhance their, or their child's, prospects for an economically secure future. Similarly, at the societal level, we frequently think in terms of society's need to invest in the education of its youth in order to ensure a prosperous and globally competitive national future. As we are all aware though, high quality educational outcomes do not come at a cheap cost. All of the factors that contribute to a quality education - highly skilled teachers, solid infrastructural support, cutting edge technology, creating the learning environments most conducive to learning – all add to the price tag. Moreover, we also know that education is not a one-size-fits-all enterprise. Student populations differ widely and manifest different needs. In particular, we know that it is more expensive to provide a high quality educational experience for at-risk student populations (e.g., those in poverty, those from marginalized communities, and those with limited English proficiency). Finally, we cannot lose sight of how externalities, such as the Great Recession of 2007-2009, impact the economics of education. Thus, it is not only appropriate, but necessary, that we examine both how much we spend on education, but also where and how we allocate our economic resources in the educational sphere on Long Island.

Changes in District Revenues and Expenditures

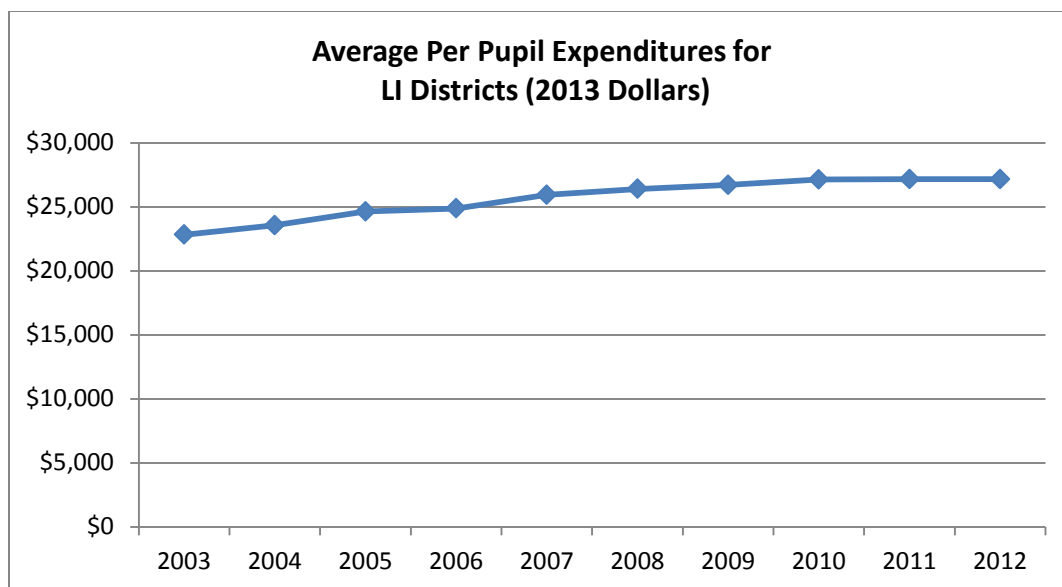
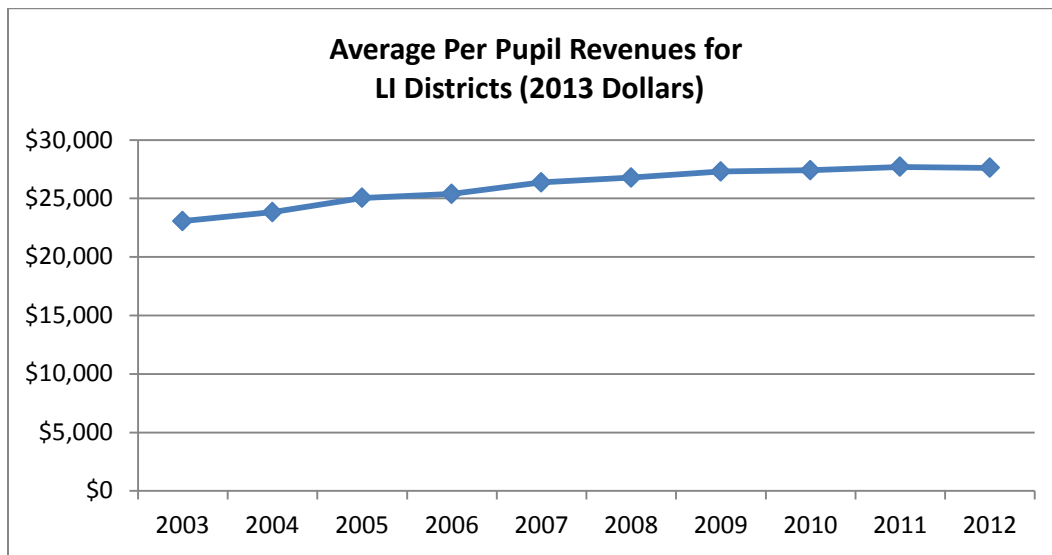
It has been five years since the official end of the “Great Recession.” We take this opportunity to look at how the economics of education have changed pre- and post-recession. In this section we examine economic data at the school district level. We look at districts because we are considering budgetary issues, and educational funds are disbursed solely at the district level. We evaluate district revenues, expenditures, and ‘financial cushion’ for the period 2003 – 2012 (the latest year for which fully audited budgets were made available by the New York State Education Department). For fiscal data, we convert all dollar figures to 2013 “constant” dollars. All monies are adjusted to 2013 based on the Consumer Price Index (CPI) for the NYC metro area. This adjustment takes into account the changing value of the dollar from year to year (i.e., inflation). By expressing amounts in 2013 dollars, we are taking into account increases in the cost of goods and services that may have occurred over time. Any changes reported thus reflect changes over and above shifts in the costs of goods and services. In other words, we report “real” changes, taking into account the fact that goods and services tend to cost more over time. One additional methodological issue is worth noting. There are 125 school districts in Nassau and Suffolk counties. When we refer to “all of Long Island” all districts are included. That said, several districts are atypical in that they have very few students. For example in 2013, three districts had 15 or fewer students, while the average district size for LI was 3,576 students. To produce more meaningful comparisons, we excluded seven very small districts from the analyses that break down the districts into smaller groupings (i.e., those that look at poverty categories). Working at the district level, we identify the 10% of LI districts with the highest percentage of students receiving Federal Title I free lunch. We call these “High Poverty Districts” (N=12). The 10% of districts with the lowest percentage of students receiving free lunch

