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Changing Schools

A Look at Student Mobility Trends in Chicago Public Schools Since 1995

Marisa de la Torre
Julia Gwynne

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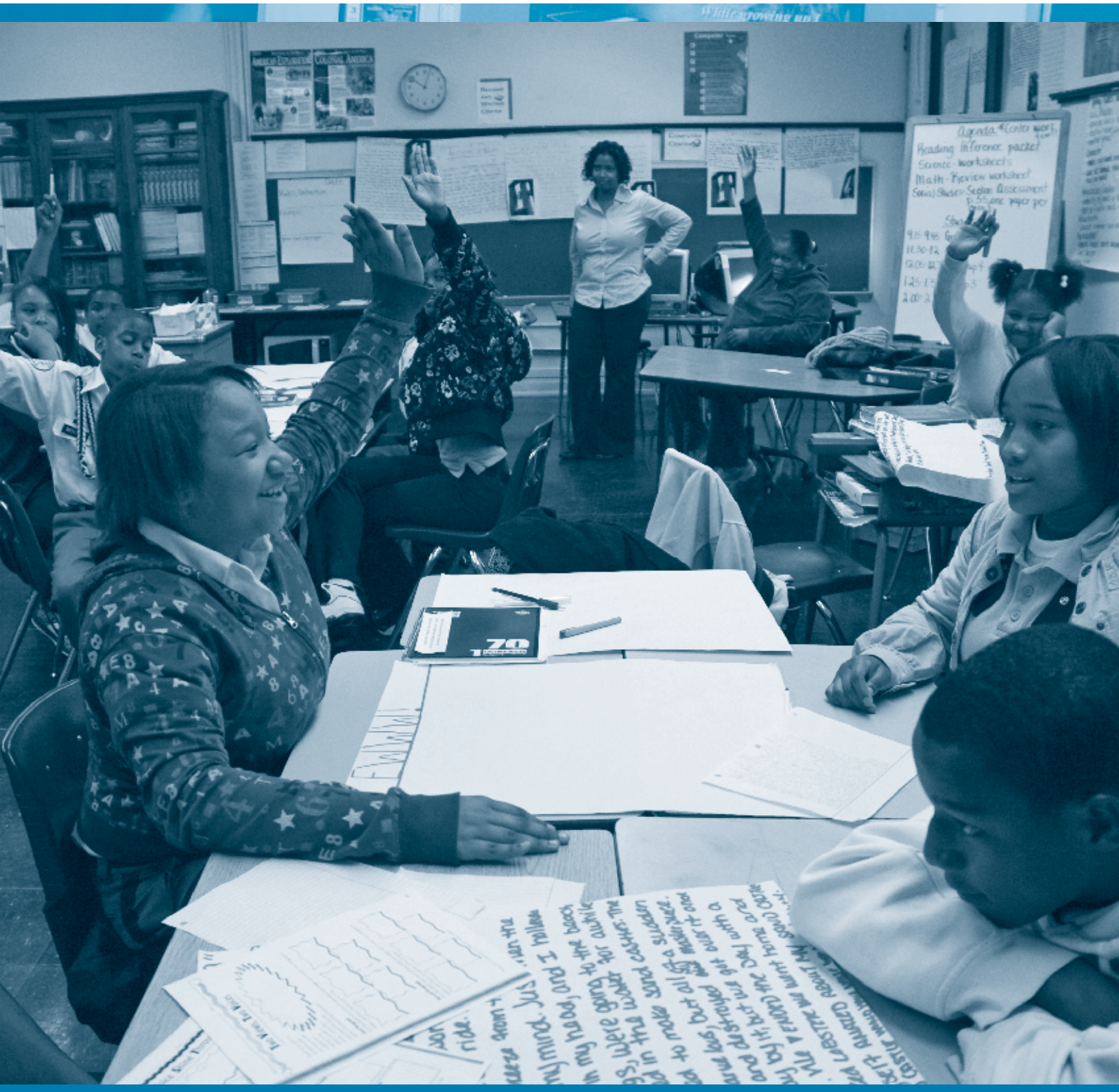
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Executive Summary

Student mobility has been a long-standing concern to educators and researchers because of the negative impact that changing schools can have on students, teachers, and schools. For mobile students, changing schools can impede learning, particularly when moves occur between schools where curricula are not well aligned.[1] Stable students may also be affected if teachers slow the pace of instruction to accommodate the needs of incoming students.[2] Teachers may also have trouble implementing an integrated curriculum in which learning from one grade builds on learning from a previous grade when students are constantly moving in and out of a school.

> Student mobility in CPS has decreased since 1985, and this is due to fewer students transferring between schools.

High levels of student mobility can create a sense of upheaval and constant change at the school level, which can lead to feelings of demoralization, stress, and tension among school staff.[3] In addition, schools typically have few established practices in place to assist mobile students in the transition into their new school. As a result, classroom teachers are often left with the task of helping new students integrate socially and educationally, which can create an additional burden for teachers.[4]

Despite the potentially negative impact of changing schools, there is growing recognition that it may be beneficial to provide opportunities for students to leave schools with which they and their families are dissatisfied for ones that are better fits.[5]

In urban areas such as Chicago, student mobility is of particular interest to district and school personnel because of its pervasiveness. In 1995, Kerbow found that, on average, only three-fourths of elementary students remained in the same school from one year to another, and only 38 percent of students remained in the same school from first through sixth grades.[6] Since most students left one Chicago public school to enroll in another Chicago public

school, this turnover meant that on average five new students joined a typical classroom each year. Kerbow also found that a majority of school changes were to schools of similar or worse academic quality.[7]

This study builds on Kerbow's work by looking at trends in student mobility in Chicago Public Schools (CPS) between 1995 and 2007. We also explore factors that contribute to student mobility. Students change schools for a number of reasons, including a change in residence, a desire to improve the quality of their educational opportunities, and a wish to escape unsafe or difficult circumstances at a previous school.[8]

In some cases, economic conditions and public policies also affect student mobility. The latter half of the period of study, from 2000 on, is a particularly interesting time to examine student mobility in CPS because of the potential impact that changes in these two areas may have had on student and family decisions to change schools. In 2001, for example, Chicago experienced a serious economic downturn that led to higher levels of unemployment and more people living in poverty in Chicago.[9] Simultaneously, the housing market in Chicago became even more constrained, with rising rents and fewer rental opportunities.[10] These conditions often result in higher rates of residential mobility that, in turn, can lead to increases in the number of students changing schools.[11]

During this period, there were also a number of new policies implemented at the school district, city, and federal levels that have had an impact on student mobility. Beginning in 2000, for example, CPS initiated an aggressive policy of closing schools that displayed consistently low levels of academic achievement or chronic underutilization. Since then, a total of 24 schools have been closed for these reasons, with another 18 schools closed for other reasons (e.g., poor building conditions, alternative usage, or changes in educational focus).[12] In addition, CPS opened 136 new schools between 1995 and 2007.[13] Closing schools typically results in "forced mobility" (students must relocate to a new school because they can no longer attend their former school). Opening new schools influences voluntary mobility by increasing the number of options available to students as they choose which schools to attend.[14]

City and federal policies also have had an influence on mobility. Beginning in 2000, the Chicago Housing Authority (CHA) launched its Plan for Transformation. CHA's Plan called for the demolition of many high-rise public housing projects. Many residents of demolished units had to relocate, and school aged children typically had to switch schools at the same time. At the national level, the No Child Left Behind Act was passed and implemented during this time. This legislation permitted students who attended schools that were not meeting academic standards to apply for transfers to schools that were meeting standards.

Many of these policies, as well as the changes in the economic and housing conditions in Chicago, were much more likely to affect African American students than students of other racial or ethnic backgrounds. Although African American students have historically been the most mobile group of CPS students, their mobility trends began to diverge from other students in 2000–01, particularly at the elementary school level. While the percent of Latino, white, and Asian students making school transfers continued to decrease, the percent of African American students changing schools during the summer or during the school year either increased or remained stable. In the final section of this report, we examine which factors explain the widening of the race gap in mobility since 2000.

Our analysis focuses on two indicators of mobility—the stability rate and the in-mobility rate—and we examine trends for these indicators separately for the school year and the summer. During the school year, the stability rate measures the percent of students who remain continuously enrolled in the same school between September and May; during the summer, it measures the percent of students enrolled in May who re-enroll in the same school the following September. The school year in-mobility rate reports the percent of students enrolled in May who entered the school some time after the previous September, while the summer rate reports the percent of students enrolled in September who were not enrolled in that school the previous May.

Key Findings

1. Student mobility in CPS has decreased since 1995. Student mobility is largely caused by transfers within-district, and the decrease in mobility is due to fewer students making these within-district moves.

Between 1995 and 2007, the percent of elementary students transferring into and out of schools mid-year decreased. For example, of the students enrolled in the system in the fall of 1994, 87.9 percent remained in the same school throughout the school year; by 2006–07 this rate increased to 91.2 percent. During the same time period, the school year in-mobility rate decreased by more than 4 points; of the students enrolled in the spring of 1995, 11.4 percent entered their school at some point after September 1994. By 2007, this number dropped to 7.1 percent.

Although the percent of elementary students exiting and entering schools during the summer remained fairly constant between 1995 and 2005, it then decreased. For example, the summer stability rate fluctuated between 83.4 percent in the summer of 1995 and 82 percent in the summer of 2005. Since then, the stability rate increased by more than 4 points so that by the summer of 2007 it was 86.3 percent. The summer in-mobility rate also remained relatively flat between 1995 and 2005 at approximately 15 percent, but since 2005 it decreased by 2.5 points. In general, summer mobility rates are substantially higher than school year mobility rates, indicating that families and students are more likely to wait until the end of the school year to change schools.

Among elementary students, mobility is mainly a within-district phenomenon; most transfers into and out of schools occur because students are moving from one CPS school to another. These types of moves represent between 50 and 60 percent of the total transfers into schools, and in the summer they represent two-thirds of all transfers. Over time, elementary students have become less likely to make these within-district transfers during the school year, and this decline is largely responsible for the decrease in the school year in-mobility rate as well as the increase in the stability rate.

High school students change schools less often than elementary students. But since 1995, their decrease in mobility has been nearly comparable to decreases evident among elementary students. For example, the school year stability rate increased by 3 points during this period (from 84.5 percent in 1995 to 87.6 percent in 2007), while the summer stability rate increased from 85 percent in 2005 to 90.5 percent in 2007. In-mobility rates have also improved during this time period, decreasing by 3 points during the school year (from 6.7 percent in 1995 to 3.6 percent in 2007). During the summer, the in-mobility rate decreased by a more modest 2 points (from 8.4 percent in 1995 to 6.3 percent in 2007). Although mobility is higher during the summer than during the school year, the differences are not as great as those for elementary students.

Within-district transfers at the high school level represent only one-fourth of all transfers out of schools during the school year and one-third of transfers out during the summer. Historically, most students left schools because they were dropping out. In 1995, this group of students represented 46 percent of all high school students leaving schools mid-year and 38 percent of those who left during the summer. Between 1995 and 2006, the dropout rate decreased substantially; by 2006, dropouts represented only one-fourth of all students transferring out of schools during the school year and the summer.[15] For the most part, the decrease in the dropout rate has been responsible for the increase in the stability rates, but these decreases have been partially offset by small increases in the percent of students who leave Chicago.

Within-district transfers are approximately 40 percent of high school students' transfers into schools, both during the school year and the summer. Between 1995 and 2006, the within-district transfer rate during the school year decreased from 3 to 1.9 percent; during the summer, it decreased from 3.3 to 2.3 percent. Fewer students transferring from one CPS school to another led to lower in-mobility rates at the high school level.

2. African American students are the most mobile group of CPS students, and the gap between them and other students has grown wider since 2000–01.

Among elementary students, African American students are the most mobile group of CPS students. They change schools more often than Latino, white, and

Asian students. In 1995, for example, African American students had a summer in-mobility rate of 16.5 percent, while the in-mobility rate for Latino, white, and Asian students was approximately 14.3 percent.

Between 1995 and 2000, stability and in-mobility rates decreased for all students at roughly the same rates. Since 2000–01, however, the gap between African American students and the rest of the CPS elementary population widened across each mobility indicator. By 2007, for example, the summer in-mobility gap increased from 2 points to almost 7 points.

The differences in mobility patterns between African American elementary students and Latino, white, and Asian students can mostly be attributed to school transfers that occur within the district. African American students are much more likely than other students to move from one CPS school to another CPS school, both during the summer and during the school year. Differences in within-district transfer rates are also largely responsible for the widening mobility gap between African American and other students, although an increase in the percent of African American students who leave the city in the past few years has also contributed to the growing gap in the stability rate during the summer.

At the high school level, African American students are also more mobile than other students. However, the gap between them and other students is smaller than at the elementary school level and has not widened over time, except in the case of school year in-mobility rate. Their higher mobility rates are the result of higher within-district transfer rates. Since 2001, there has also been an increase in the percent of African American students who leave Chicago.

3. Residential mobility is an important factor influencing the decisions of elementary students to change schools. Furthermore, trends in residential mobility mirror trends in student mobility among elementary students. Other factors, such as a desire to improve the quality of educational opportunities, also influence decisions to change schools, particularly during the summer.

Among elementary students, there is a very close relationship between school moves and residential moves, particularly during the school year. Nearly 80 percent of students who move from one CPS school to another CPS school during the year also change residences. During the summer, two-thirds of students who change schools also change residences.