are defined as “Low Poverty Districts” (N=13). The 80% of districts in the middle are “Mid Poverty Districts” (N=93). We will describe these districts in more detail below.

Education receives sizable investments on Long Island, overall. In 2012, the sum of all expenditures across all LI districts was \$11.2 billion (in 2013 dollars), with an average of \$92.6 million per district. This represents an increase of 14.6% since 2003. Most of the growth occurred during the pre-recession years between 2003 and 2007. Expenditures between 2007 and 2010 continued to grow, albeit at a slow pace, and hitting a peak in 2010 at \$11.35 billion. Expenditures declined between 2010 and 2012. We see the effect of the recession as expenditures by 2012 had declined to slightly below their 2009 level.

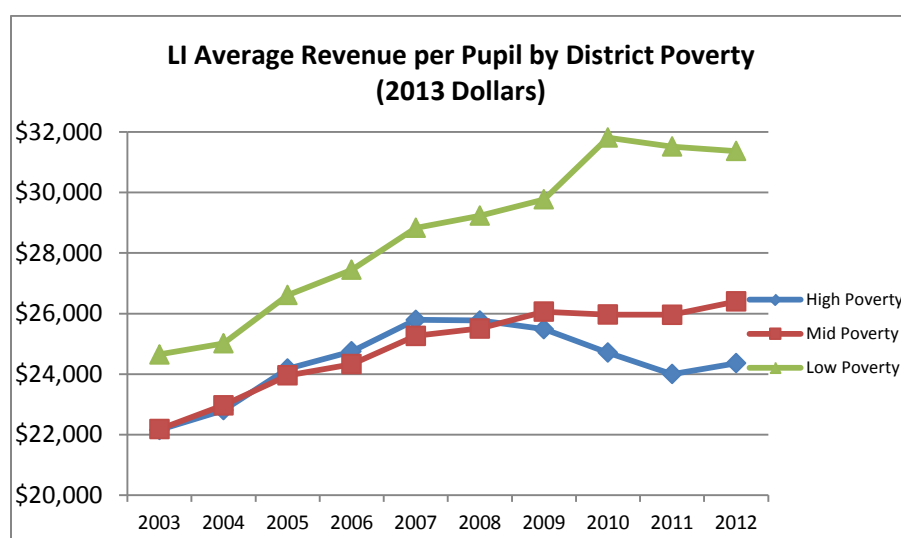


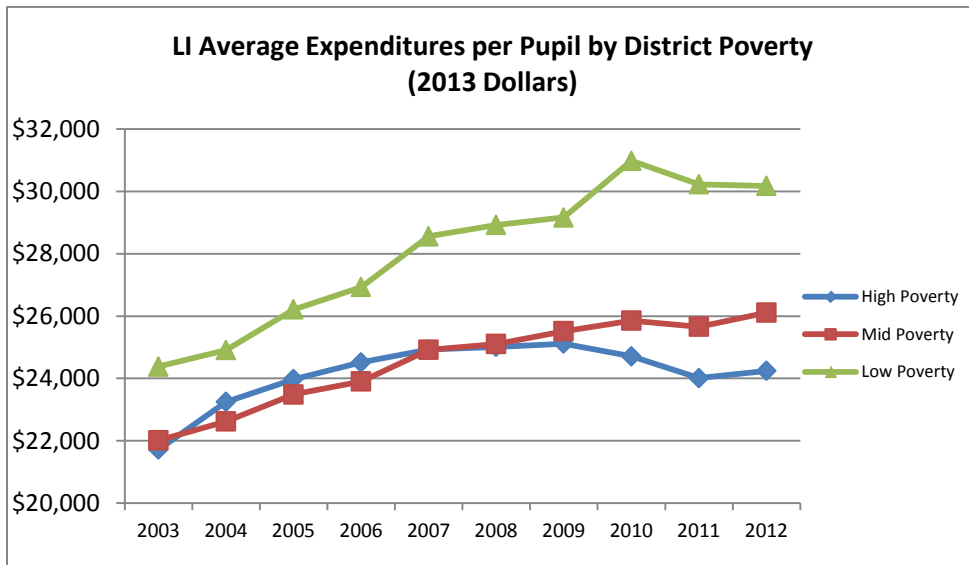
We obtain the clearest perspective on educational investments when we look at dollars “per pupil”. Configuring revenues and expenditures “per pupil” controls for the size of the student population. As you would expect, greater numbers of students requires larger budgets, other things being equal. The following charts show LI districts’ average revenues and expenditures per pupil from 2003 to 2012. Both revenues and expenditures per pupil rose from about \$23,000 in 2003 to approximately \$27,000 by 2009 and have remained essentially flat since then. Since per pupil amounts account for changes in the student population, we find that, all things considered, per pupil revenues and expenditures have increased by about 17% since 2003. Most of that increase occurred prior to 2010.



Unfortunately, overall per-pupil spending for Long Island school districts as a whole does not reveal the gross inequalities that exist across districts. The following two charts show per pupil revenues and expenditures for districts with relatively few students in poverty, moderate levels in poverty, and districts with relatively many students in poverty. The proportion of students in poverty within a district has both direct and indirect significance for the economics of education. Most directly, it indicates the relative presence of at-risk students that require greater attention and resources in order to provide them with sufficient support for their educational endeavors. More indirectly, but with a profound impact on the economic base for education, it indicates the relative presence of financial resources in the community/district to support the educational enterprise. Districts with a high proportion of students in poverty tend also to have a lower tax revenue base for funding education (e.g., lower residential and commercial property values). A lower tax base means lower direct revenues from local property taxes.

In light of that, some glaring differences become apparent. First, we see that the poorest districts on LI were the hardest hit by the recession. Prior to 2009, Mid Poverty Districts and High Poverty districts were funded almost equally; for example, both had per pupil expenditures of \$25,000 in 2007 and 2008, and they had similar rates of fiscal increase leading up to those years. However, post-2008, we see that High Poverty Districts had a reversal of their funding, with a decline that hit bottom in 2011. From 2009 to 2011, the average student in a High Poverty District saw expenditures on her education decrease by \$1,100; and since their peak in 2007, revenues decreased by more than \$1,700 per student. Students in Mid Poverty Districts did not experience a decline in funding; they only saw a leveling-off. Indeed, in Mid Poverty Districts the highest level of per pupil revenues and expenditures occurred in the last year of data availability, 2012, when expenditures for them were \$26,100 per student. In contrast, High Poverty Districts' revenues and expenditures were in 2012 on par with those of 2005. For post-recession High Poverty Districts, seven years of fiscal gains were erased by 2012.