Trends in the residential mobility of CPS students resemble trends in student mobility at the elementary school level. For example, African American students have higher rates of residential mobility than Latino, white, or Asian students. Since 2001, this gap increased because more African American students changed residences and fewer Latino, white, and Asian students have changed residences. The increase in residential mobility for African American students is likely the result of changes in the economic conditions in Chicago that occurred after 2001, such as higher levels of unemployment, greater numbers of people living in poverty, and a more constrained housing market.[16]

The relationship between residential mobility and school transfers is weaker at the high school level; only one-third of students who change schools during the school year also change residences, and less than one-third of students who change school during the summer also change residences.

School-related factors also influence students and their families deciding to change schools. For example, students who move during the summer are more likely to want to improve the quality of their educational opportunities; students who move during the school year are more often concerned with issues such as school safety, bad grades, and problems with students and teachers at previous schools.

4. School district, city, and federal policy changes have had only a small effect on student mobility at the system level. However, some schools and their students experienced a much greater impact as a result of these policies.

Between 1995 and 2007, CPS closed 44 regular schools and opened 136 new schools.[17] The impact of closing and opening schools on student mobility at the system level has been negligible. Fewer than 1 percent of students in any given year between 1995 and 2007 made voluntary moves into new schools, and fewer than 1 percent of students made forced moves out of schools that closed. However, system-wide statistics mask the impact felt by a smaller group of schools that were

located in close physical proximity to new or closing schools. Between 1995 and 2007, for example, at least 50 or more students transferred out of 34 schools to enroll in a new school the following September; more than 100 students transferred out of 22 of those schools to enroll in new schools. Of those 34 schools, 21 schools were considered overcrowded prior to losing their students. CPS has specifically sought to open new schools in areas where existing schools were overcrowded in order to ease enrollment burdens. Large numbers of students transferring out may actually be beneficial to an overcrowded school.

Other changes were experienced by schools that enrolled students who transferred because their previous school closed. Due to the closing of a nearby school, 25 schools received 50 or more new students at the start of the school year; 12 of those schools received 100 or more students. On average, those schools experienced an increase of almost 13 percentage points in their summer in-mobility rate in the year that they received new students from closing schools. While mobility rates typically returned to the levels experienced prior to the influx of those new students, other aspects of school life were impacted. For example, staff in receiving schools reported feelings of demoralization, stress, and tension because they lacked resources to integrate new students.[18]

The CHA housing demolitions have also had a small impact on student mobility at the system level. Fewer than 1 percent of students in any given year were CHA residents who changed schools. Nevertheless, the impact on schools located near high-rise CHA projects slated for demolition has been substantial. For example, most of the elementary schools that were closed because of underutilization had enrolled CHA residents. In addition, four schools that were closed for low academic achievement also suffered declining enrollments due to CHA's Plan for Transformation. Other schools are still in the process of losing a substantial portion of their student population as residents move out of CHA high-rises.

Finally, the No Child Left Behind Act (NCLB) has had virtually no impact on student mobility in CPS. Between 2002 and 2005, fewer than 1,000 students each year were granted transfers out of underperforming schools into schools making adequate yearly progress (AYP). Although the district has received thousands of applications each year from students and their families requesting transfers, there has not been sufficient space in schools making AYP to accommodate these requests.

5. The gap in school year and summer mobility between African American students and white and Asian students is largely due to differences in residential mobility and to differences in their schools' average achievement. The summer race gap is also partially explained by access to school choice options.

During the school year, residential mobility explains between 55 and 61 percent of the mobility gap that emerged since 2000 between African American and white and Asian students. African American students experienced rates of residential mobility that were nearly double the rates for white and Asian students, and this led to higher rates of school transfers.

In addition, schools' average achievement level explains an additional 16 percent of the mobility gap. African American students tend to be enrolled in schools with lower average levels of achievement, which they leave at higher rates. White and Asian students tend to be enrolled in schools with substantially higher average levels of achievement, in which they are more likely to remain stable.

During the summer, the gap in mobility between African American and white and Asian students is explained by many of the same variables as during the school year. Residential mobility explains more than 55 percent of the gap, while schools' average achievement explains an additional 12 percent of the gap.

An essential difference between the race gap in summer transfers and the gap in school year transfers is the importance of the school choice variables. Two variables, in particular, are instrumental in explaining the summer race gap: access to new schools, and access to other neighborhood schools that are academically better than one's own neighborhood school. Having access to new schools increases the likelihood of transferring from one CPS school to another, and African American students are two to three times more likely to have access to these schools compared to white and Asian students. Similarly, having access

to neighborhood schools with higher levels of average achievement also increases the likelihood of changing schools during the summer, and African American students have, on average, access to twice as many schools than white or Asian students that are better than their own school. While these variables had no role in explaining the race gap in school year transfers, they become increasingly important over time in explaining the gap in summer transfers. During the summer of 2000, these variables explain only 7 percent of the race gap; by 2006, they explain almost 12 percent of the race gap.

Chapter 1

General Trends in Student Mobility

Despite concern about student mobility, there has been little consensus about the optimal way to measure this phenomenon.[19] A number of districts, including CPS, use a formula that sums the number of early exits and late entrances occurring during the academic year and divides this number by a school's fall enrollment. This approach can be problematic for several different reasons. First, it combines two very different phenomena (exiting and entering a school); consequently, schools with the same score might in fact experience very different patterns of student mobility. In addition, it ignores the stable population of a school, which can be important for assessing the proportion of students who received the full effect of a school's instructional program.[20] It also ignores mobility that may occur during the summer.

> Most mobility is driven by students transferring from one CPS school to another, especially at the elementary level.

To address these issues, we measure student mobility with two separate indicators (the stability rate and the in-mobility rate), and we examine trends in these indicators during the school year and during the summer. The stability rate is the percent of students who remain continuously enrolled in the same school between two points in time; the in-mobility rate reports the percent of students who are new to a school between two points in time. Occasionally, we refer to the out-mobility rate, which may be thought of as the opposite to the stability rate since it describes the percent of students who left a school during two time periods.

During the school year, the stability rate measures the percent of students who remain in the school between September and May; during the summer, it measures the percent of students enrolled in May who re-enrolled by the following September. The school year in-mobility rate is the percent of

students enrolled in May who entered the school some time after the previous September; the summer rate reports the percent of students enrolled in September who were not in the same school the previous May. The mobility indicators exclude students who were required to change schools for reasons such as promotion and graduation. (See Appendix A for a description of how students were identified as stable or mobile and which students were excluded from the mobility indicators.)

Elementary Students Mobility Trends from 1995 to 2007

Figure 1 presents trends in stability and in-mobility rates for elementary students from 1995 to 2007. During this period, the percent of elementary students transferring into and out of schools mid-year decreased. For example, of the students who were enrolled in the system in the fall of 1994, 87.9 percent remained in the same school throughout the school year; by 2006–07, this rate increased slightly to 91.2 percent. During the same time period, the school year in-mobility rate decreased by more than 4 points; of the students enrolled in the spring of 1995, 11.4 percent entered their school at some point after September. By 2007, this number dropped to 7.1 percent. (See Appendix A for more data.) Given the disruptive nature of mid-year school changes, these improvements, however modest, are likely to be beneficial to students, teachers, and schools.

During the summer, the percent of students exiting and entering schools remained fairly constant between 1995 and 2005, but it decreased since then. For example, the stability rate fluctuated between 83.4 percent in the summer of 1995 and 82 percent in the summer of 2005. Since then, the stability rate increased by more than 4 points, so that by the summer of 2007 it was 86.3 percent. The summer in-mobility rate also remained relatively flat between 1995 and 2005, but since then it decreased by 2.5 points. Summer mobility rates are substantially higher than school year mobility

Formulas for the Mobility Indicators:

Stability Rate

$$\frac{\text{Number of students enrolled in a school at } T_1 \text{ who are still enrolled at } T_2}{\text{System Enrollment at } T_1}$$

Out-Mobility Rate

$$\frac{\text{Number of students enrolled in a school at } T_1 \text{ who are no longer enrolled in that school at } T_2}{\text{System Enrollment at } T_1}$$

In-Mobility Rate

$$\frac{\text{Number of students enrolled in a school at } T_2 \text{ who joined after } T_1}{\text{System Enrollment at } T_2}$$

School Year Rate	T_1 = September	T_2 = May
Summer Rate*	T_1 = May	T_2 = September

* Summer rates exclude natural moves. Natural moves that are excluded from the stability indicator occur when students cannot continue at their current school, either because they have graduated or because that school can no longer serve their academic needs. Natural moves that are excluded from the in-mobility indicator occur when students join a school where the transition from the other grade is impossible, for example, when the students join the first grade served by the school. (See Appendix A for a more detailed explanation.)

Elementary students have become less mobile over time, with modest increases in stability rates and modest decreases in in-mobility rates

FIGURE 1A

Stability Rates

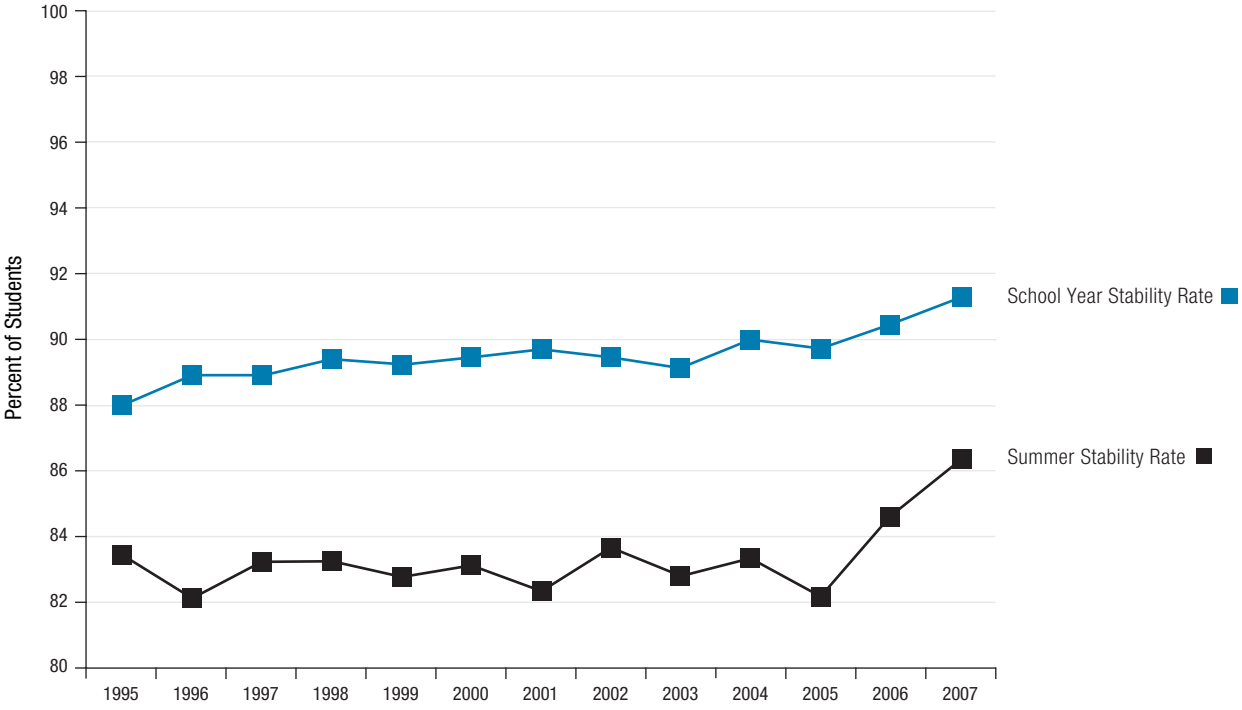
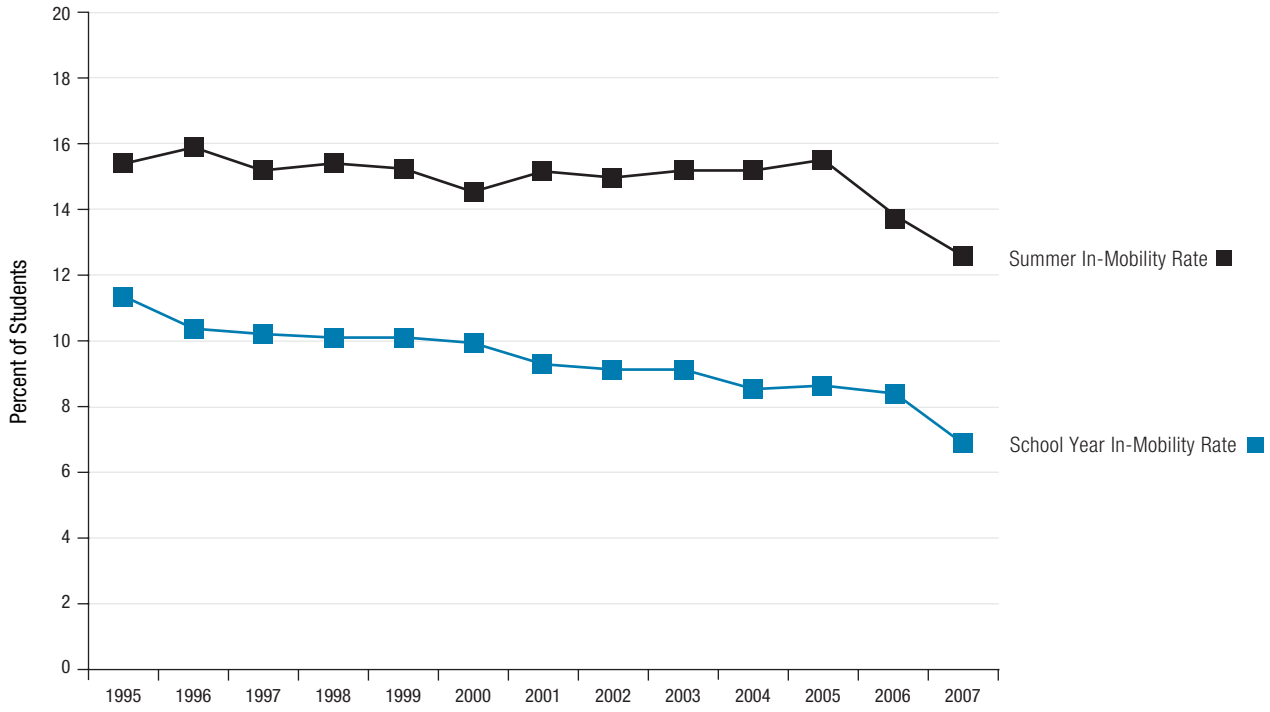


FIGURE 1B

In-Mobility Rates



Note: See Appendix B for specifics on all rates.

rates in general, suggesting that families and students are more likely to wait until the end of the school year to change schools.