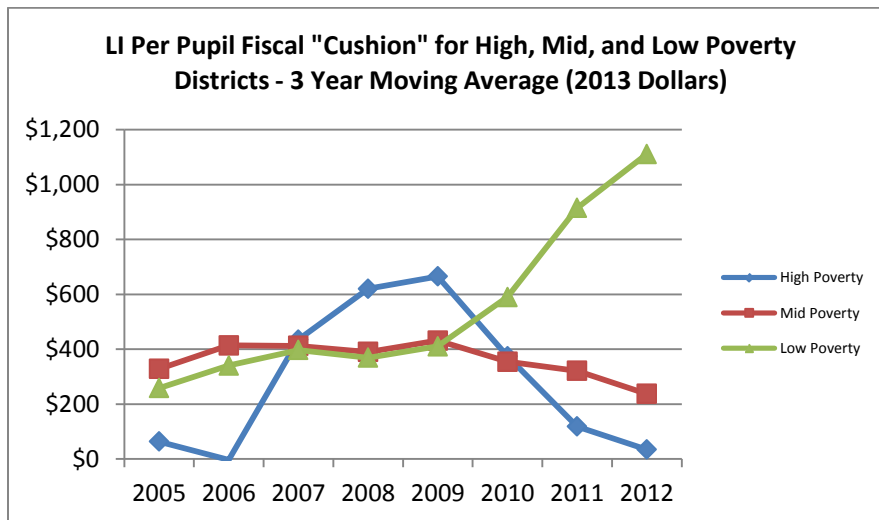
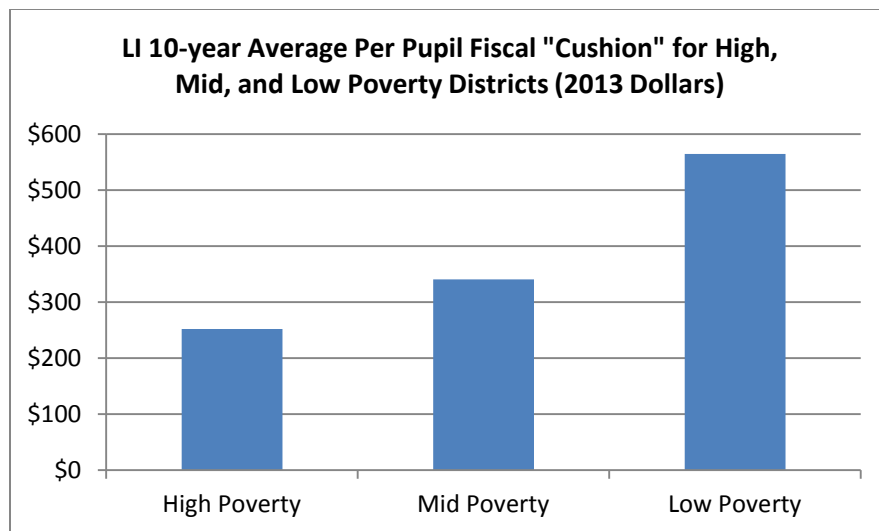




Low Poverty Districts are in a class by themselves. In 2003, they had per pupil revenues and expenditures of \$24,700 and \$24,400, respectively. Through the decade, Low Poverty Districts increased their spending unabated, even seeing the largest single-year increase in revenues and expenditures from 2009 to 2010. From 2003 to 2010, revenues and expenditures grew by approximately 28%, to \$31,800 (revenues) and \$31,000 (expenditures). From 2010 to 2012, Low Poverty Districts saw a small decrease in fiscal resources (-1.4% for revenues and -2.6% for expenditures); however their 2012 levels are still higher than all pre-recession years.

The “Fiscal Cushion”

More insight can be gained by looking at the fiscal gap between High Poverty Districts and Low Poverty Districts. Through the past decade, the gap in financial resources between our most privileged students and our most vulnerable students has widened. In 2003, the gap in per pupil expenditures was \$2,600 (in 2013 dollars). Even with the small fiscal downturn in Low Poverty Districts after 2010, the gap in resources between them and High Poverty Districts in 2012 was \$6,000 for expenditures and \$7,000 in revenues, per student. In terms of percent change, from 2003 to 2012, the gap grew by more than 130%.



The difference between revenue per pupil and expenditures per pupil can be used to illuminate the fragile position of High Poverty Districts. This is a measure we call “fiscal cushion”, and it assesses the amount of surplus funds in a given district. It is calculated simply by subtracting expenditures from revenues for a given year. Over the ten-year period, Low Poverty Districts averaged a cushion of \$565 per student, while Mid Poverty and High Poverty Districts averaged cushions of \$341 and \$252, respectively. High Poverty Districts work closest to being “in the red”. The next chart expresses the fiscal cushion as a three year “moving average” (for each year, taking the mean of that year and the previous two. A moving average is used to “smooth out” the curve).

From 2005 to 2009, the fiscal cushion of Mid Poverty Districts and Low Poverty Districts ran in tandem, with year-to-year stability and an overall modest increase over those five years. After 2009, however, the financial privilege of Low Poverty Districts once again becomes apparent. Their fiscal cushion balloons by 171%, from \$410 (2009) to \$1,111 (2012). In contrast, over the entire

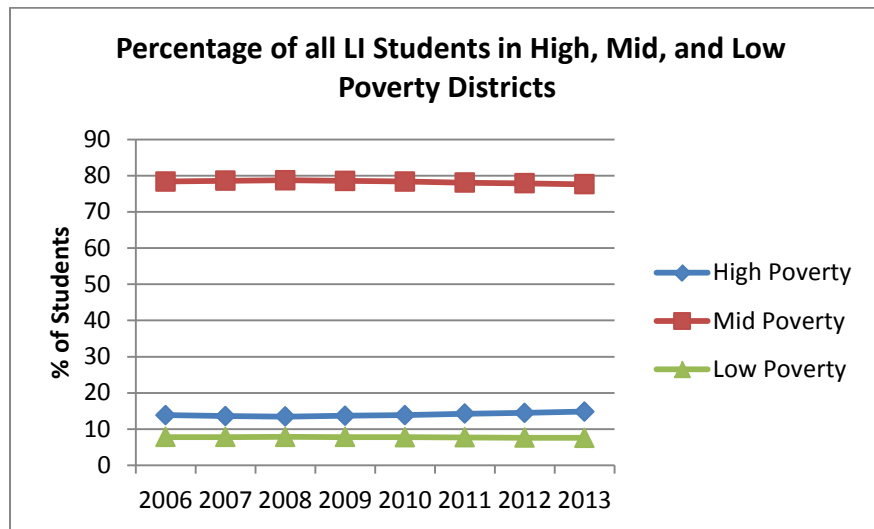
time period (2005-2012), High Poverty Districts and Mid Poverty Districts saw a net decline in their fiscal cushion (respectively, 46% and 23% decreases), while overall Low Poverty Districts enjoyed a 331% increase. Mid-poverty districts saw their cushion decline as the recession set in. The mid-poverty cushion in 2005 (1.25% of expenditures) had fallen substantially by 2012 (.91% of expenditures). High-poverty districts experienced great volatility between 2005 and 2012. It changed rapidly from year to year, and in two years it approached zero (2006 and 2012). The cushion for high-poverty districts in 2012 was only two tenths of one percent of expenditures. On average, high-poverty districts operated just barely above the break-even point in 2012. In stark contrast, low-poverty districts' cushion increased throughout the 2005 – 2012 period, reaching its peak in 2012 at 3.2% of expenditures (as previously noted, a 331% overall increase). The "Great Recession" clearly had very different impacts on educational economics at the district level.

Overall, we can see that the economics of education is largely a picture of economic inequality. The advantages of those in the low-poverty districts result in significantly higher expenditures per pupil for educational purposes and also in a larger financial "cushion". The Great Recession seemingly had little impact on the most affluent districts, as the gap between them and mid- and high-poverty districts widened in the post-recession years. At the other end of the spectrum, high-poverty districts saw a drastic decline in revenues and expenditures in the post-recession years and their financial cushion shrink to near zero. Mid-poverty districts, while holding their own in the post-recession years with respect to per-pupil expenditures, saw substantial declines in their financial cushions. The years of economic crisis exacerbated educational inequalities that previously existed, and created new chasms where there was once greater parity. Unfortunately, but not surprisingly, economic inequalities contribute significantly to educational inequalities. Sadly, those districts with the least amount of financial resources, and with their young learners most at-risk, have been the ones bearing the severest of consequences in the post-recession years.