Figure 2 disaggregates the out-mobility rate (complement to the stability rate) and in-mobility rates for elementary students to show where mobile students transfer to and where mobile students come from.[21] Specifically, Figures 2A and 2C show the percent of students who left a CPS school to transfer to another CPS school, who transferred to a school outside of Chicago, or who transferred for other reasons. Figures 2B and 2D show the percent of students who transferred into a CPS school, either from another CPS school or from a school that was not a CPS one.

These figures show that student mobility at the elementary school level is predominantly a within-district phenomenon. In each figure, students who transfer from one CPS school to another CPS school represent a substantial portion of the overall mobility rate. During the school year, these types of moves represent between 50 and 60 percent of the total transfers into schools (Figures 2A and 2B); during the summer, they represent two-thirds of all transfers (Figures 2C and 2D). Over time, elementary students have become less likely to make these within-district transfers during the school year, and the decrease in this rate from 6.9 percent in 1995 to 4.9 percent in 2006 is largely the reason for the decrease in the school year in-mobility rate as well as the increase in the stability rate.

Figures 2A and 2C also show that the school year and summer out-mobility rates have been modestly influenced by an increase in the percent of students who leave Chicago. As employment opportunities have increasingly emerged in locales further away from Chicago, many white and African American families have left the city and moved to the suburbs or to other states.[22] In addition, recipients of Housing Choice Vouchers are increasingly leaving the Chicago area for suburbs around the city.[23]

High School Students Mobility Trends from 1995 to 2007

Figure 3 presents trends in the stability and in-mobility rates for high school students from 1995 to 2007. High school students change schools less often than elementary students. Since 1995, however, the decrease in mobility of high school students has been comparable to the decrease evident among elementary students. For example, the school year stability rate increased by 3 points during this period, from 84.5 percent in 1995 to 87.6 percent in 2007; the summer stability rate increased from 85 percent in 2005 to 90.5 percent in 2007. In-mobility rates have also improved during this time period, decreasing by 3 points during the school year and a more modest 2 points during the summer. Although mobility tends to be higher during the summer than during the school year, the differences are not as great as those for elementary students.

Figures 4A and 4C disaggregate the school year and summer out-mobility rates. In addition to the three types of transfers described earlier, a fourth type is included for high school students: students who leave a school in order to drop out. Figures 4A and 4C show that improvements in the school year and summer stability rates are largely the result of decreases in the dropout rate.[24] In 1995, 7.1 percent of high school students dropped out at some point during the school year. This number dropped to 3.2 percent by 2006, a decrease of more than 50 percent. Similarly, during the summer the dropout rate went from 5.8 percent in 1995 to 2.8 percent in 2006.

Figures 4C and 4D disaggregate the school year and summer in-mobility rates. Within-district transfers are approximately 40 percent of transfers into schools by high school students, during both the school year and the summer. Between 1995 and 2006, the within-district transfer rate during the school year decreased from 3 to 1.9 percent; during the summer, it decreased from 3.3 to 2.3 percent. Fewer students transferring from one CPS school to another led to lower in-mobility rates at the high school level.

At the elementary level, student mobility is mainly driven by transfers within the district

FIGURE 2A

School Year Out-Mobility Rates

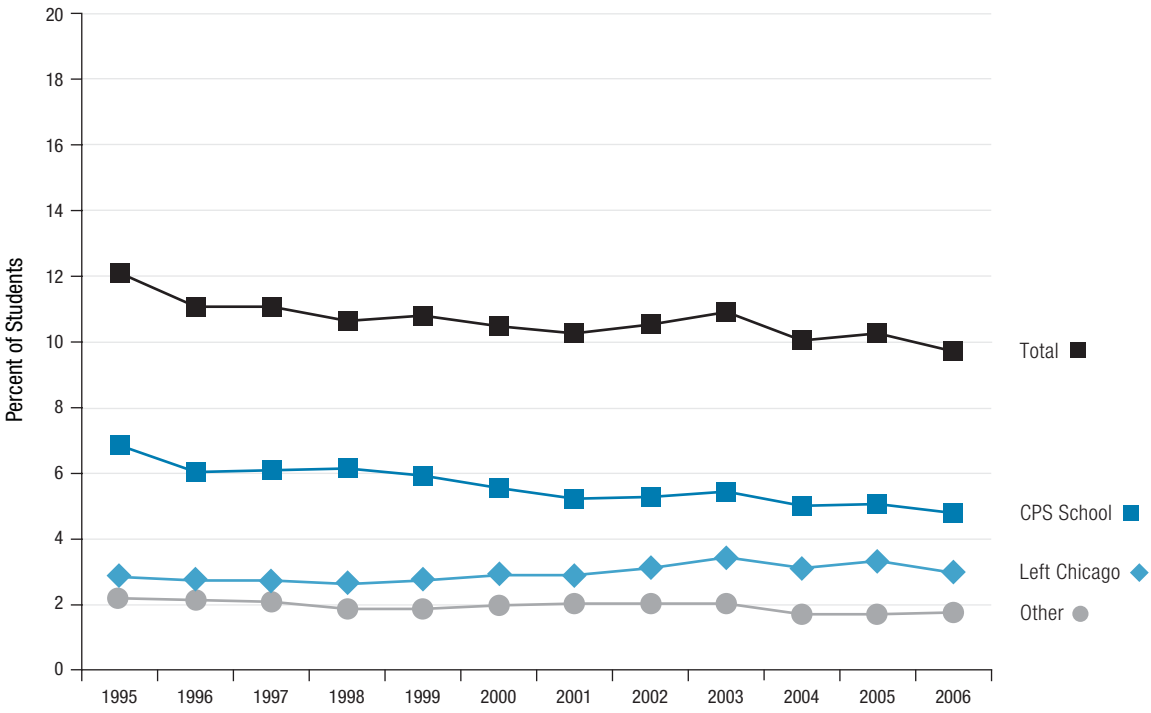
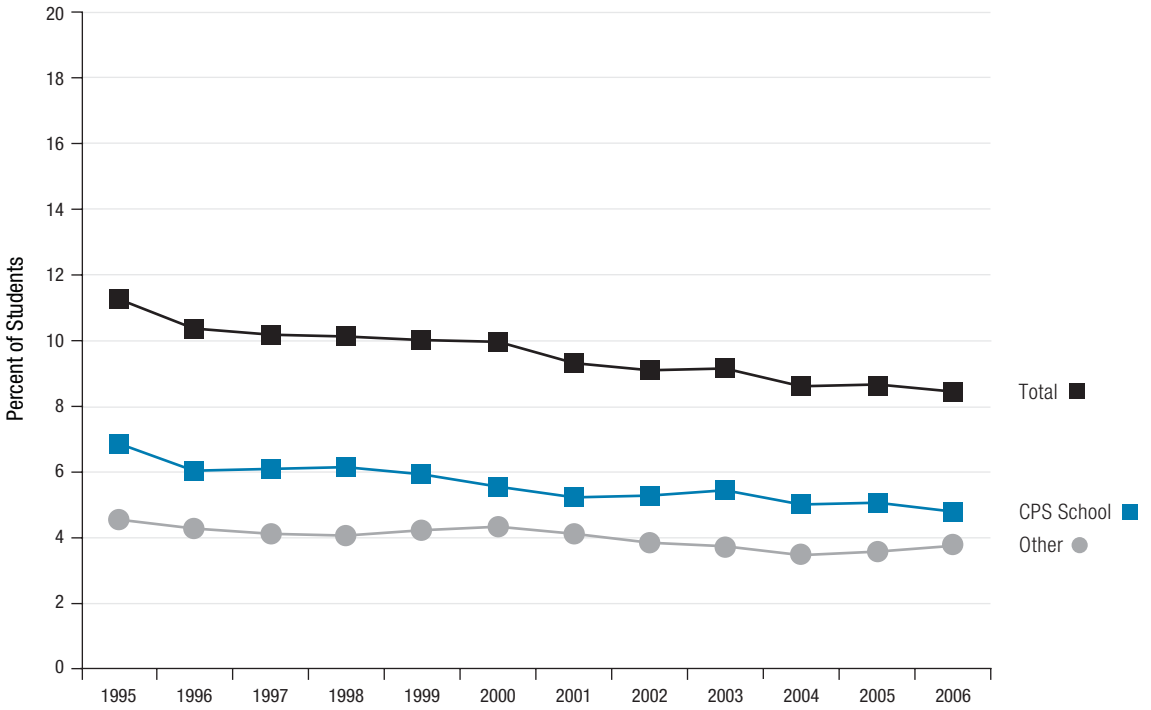


FIGURE 2B

School Year In-Mobility Rates



Note: See Appendix B for specifics on all rates.

At the elementary level, student mobility is mainly driven by transfers within the district

FIGURE 2C

Summer Out-Mobility Rates

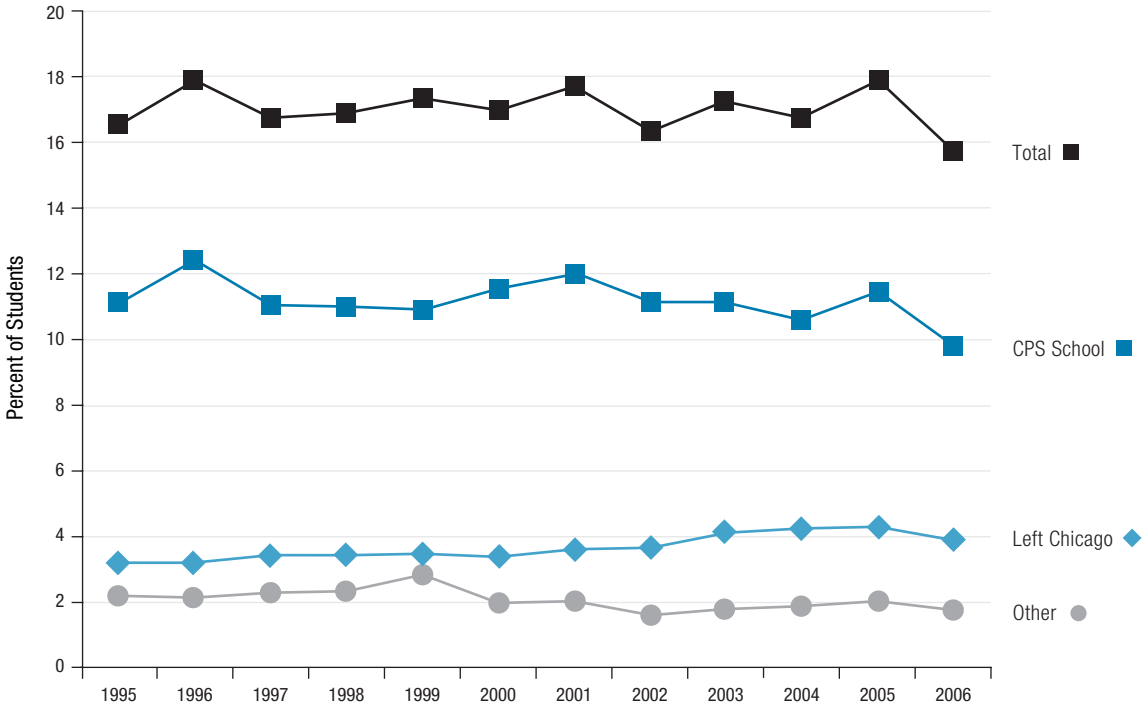
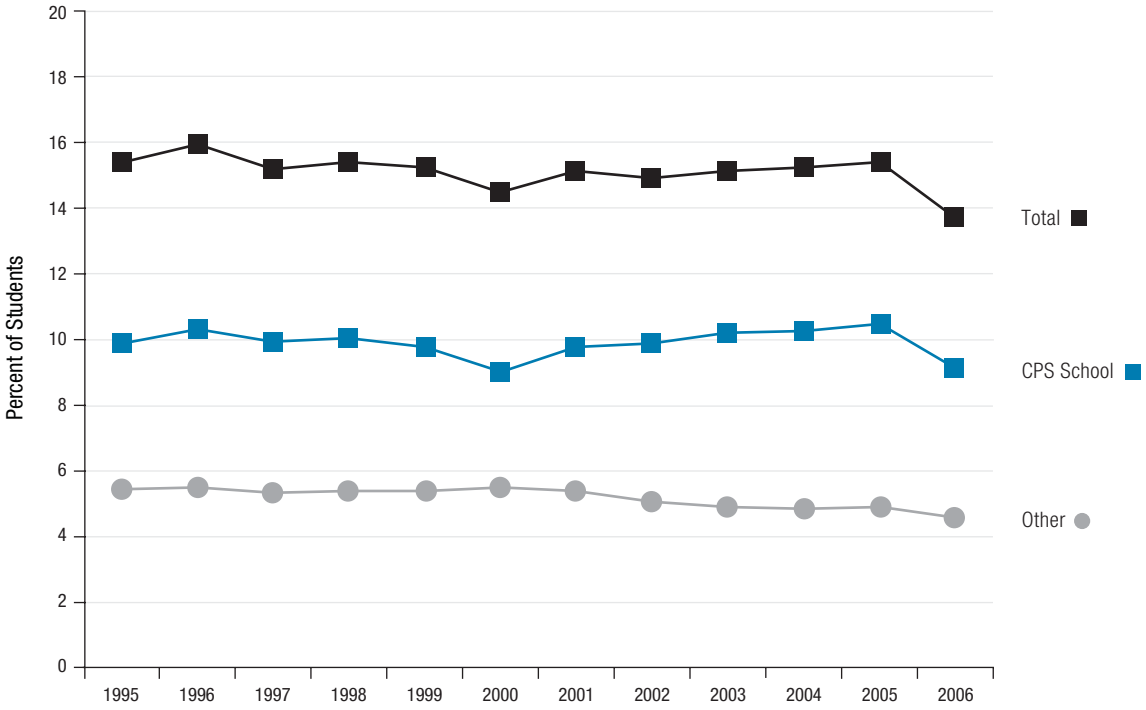