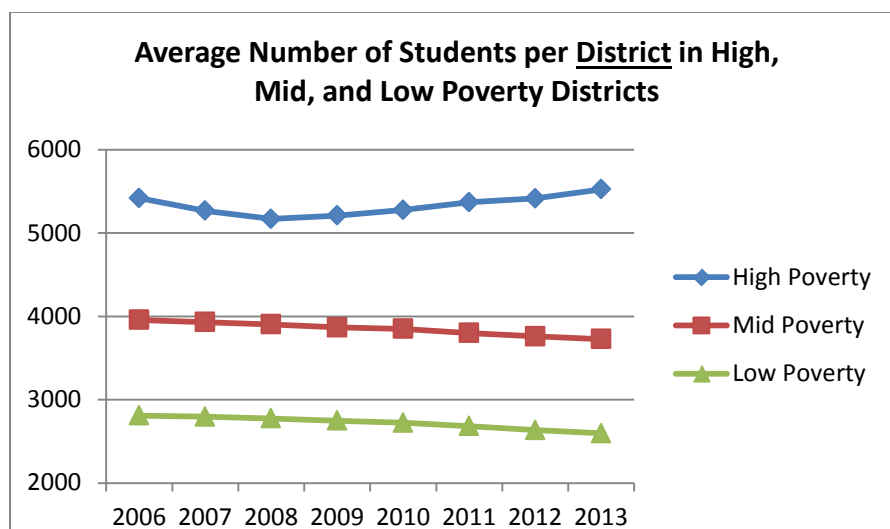
Changes in District and School Size

Having now gained a clear perspective on the financial landscape, we would next like to further consider the demographics of various school districts on Long Island. Recall that our categorization of "Low", "Mid", and "High" poverty districts are based on percentile rank. The 10% of districts with the fewest students receiving free lunch are "Low Poverty"; and the 10% with the most students receiving free lunch are "High Poverty". Thus there are roughly an equal number of districts in the Low and High categories (13 and 12, respectively), while there are 93 in the Mid Poverty category (the middle 80%). However, just because districts are distributed approximately evenly in the Low and High Poverty categories, does not mean that there is an even distribution of students. As the chart below shows, despite the fact that there is one more district in the Low Poverty category, a smaller percentage of students attend Low Poverty Districts than attend High Poverty Districts. Taking 2013 as the example (the percentages are quite stable through time), 8% of all students (about 33,800 children) on LI attended Low Poverty Districts, about 78% of students (346,600

children) attended Mid Poverty Districts, while 15% of all students (66,300 children) attended High Poverty Districts.



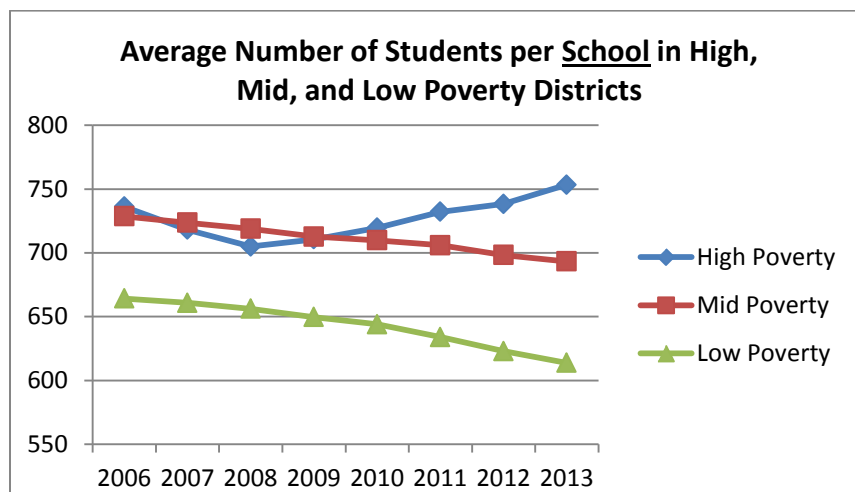
This indicates that High Poverty districts carry the burden of a disproportionate share of the overall student body. These are not “just numbers”. Cutting-edge scholarly research shows that small learning environments are conducive to higher academic performance. Small environments are more intimate; teachers are more familiar with individual students and therefore can more easily enforce norms of educational excellence. We see in the next chart, that high poverty children learn in larger environments.



Here, rather than looking at percentages, we are seeing the number of students in the “average” district for each poverty category. Staying for the moment with 2013, we see that the average Low Poverty District has about 2,600 students, while the average High Poverty District is more than

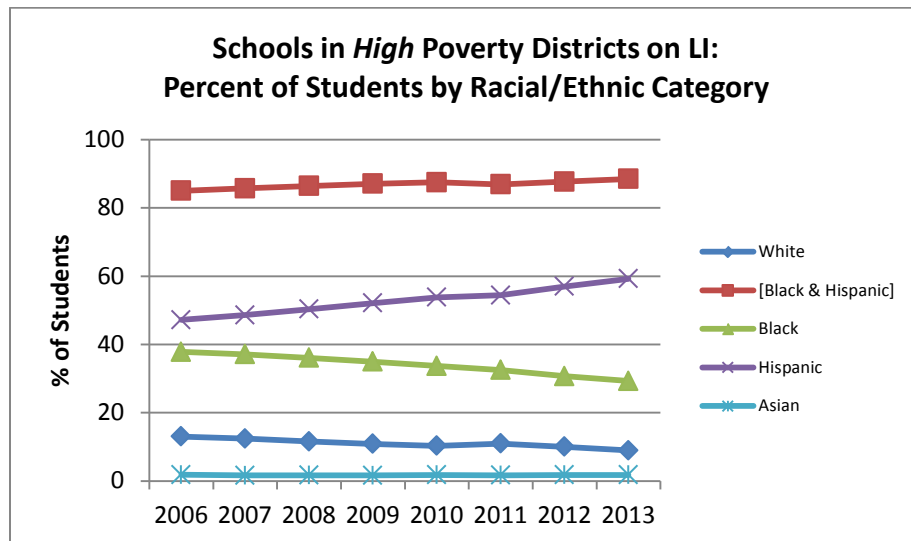
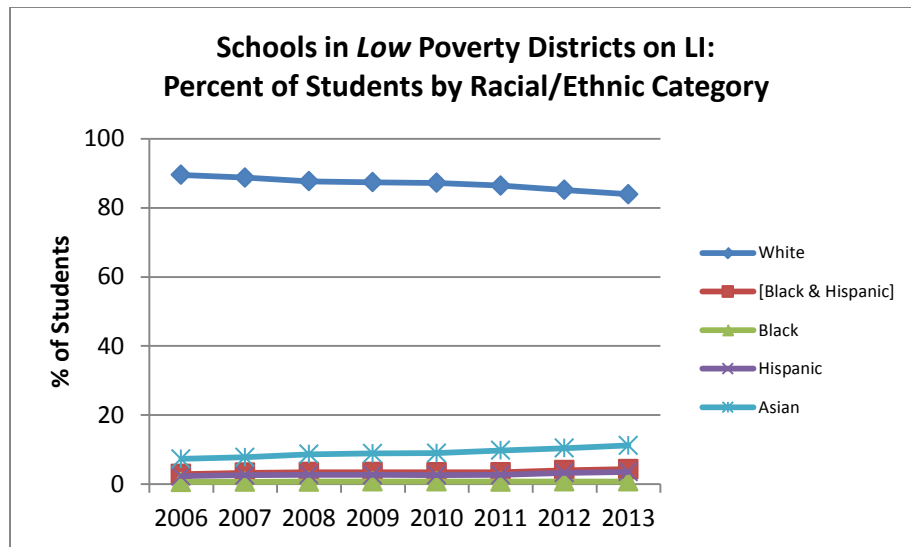
double the size, with 5,525 students. The trend through time is also illuminating. Since 2006 Low and Mid Poverty Districts have gotten smaller (decreases of 7.6% and 5.8%, respectively), while High Poverty Districts have gotten larger. High Poverty Districts were decreasing in size from 2006 to 2008, but since then they have grown by over 6.8%, even while their budgets were shrinking.

While scholarly research stresses the importance of small and intimate learning environments, children don't actually learn "in a district". They learn in schools that are embedded in districts. To capture this experiential reality, the next chart examines the average size of schools in each category of district. Again we see that Low Poverty Districts are privileged with environments more conducive to learning. In 2013, the average school in a Low Poverty District had 614 students, while the average school in a High Poverty District had 753 students—a difference of nearly 24%. Schools in Mid Poverty Districts in 2013 averaged 693 students. As with the earlier charts, the trends through time show additional patterns of systematic privilege and disadvantage. Since 2006 schools in both Low and Mid Poverty Districts have been getting smaller (by percentages similar to their district trends), while High Poverty Schools have been getting larger. Just like in the district at large, schools in High Poverty Districts reached their smallest in 2008, with an average of 705 students. Since then, such schools have gotten larger by 6.8%.



District Demographics

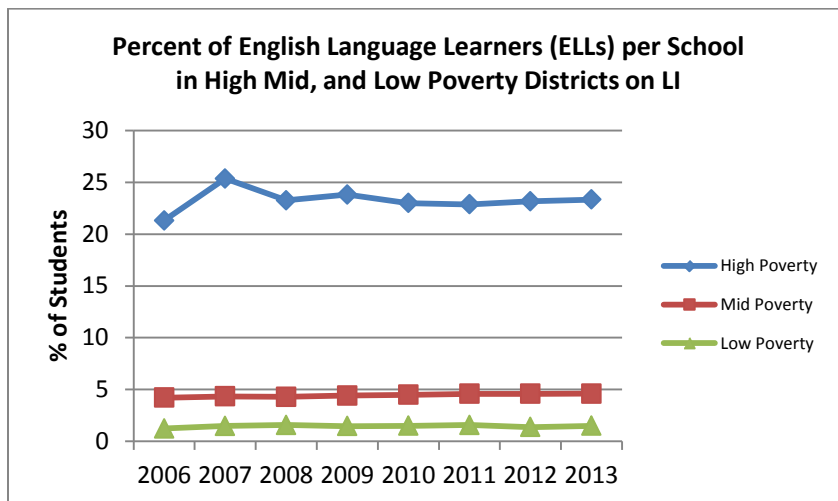
So who are in these districts and schools? Well to put it bluntly, schools in Low Poverty Districts are largely White. Schools in Low Poverty Districts averaged 84% white students in 2013 (about 61% of all Long Island students were white). And even though the percentage of white students has declined from 89% in 2006, this decline is not due to an influx of Latino or Black children in these well-to-do districts. The relative decline in the white student population in Low Poverty Districts is due to an increasing number of Asians. Asian students in Low Poverty Districts have increased from 7% in 2006 to 11% in 2013.