FIGURE 2D

Summer In-Mobility Rates



Note: See Appendix B for specifics on all rates.

High school students became less mobile over time, with increases in the stability rates and decreases in the in-mobility rates

FIGURE 3A

Stability Rates

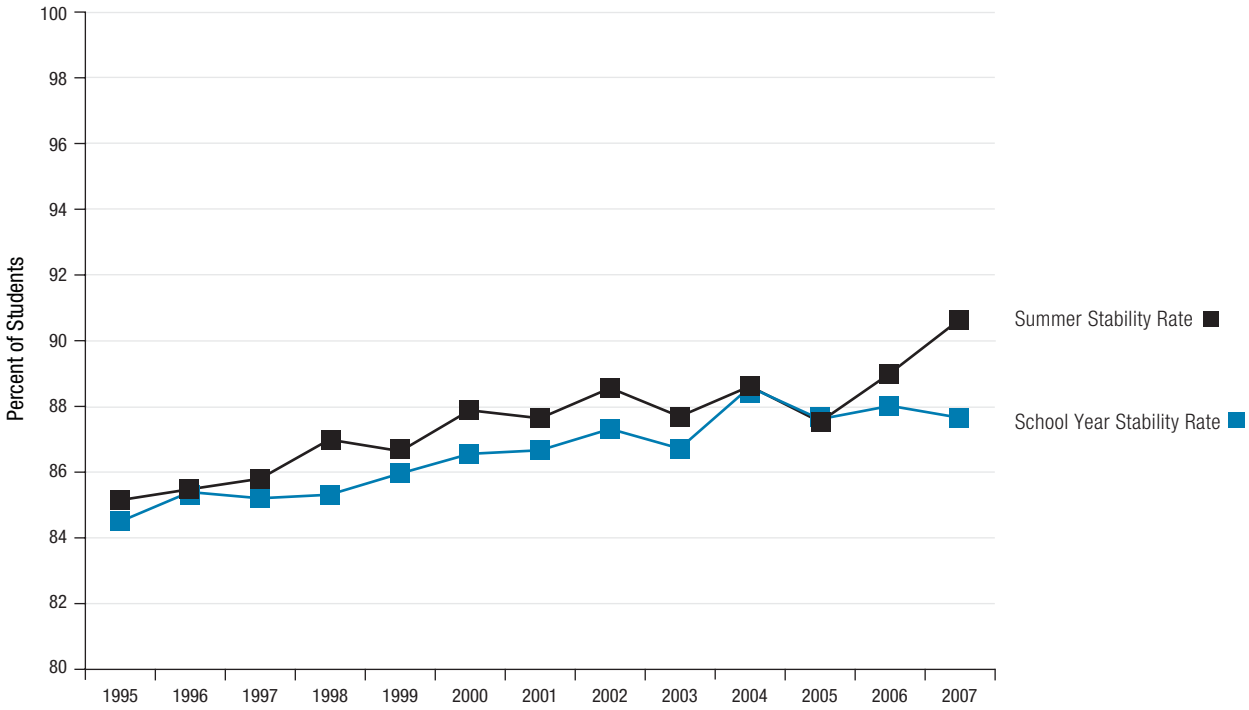
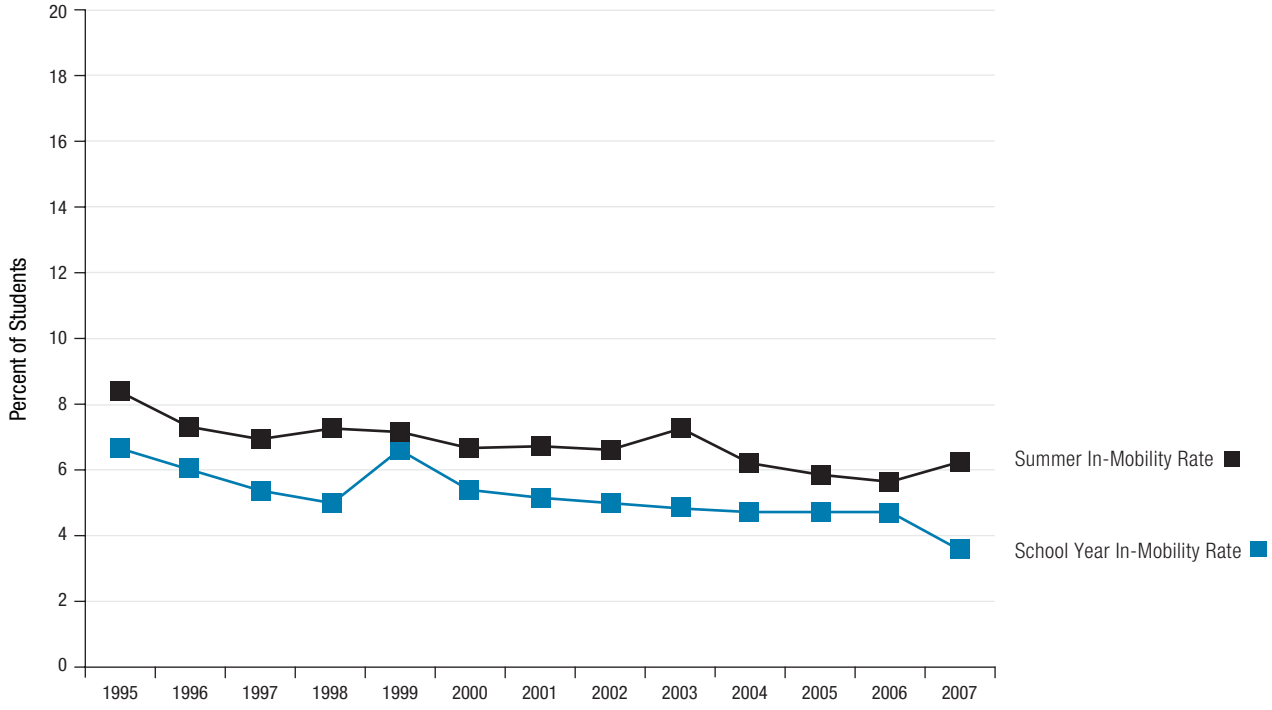


FIGURE 3B

In-Mobility Rates



Note: See Appendix B for specifics on all rates.

At the high school level, increases in stability rates are driven by fewer students dropping out of school, while decreases in in-mobility rates are driven by fewer district transfers

FIGURE 4A

School Year Out-Mobility Rates

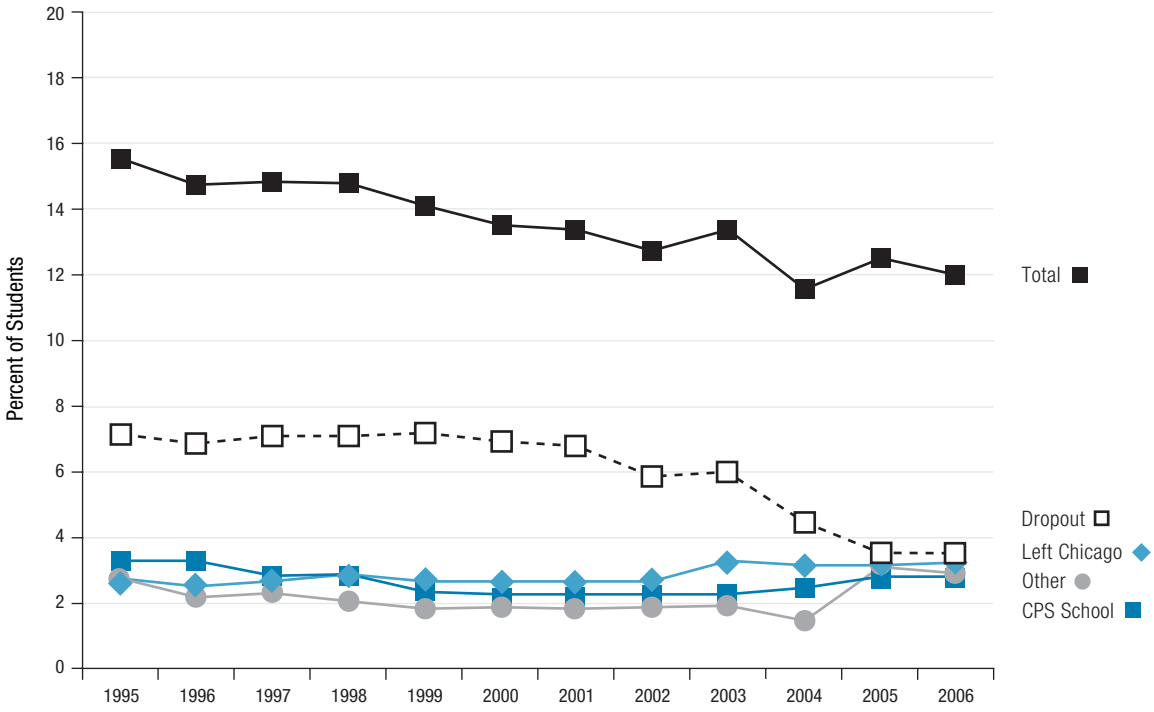
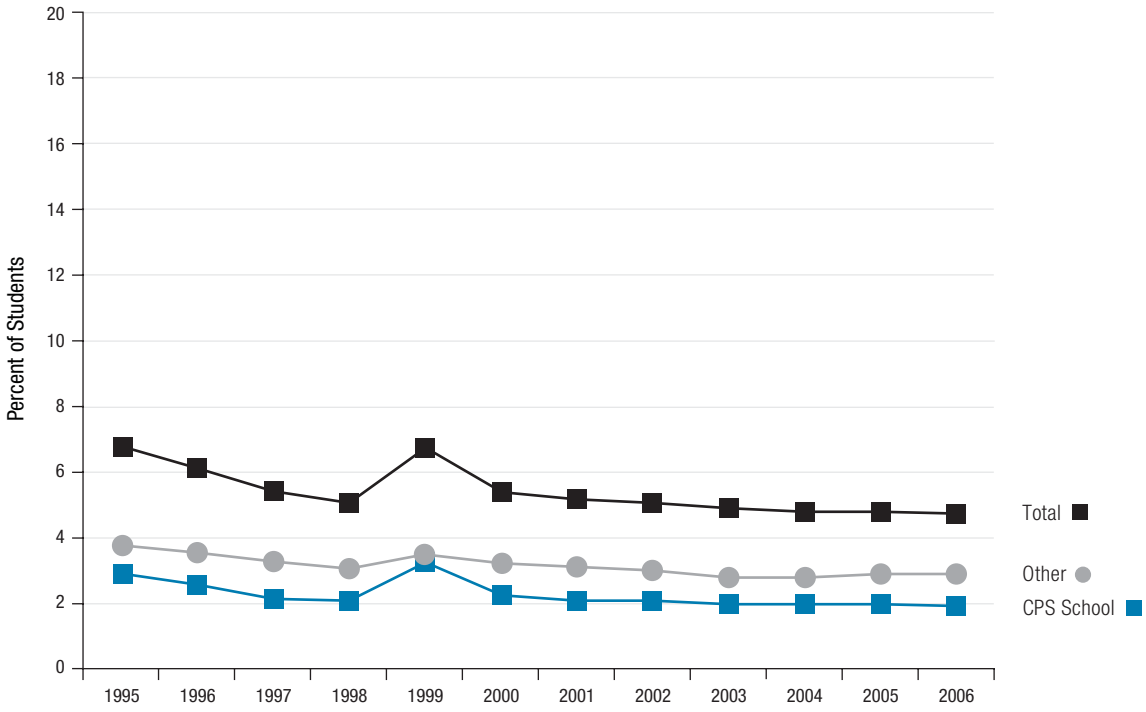


FIGURE 4B

School Year In-Mobility Rates



Note: See Appendix B for specifics on all rates.

At the high school level, increases in stability rates are driven by fewer students dropping out of school, while decreases in in-mobility rates are driven by fewer district transfers

FIGURE 4C

Summer Out-Mobility Rates

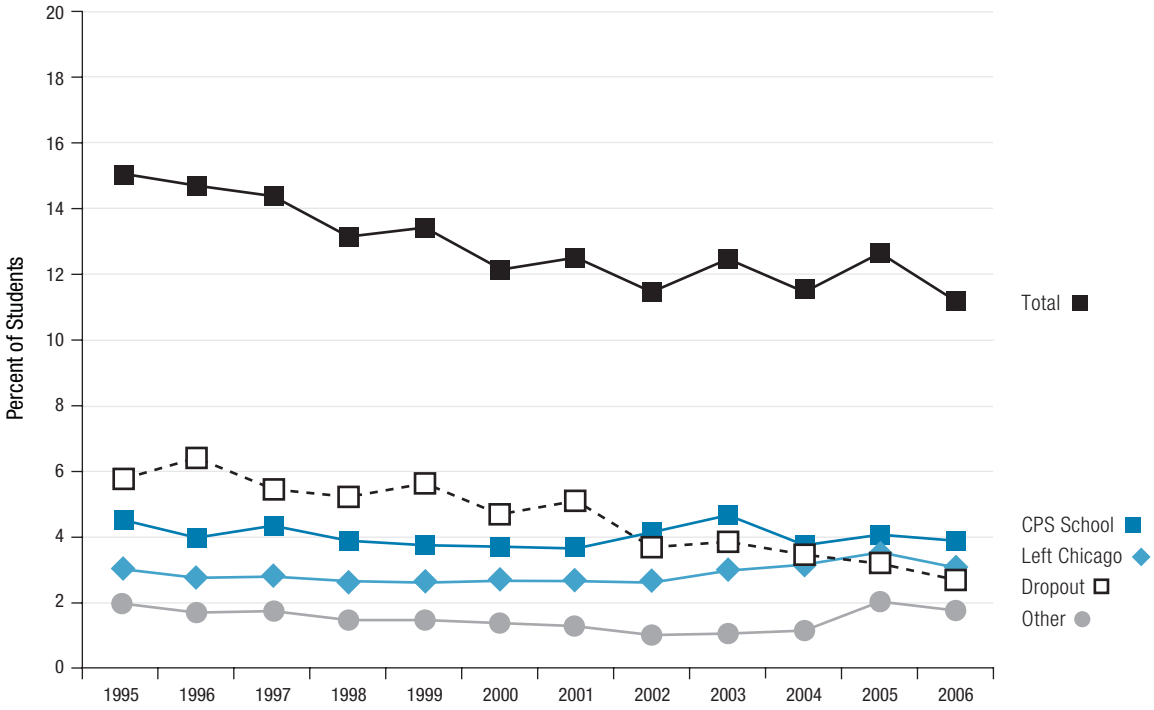
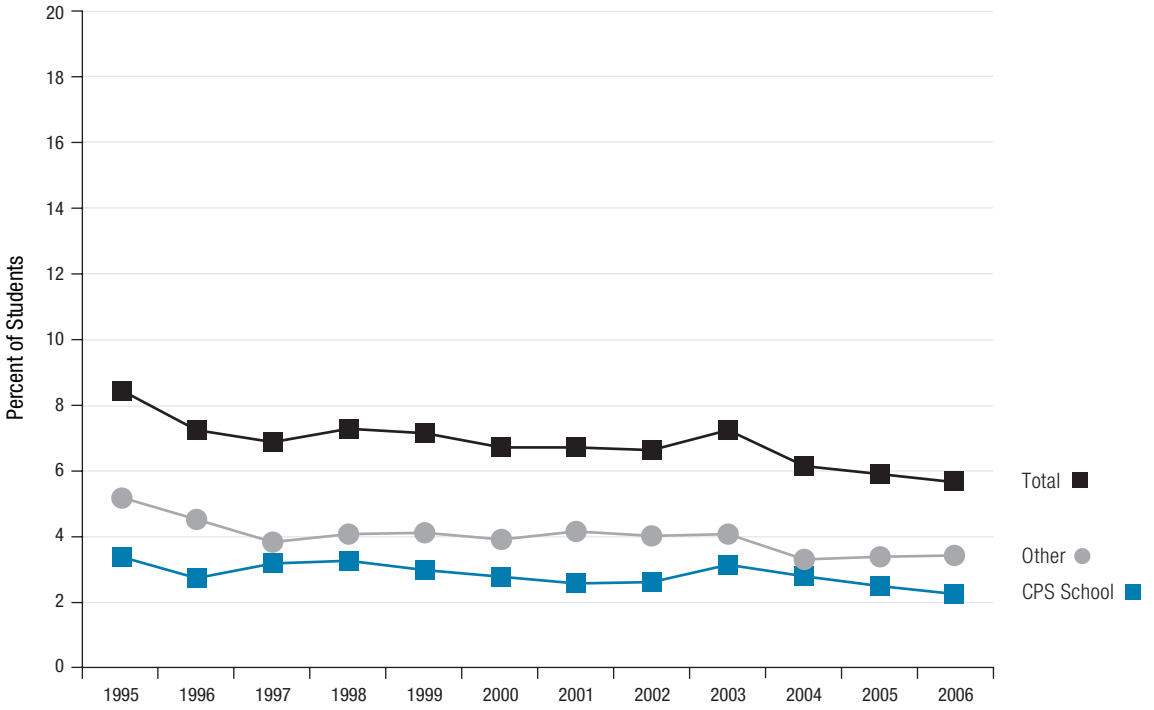


FIGURE 4D

Summer In-Mobility Rates



Note: See Appendix B for specifics on all rates.

Following the Same Students Over Time

In addition to reporting mobility rates for the system at each point in time, it is also possible to follow trends for the same group of students over time. Figure 5 shows the stability rates over time for two cohorts of students. The first set of bars represents the cohort of students who began first grade in the fall of 2000, and the second set represents the cohort of ninth graders in the fall of 2000.

Each bar reports the percent of students from the original cohort who remain in the same school after one year. For example, the first bar is the percent of 2000 first graders who remained in the same school by the fall of 2001; the second bar shows the percent of students in the cohort who are still in the same school by the fall of 2002.

After one year, around one-fourth of the elementary students have left the school in which they were first graders in the fall of 2000. Another 14 percent have left the following year, leaving only 61 percent of the original cohort still enrolled in their fall 2000 school. The number of mobile students decreases with each passing year, with the biggest loss of students taking place in the first year.

On average, a typical elementary school can expect one-fourth of its 2000 first graders to still be enrolled in the school eight years later. A typical high school can expect that around half of the students who enrolled in ninth grade in 2000 will still be enrolled four years later. Since stability rates have been increasing over time, these numbers are slightly lower for earlier cohorts, especially among high school students. Nevertheless, the general patterns over time are the same for all the cohorts examined. These trends can have important implications for instructional programming. Schools that try to create an integrated curriculum in which learning in one grade builds on learning from previous grades will be hampered in this effort if, over time, they lose 75 percent of each cohort and receive a similar percent of new students who have not been exposed to their curriculum in earlier grades.

FIGURE 5A

A typical elementary school can expect to lose one-fourth of its first graders after one year and will enroll one-fourth of these students eight years later

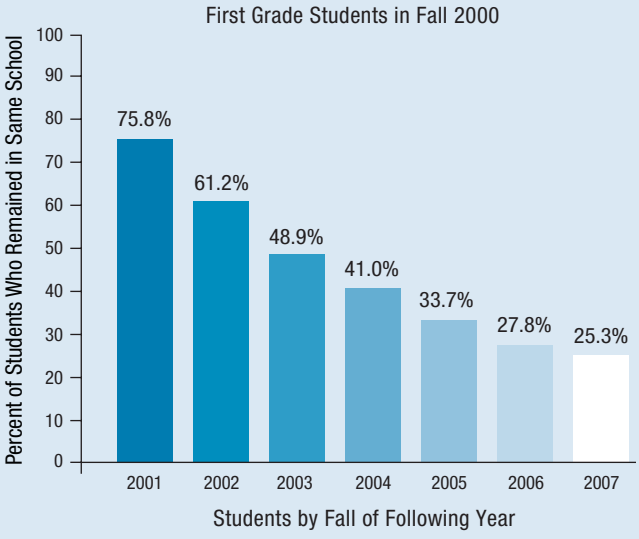
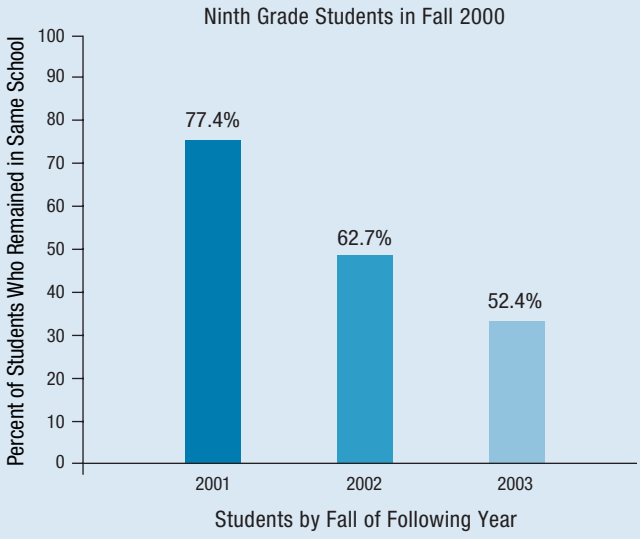


FIGURE 5B

A typical high school can expect half of its freshmen will still be enrolled four years later



In general, elementary schools have many more students transferring into their schools than high schools. For the most part, this is because high school students are much less likely to move from one CPS school to another CPS school. In 2006, approximately 2 percent of high school students transferred into a CPS school from another CPS school during the school year and during the summer. The rates for elementary students are larger: during the school year, nearly 5 percent of elementary students transferred into a CPS school; during the summer, 9 percent of elementary students transferred into a CPS school. Several factors may be responsible for these differences. First, high school students are more likely to choose their school after comparing a number of options, instead of automatically enrolling in their neighborhood school. This may mean that high school students have a greater commitment to their schools than elementary students and, therefore, that they may be less willing to leave those schools. Alternatively, high school students are more accustomed to traveling further distances by themselves to get to school. When an event such as a change in residence occurs, high school students may be more willing to endure a lengthier commute to remain in the same school. When high school students leave a school, they are much more likely to drop out altogether. When elementary students leave a school, they are much more likely to re-enroll in another school.


abundant
Aroma
entrée
Vegetarian
devour
disgusting
rancid
palatable
Appetizers
distasteful
delicacy
putrid
concoction

Chapter 2

Mobility Trends by Age, Gender, Race, and Socio-Economic Status

Prior research found that the incidence of student mobility varies by age, gender, race/ethnicity, family income, and family structure.[25] Our own research confirms many of these findings. For example, younger students tend to be more mobile than older students: 6 year olds in 2007 have a school year in-mobility rate of 7.9 percent; 13 year olds have a rate of 5.4 percent. Among high school students, there is a gender gap in student mobility in which male students tend to be less stable than female students: in 2007, male students have a school year stability rate of 85.4 percent; female students have a rate of 89.6 percent. During the summer, the gap is smaller: male students have a stability rate of 89.9 percent; female students have a rate of 91.1 percent. Differences in the stability rates for males and females can mostly be explained by dropout rates; male students drop out of school at higher rates than female students. Among elementary students, there is very little difference between mobility patterns of male and female students.

> At both the high school and elementary levels, African American students are the most mobile group of CPS students.

Breakdowns of mobility indicators by the students' race and socio-economic status present stark differences between sub-groups. Figure 6 shows in-mobility rates during the school year and during the summer by race/ethnicity for elementary school students. At both the high school and elementary levels, African American students are the most mobile group of CPS students. They change schools more often than Latino, white, and Asian students. Furthermore, the gap between them and other CPS students has been increasing since 2000, especially among elementary students. Although evident across all elementary mobility indicators, the most extreme example

of the race gap is the summer in-mobility rate (Figure 6B). In 2000, for example, African American elementary students had an in-mobility rate of 15.9 percent; the rate for Latinos, whites, and Asians was approximately 13 percent. By 2005, the in-mobility rate for African American students increased to 18.9 percent; it was around 11 percent for white and Asian students, and 12.7 percent for Latino students. Between 2005 and 2007, the in-mobility rate for African American students dropped by nearly 3 points. But because the rate for other students decreased as well, the gap remained fairly stable during this period.

The widening of the mobility gap at the elementary school level is largely driven by differences in within-district transfer rates that have occurred since 2000–01. The rates at which African American students leave one CPS school for another, both during the school year and during the summer (Figures 7A and 7B), have either remained flat or increased over time, while those for other students have decreased. During the school year, for example, the within-district transfer rate for African American students remained relatively flat at approximately 7 percent from 2001 to 2006 (Figure 7). During the summer (Figure 7), however, the increase was far more substantial: in 2000, 10.8 percent of African American students moved from one CPS school to another; in 2005, 13.7 percent transferred; in 2006, the rate dropped to 12.3 percent.