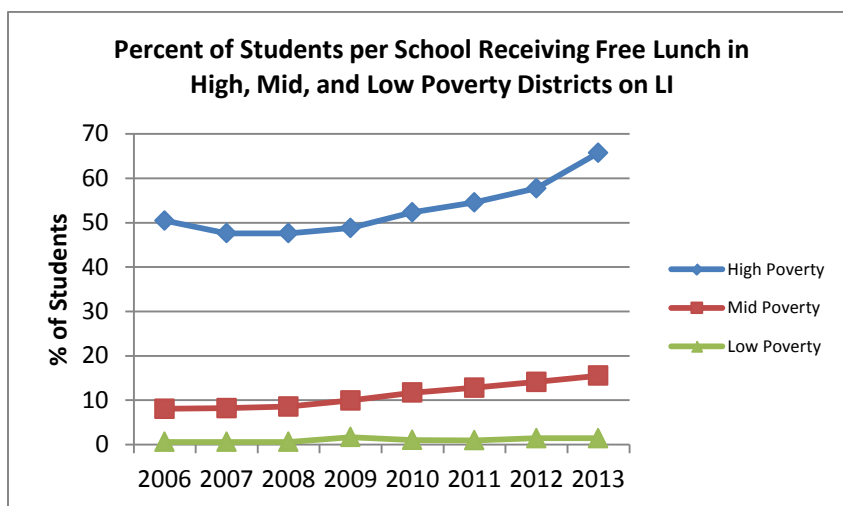
The flipside of white segregation is, of course, non-white segregation. Just as schools in Low Poverty Districts are overwhelmingly white, schools in High Poverty Districts are predominantly Latino and Black. Together, Black and Latino students represented 85% of the High Poverty District student body in 2006 and fully 89% in 2013. White students are a shrinking minority in these districts. In 2006, they were 13% of the student body; by 2013 their numbers had decreased to 9%. Racial segregation in Long Island's schools is increasing, even as the population of the region as a whole is becoming more diverse.

Our final two charts show the percentage of English Language Learners (ELL) and the percentage of students receiving free lunch in schools in each district-poverty category. The percentage of ELL has remained flat in all three poverty categories throughout the period covered by the analysis. In 2013,

schools in High Poverty Districts averaged 23% ELL, while schools in Mid and Low Poverty Districts averaged 5% and 1% ELL, respectively. The relative presence of English Language Learners in High Poverty Districts was over 400% of Mid Poverty Districts and 2300% of Low Poverty Districts. Again, this clearly indicates the extra educational burden carried by High Poverty Districts.



Perhaps the chart showing the starkest inequality is our last. Because our poverty categorization of districts is based on the percentage of students receiving free lunch, we expect that schools in “High Poverty Districts” will have more free lunch students than schools in either Mid or Low Poverty Districts. However, the wideness of the gap among them is an indicator of how much inequality and class segregation exists on Long Island.



In 2013, 66% of students in schools in High Poverty Districts received free lunch, and this is up by 38% from 2007, when ‘only’ 48% of such students received free lunch. As shown in the chart, this is significantly greater than for either Mid or Low Poverty Districts. The trend for Mid Poverty Districts

has also been toward a greater presence of students in poverty, however. In 2006, only 8% of students in Mid Poverty Districts received free lunch. It had increased to 16% by 2013 (a 100% increase). Most of that increase occurred since the onset of the Great Recession. In contrast, a mere 1% of students in schools in Low Poverty Districts received free lunch in 2013, the same percentage as did in 2006. The difference in the percentage of students receiving free lunch in schools in Low Poverty Districts compared to schools in High Poverty Districts is a whopping 6,500%.

Low Poverty Districts have remained unscathed since the Great Recession. Their level of poverty is virtually non-existent and has not changed in 8 years.

Conclusion

In sum, we see that Low Poverty Districts operate with an increasing abundance of fiscal resources and have a large cushion to fall back on should unexpected exigencies arise. They have smaller, more intimate schools and districts. Indeed everything is stacked in their favor. High Poverty Districts, on the other hand, are seeing declining financial resources even as they struggle with the demands of an increasingly impoverished student body. They operate with a razor thin financial cushion, and their schools and districts are large and getting larger. The contradictions in our educational policies could not be more profound. On the one hand, we expect education to be the great leveler—superior educational accomplishment acting as the supposed portal to economic security and success. Thus, we ask poor and minority children to raise their station in life by first excelling in their education endeavors. We expect all public school districts to provide the basis for a high-quality educational experience. But, as our analysis suggests, those who need educational resources the most seem to be the least likely to get them. As presently funded and structured, our public schools are much more likely to reproduce present trends of increasing inequalities of economic opportunity than they are to reduce them.