The growing gap in the stability rate for elementary students who are African American has also been impacted by their rate of departure from the city over the last few years. Although white and Asian students have historically left the city at higher rates, African American students have in recent years experienced an increase in the rate at which they leave the city. As mentioned previously, African American students have become increasingly likely to leave the city for suburban towns in response to changes in employment and housing market opportunities and to changes in public housing opportunities.[26]

At the high school level, African American students are also more mobile than other students, although the gap between them and other students is smaller than at the elementary school level and has not widened over time except in the case of school year in-mobility rate. Their higher mobility rates are the result of higher within-district transfer rates. There has also been an increase in the percent of African American students who left Chicago since 2001.

A comparison of mobility trends between students with higher socio-economic status (SES) to those with lower SES looks very similar to the comparison between students of different racial/ethnic backgrounds, particularly at the elementary school level. At the elementary school level, students with low SES enter and exit schools at higher rates than their high SES peers, and the gap between these two groups has grown wider since 2000. At the high school level, there is some evidence of a widening gap in school year in-mobility rates; however, the gap is not as large as the gap at the elementary school level. Given that African American students in CPS are disproportionately from lower SES backgrounds, it is not surprising that the trends are similar.

The mobility gap between African American students and other students widens after the year 2000, especially for elementary school students

FIGURE 6A

School Year In-Mobility Rates

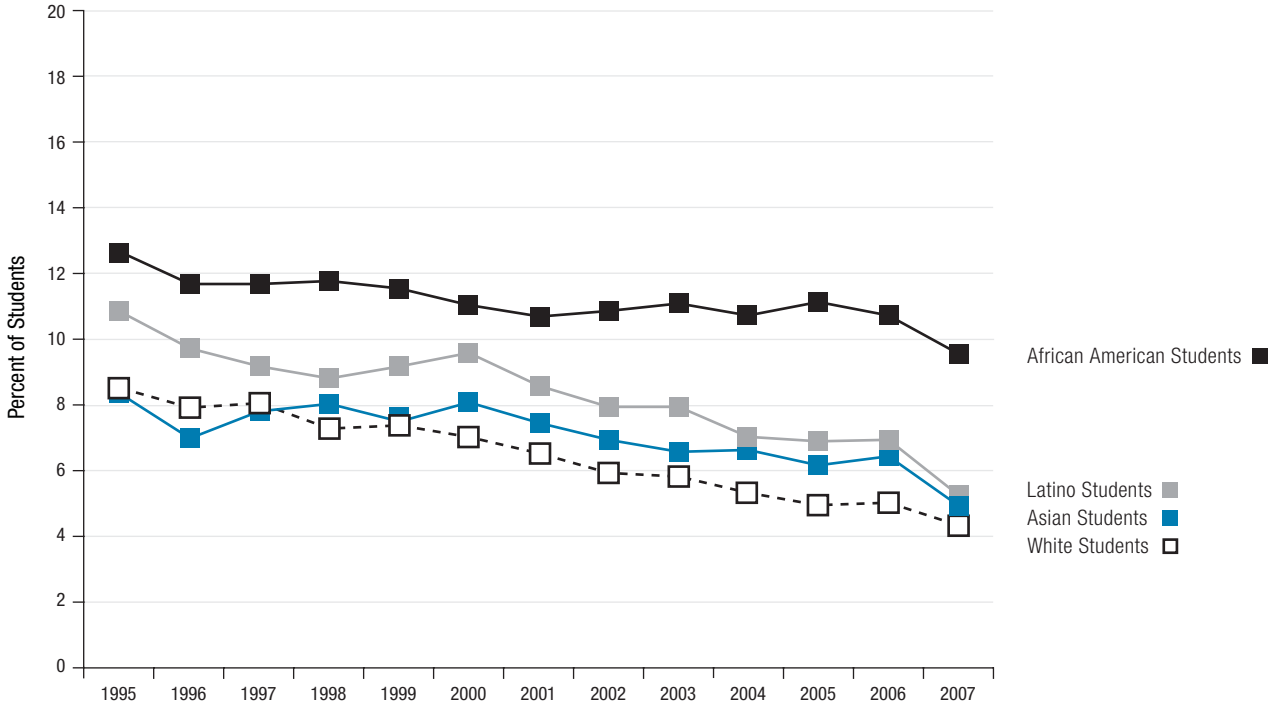
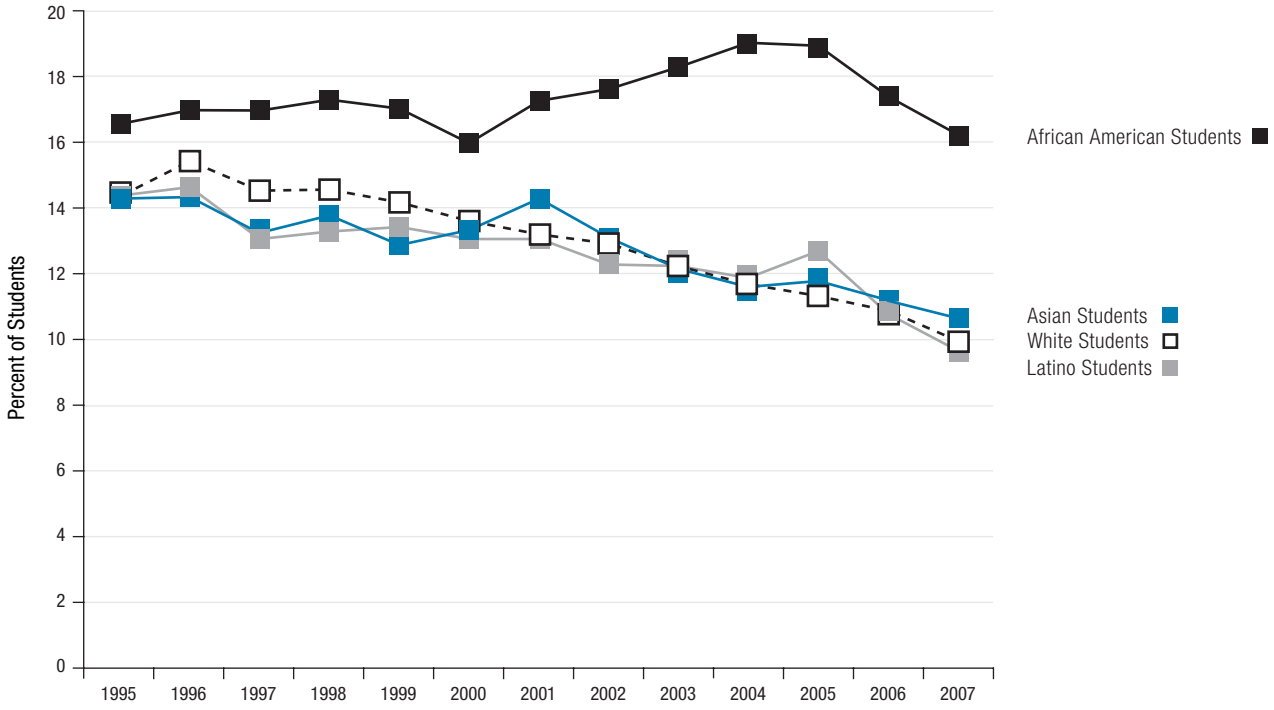


FIGURE 6B

Summer In-Mobility Rates



Note: See Appendix B for specifics on all rates.

Transfers between CPS schools explain the growing mobility gap for African American students

FIGURE 7A

School Year Within-District Transfers

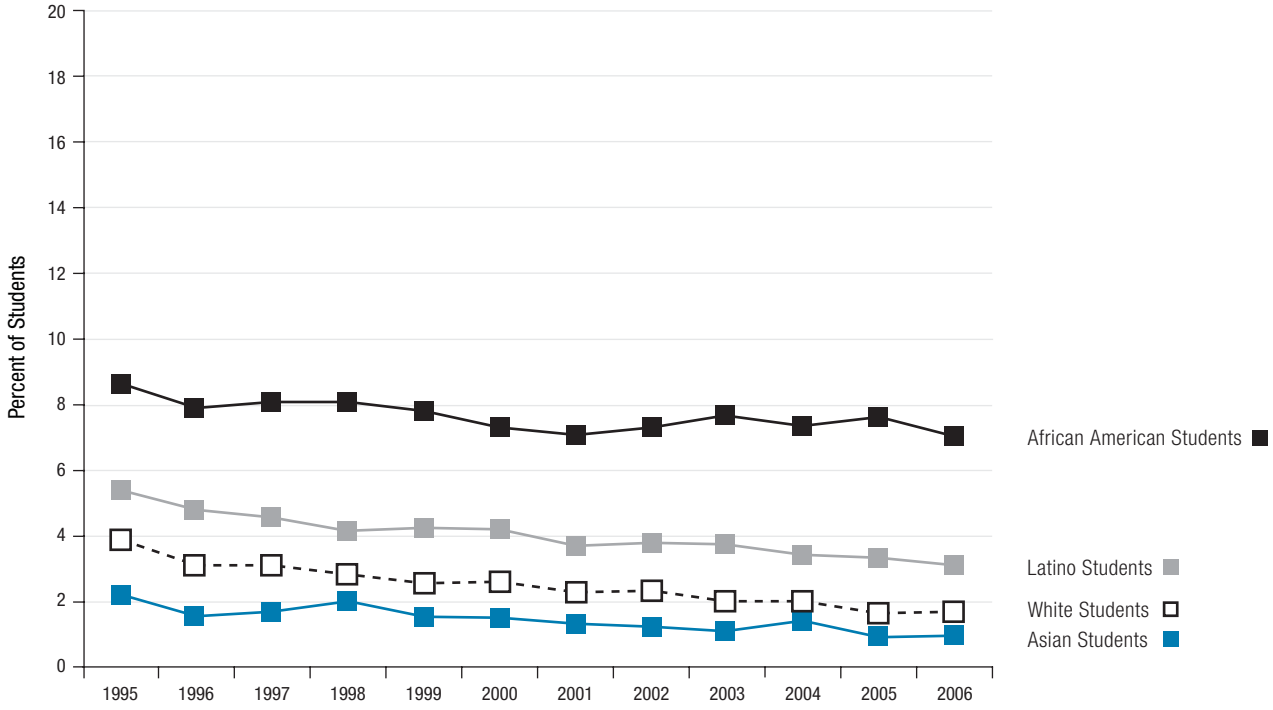
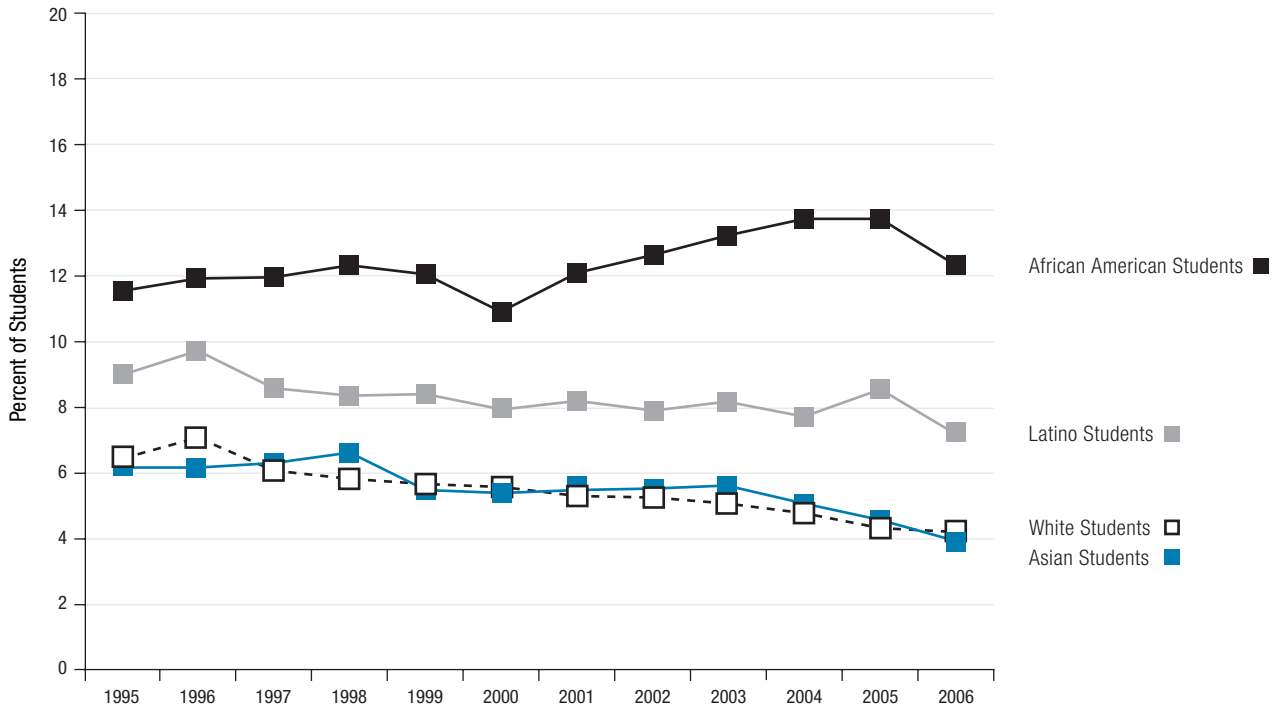


FIGURE 7B

Summer Within-District Transfers



Note: See Appendix B for specifics on all rates.

Chapter 3

Residential Mobility, School Quality, and Student Mobility

A change in school is often precipitated by a change in residence.[27] Yet, a school move can also occur for other reasons and, in general, can be either "strategic" or "reactive": the goal of a strategic move is to improve educational opportunities; a reactive move is motivated by a desire to escape difficult or unsafe conditions, or is a reaction to other circumstances in a student's life.[28] Family factors, school factors, and, in some cases, public policies influence the decision of a family to move a child to a different school. This chapter explores the effect that residential mobility, school academic quality, and concerns about other school issues (e.g., safety, grades, getting into trouble) have on decisions to transfer from one CPS school to another CPS school.[29] Chapter 4 examines the effect of numerous policy initiatives on school transfers.

> Students change schools when they move residences, but also because they want to improve educational opportunities.

Residential Mobility and Student Mobility

Among CPS elementary students, residential mobility is closely associated with student mobility (Figure 8). In 2006, nearly 80 percent of students who transferred mid-year from one CPS school to another CPS school also changed residences (Figure 8A). During the summer, nearly two-thirds of elementary students who changed schools also changed residences (Figure 8B).

Residential mobility decreased among CPS students between 1995 and 2001, and it has leveled off since then. Figure 9 shows trends in one-year residential mobility rates by race/ethnicity for all CPS students between 1995 and 2006. In general, these trends mirror the trends in elementary student mobility reported in Chapter 2. For example, African American students have higher rates of residential mobility than Latino, white, or Asian students. Between 1995 and 2000, all CPS students

Residential mobility often drives district transfers among elementary students, especially during the school year

FIGURE 8A

School Year Within-District Transfers

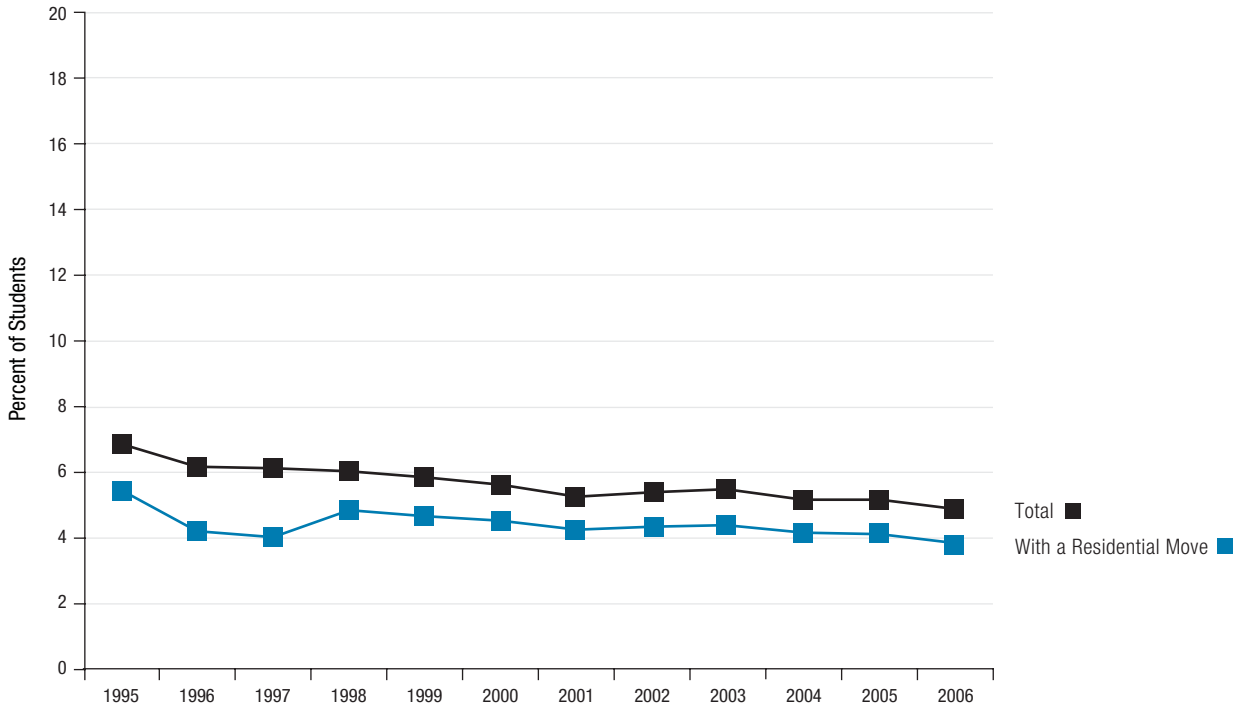
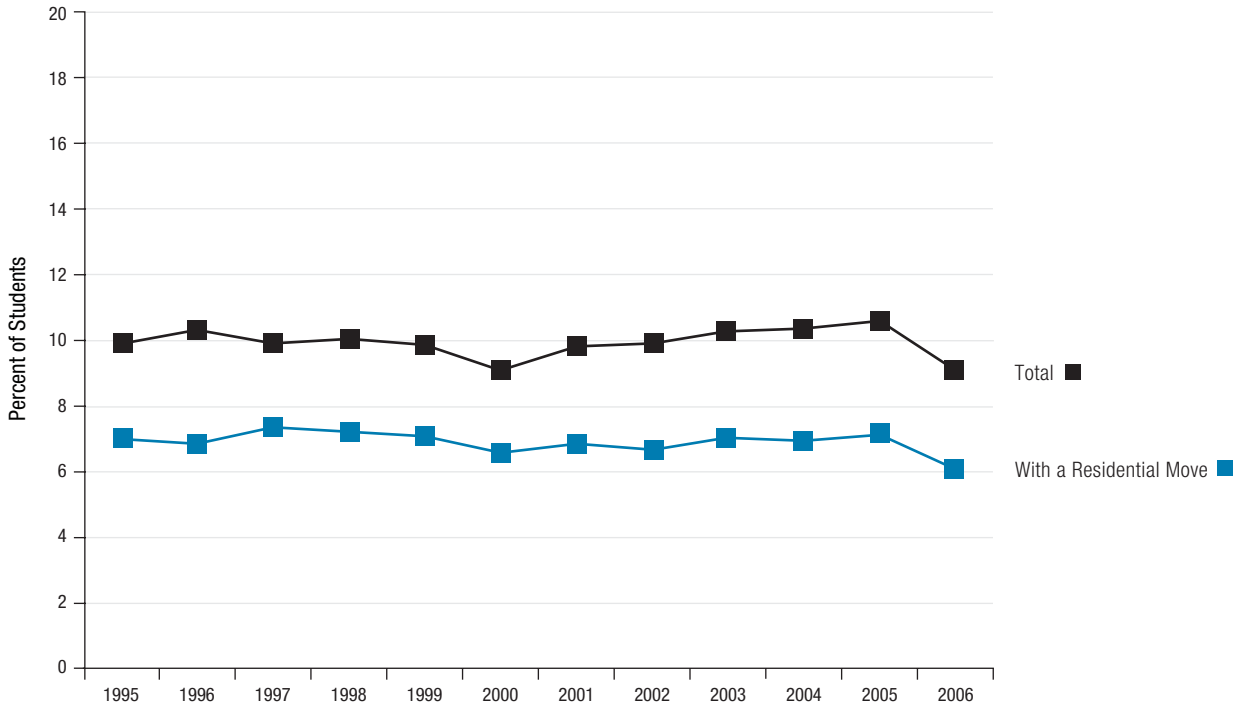


FIGURE 8B

Summer Within-District Transfers



Note: See Appendix B for specifics on all rates.

experienced decreasing residential mobility. Beginning in 2001, however, the gap between African American students and other CPS students began to widen: the percent of African American students who changed residences began to increase; the percent of Latino, white, and Asian students who changed residences continued to decrease.

Unfortunately, our data do not indicate whether students change schools because they have changed residences, or whether students and their families change residences because they want to enroll in a different school. However, trends in residential mobility, particularly among African American students, correspond closely to the timing of specific changes in the economic and housing markets in Chicago, particularly after 2000. This suggests that economic and market forces may have influenced residential mobility that, in turn, influenced student mobility.

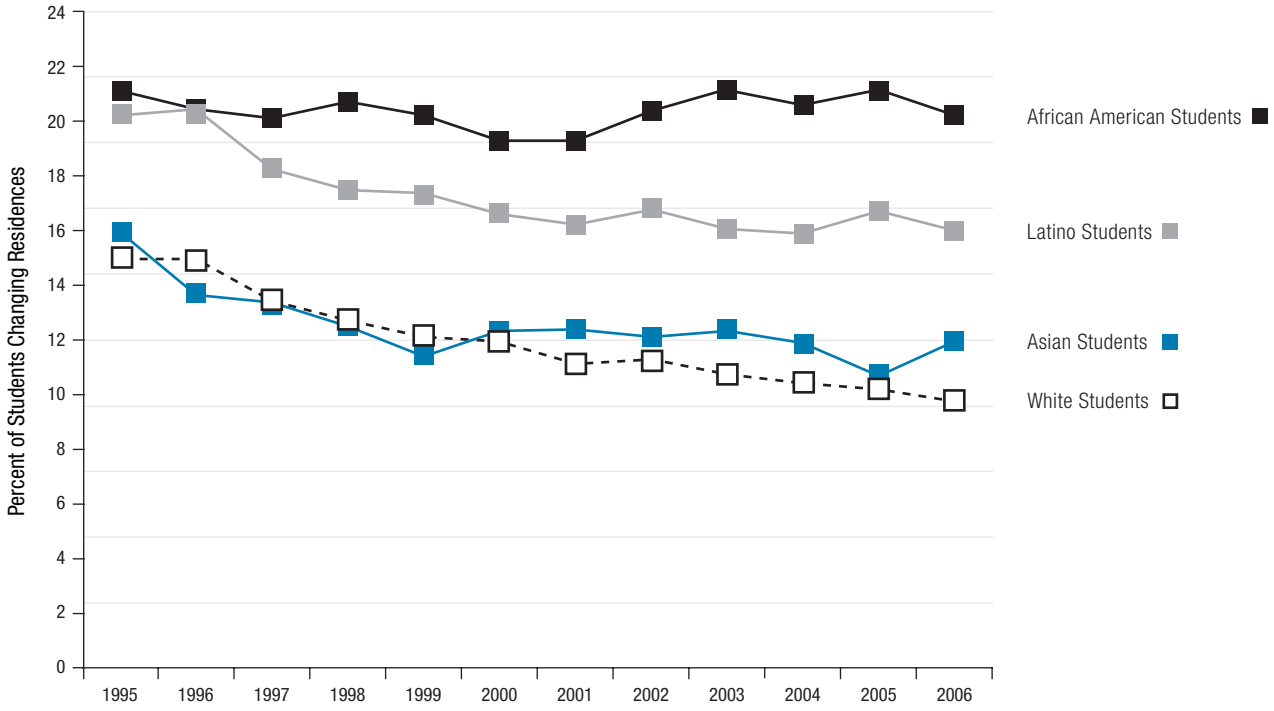
From the mid- to late-1990s, Chicago, like the rest of the country, experienced a period of relative economic growth. Beginning in 2001, however, the city experienced a serious economic downturn. Both the unemployment rate and the percent of people living in poverty rose, and these changes were disproportionately experienced in African American communities.[30] The housing market in Chicago was also changing. Between 2000 and 2006, the stock of rental housing decreased by 14 percent in the city, while the median rent levels increased by 27 percent.[31]

In general, African American families, Latino families, people living below the poverty line, and renters have higher rates of residential mobility than white families, homeowners, and people who live above the poverty line.[32] Prior research has shown that most of the difference between African American and white families in their residential mobility is due to housing tenure; African American families are much more likely to rent rather than own their homes, and renters are five times more likely to change residences than homeowners.[33] Renters are even more likely to change

African American students change residences more often than other students, and the gap is widening

FIGURE 9

Residential Mobility Rates



Note: See Appendix B for specifics on all rates.

residences during periods of economic instability; homeowners are more likely to stay put.[34]

Although we do not have data about housing tenure among CPS students, African American students are disproportionately likely to live in neighborhoods with lower levels of owner occupied housing, while white students are disproportionately likely to live in neighborhoods with higher levels of owner occupied housing. The correlation between the percent of families owning houses and the residential mobility rate at the neighborhood level is around -0.8, confirming that residential mobility is higher in neighborhoods where more residents are renters.

Given the evidence, it appears that the divergence in student mobility between African American students and other CPS students is partially the result of an increase in residential mobility, which began in 2001. At that time, African American families were disproportionately affected by the economic instability; because they were more likely to rent, they were often forced to relocate to other homes.

Among high school students, the relationship between school changes and residential moves is much weaker. In 2006, for example, only 35 percent of students who changed schools during the school year also changed residence, while less than one-third of those who transferred to another CPS school during the summer also changed residences. This weak relationship may explain why, despite increased residential mobility among African American students beginning in 2001, there has not been a substantial increase in their student mobility.[35] At the high school level, students are more accustomed to traveling further distances and by themselves to school; despite a lengthier commute, those who change residences may be more willing to continue at the same school.

School Quality and Student Mobility

Despite the importance of residential mobility in determining school moves, particularly at the elementary school level, there are many other reasons that students change schools. These include wanting to improve educational opportunities or avoid difficult school settings. This section explores how school quality, as well as other school related issues, influence decisions to change schools and the timing of these moves.

Figure 10 reports the percent of elementary students moving from one CPS school to another CPS school who enroll in a substantially better school.[36] Although the percent of students who enroll in a substantially better school includes only a minority of movers at each time point, the findings suggest that strategic school moves may be more likely to occur during the summer, while reactive school moves may be more likely to occur during the school year. Results from the 2007 Consortium on Chicago School Research student survey also support this conclusion.[37] Students who changed schools during the summer were more likely than students who moved during the school year to say that the reason for their move was a better academic program at their new school. Students who changed schools during the school year were more likely than students who changed schools during the summer to say that the reason for their transfer was a residential move, concerns about school safety at their old school, bad grades at their old school, or getting into trouble at their old school.

Figure 10 shows the percent of students who enroll in substantially better schools at each time period and is reported separately for students who make simultaneous residential moves and for those who do not. In 2005, 31 percent of students who changed schools during the summer transferred to a substantially better school; only 21 percent of students who transferred during the school year enrolled in a better school.[38] Elementary students who change schools during the summer without a corresponding residential move benefit the most in terms of improving the academic quality of their educational program. In 2005, nearly 41 percent of these students enrolled in substantially better schools; this number increased somewhat since 2001, when only 35 percent of students enrolled in better schools. However, students who change schools during the summer without a simultaneous residential change are a minority, representing only 30 percent of all students changing schools during this time period.

Elementary students who change schools and make residential moves, either during the summer or the school year, do not fare as well as students who change

Students who transfer from one CPS school to another are more likely to enroll in a better school during the summer

FIGURE 10A

Elementary School Students

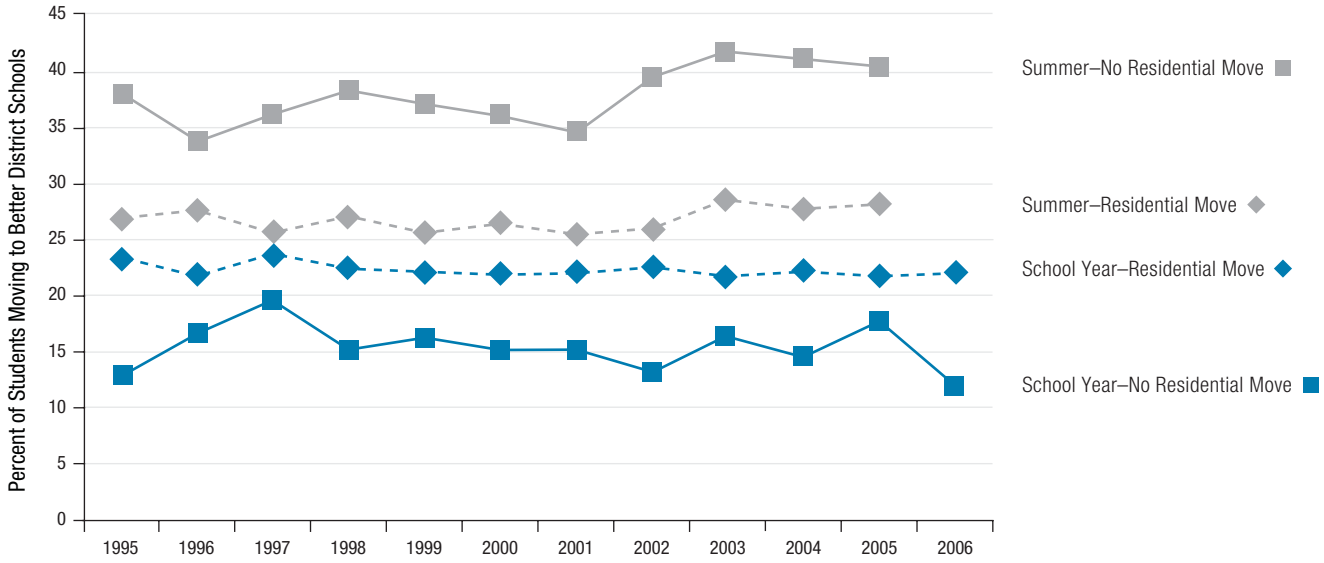
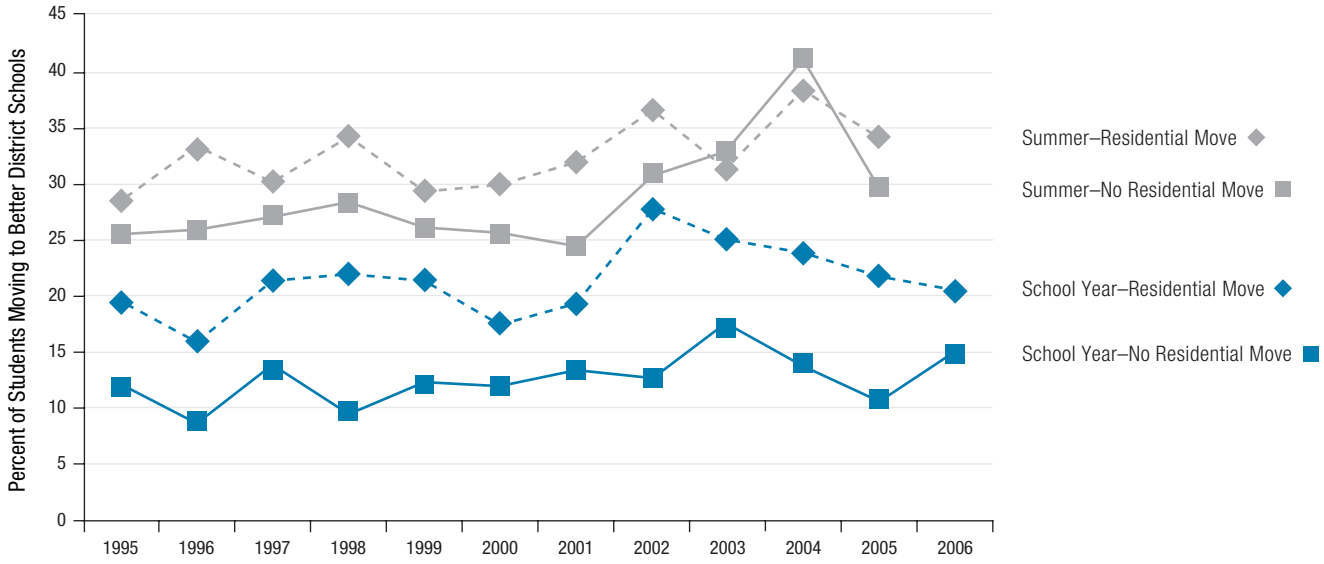


FIGURE 10B

High School Students



Note: See Appendix B for specifics on all rates.

schools during the summer without a residential move. In 2005, only 28.3 percent of elementary students who changed both residences and schools during the summer enrolled in substantially better schools; in contrast during the school year, 21.7 percent of those who moved enrolled in substantially better schools. Elementary students who change schools during the academic year but do not make a residential move fare least well; in 2005, only 17.9 percent enrolled in substantially better schools.

These findings provide additional insight into the reasons that may shape the decisions of students and their families to change schools. They suggest that students at the elementary school level who aim to make a strategic school change are most likely to do so during the summer, and they do so without making a residential move. Students who change residences *and* schools during the summer appear less likely to change schools for strategic purposes.[39] Students who change schools during the year also appear less likely to do so for strategic reasons; instead, they are more likely to transfer to a new school because of a change in residence or because of concerns about school safety, bad grades, or trouble with teachers or peers.

In 2005, 32 percent of high school students who changed schools during the summer enrolled in substantially better schools, while only 15.2 percent of students who change schools during the year did so. Similar to the findings for elementary students, these results suggest that strategic school moves may be more likely to occur during the summer, while reactive moves may be more likely to occur during the school year.[40]

Figure 10B reports separately the percent of high school students who enroll in a substantially better school at each time period for students who make simultaneous residential moves and the percent for those who do not. These trends differ slightly from those for elementary students in that school changes that occur during the summer, both with and without residential moves, yield comparable results in terms of improving academic quality. In 2005, 30 percent of students who changed schools but did not change residences enrolled in better schools, while 34 percent of students who changed both schools and residences enrolled in better schools.

Similar to elementary students, high school students who change residences and schools during the school year are more restricted in their access to substantially better schools; in 2005, only 22 percent enrolled in better schools. Students who fare the worst are those who change schools during the school year without a simultaneous residential move; only 10.5 percent of these students enrolled in better schools.

These findings suggest that high school students who want to make a strategic school move do so during the summer. High school students who change schools during the school year appear more likely to make a reactive move, either because of their change in address or concerns about their old school.

Chapter 4

Policy Initiatives and Student Mobility

Although family and school related issues are typically the most important factors influencing decisions to change school, public policies can, in some cases, also have an impact on student mobility. Beginning in 2000, a number of new policies were initiated at the school district, city, and federal levels that had either a direct or indirect effect on students' changing schools in Chicago. These include district policies regarding opening and closing schools, city policies regarding the demolition of high-rise public housing, and federal policies including the No Child Left Behind Act (NCLB) of 2001. A number of these policies, including opening and closing schools and NCLB, were intended to improve educational opportunities. Although we do not evaluate the effectiveness of these policies in improving student outcomes, we do examine the impact that these policies had on student mobility.

> Public policy initiatives had only small effects on student mobility, but certain schools were disproportionately affected.

New Schools and Closing Schools

Beginning with the 2001–02 academic year, CPS initiated a more aggressive policy of closing schools that displayed consistently low levels of academic achievement or chronic underutilization. Between 2000 and 2007, 24 regular (i.e., non-alternative, non-charter) schools were closed for reasons of low achievement or underutilization; of those, 23 were elementary schools and one was a high school. Another 18 schools have been closed for other reasons (e.g., poor building conditions, alternative usage, or changes in educational focus).[41] In the case of high schools, closings were generally handled by phasing out successive grades within the school over a period of several years. Effectively, this helped to minimize the need for students to transfer to different schools. In elementary schools, however, this type of phase out typically did not occur, requiring hundreds of students to relocate to different schools during the summer after their school closed. Nearly all students who have been forced to transfer schools are African American.

Between 1995 and 2007, 136 new CPS schools opened; 75 of those new schools are elementary schools, and 61 are high schools. Three major policy initiatives resulted in a substantial increase in the number of new schools. The first was the passage of legislation in 1996 allowing charter schools to operate in Chicago; 56 of the new schools are charter schools. In 2002, the Chicago High School Redesign Initiative began to phase in 23 small high schools—many of which were created by subdividing large high schools into smaller schools. Renaissance 2010, launched more recently in 2004, plans to open 100 new schools by 2010; 76 were opened by 2007.[42] Many of the schools opened under Renaissance 2010 are also charter schools. The addition of so many new schools within CPS has substantially increased options available to students, and, as a result, is likely to have had an impact on student mobility. Many of the new schools that opened in Chicago, especially charter schools, have attracted African American students. In schools that opened after 2000, African American students represented 53 percent of all students who made voluntary moves into new schools.

Table 1 summarizes the impact that opening and closing schools had on student mobility at the district level.

TABLE 1

Student mobility resulting from opening and closing schools

		New Schools	Students Making Voluntary Moves	Decrease in Summer Stability Rate	Closed Schools	Students Making Forced Moves	Increase in Summer In-Mobility Rate
1995	Elem	1	462	0.2%	0	0	0.0%
	High	0	0	0.0%	0	0	0.0%
1996	Elem	10	1,857	0.7%	0	0	0.0%
	High	2	46	0.1%	0	0	0.0%
1997	Elem	4	1,180	0.4%	0	0	0.0%
	High	4	159	0.2%	0	0	0.0%
1998	Elem	5	1,378	0.5%	1	152	0.1%
	High	1	0	0.0%	0	0	0.0%
1999	Elem	4	1,275	0.5%	1	170	0.1%
	High	3	112	0.2%	0	0	0.0%
2000	Elem	2	602	0.2%	0	0	0.0%
	High	2	101	0.1%	0	0	0.0%
2001	Elem	6	905	0.3%	1	260	0.1%
	High	0	0	0.0%	1	0	0.0%
2002	Elem	7	1,111	0.4%	3	1,074	0.4%
	High	5	702	0.9%	3	108	0.2%
2003	Elem	9	1,307	0.5%	5	696	0.3%
	High	9	434	0.6%	1	0	0.0%
2004	Elem	2	493	0.2%	9	2,333	0.9%
	High	8	250	0.3%	1	487	0.7%
2005	Elem	14	2,198	0.8%	5	958	0.4%
	High	10	501	0.6%	1	0	0.0%
2006	Elem	6	916	0.4%	5	862	0.3%
	High	7	251	0.3%	3	0	0.0%
2007	Elem	5	702	0.3%	1	40	0.0%
	High	10	108	0.1%	3	0	0.0%

Columns 2 and 3 of Table 1 report the number of new elementary and high schools that opened in each year between 1995 and 2007 and the number of students who made voluntary moves into those schools. The number of students making voluntary moves only includes students who left a CPS school during the summer to transfer to a new school by the start of that school's first year. It is *not* a count of all students who enrolled in new schools. For example, it does not include students who may have transferred from outside the district to enroll in new schools. Nor does it include students who made "natural" moves into a new school; for example, it excludes students who would have had to change schools anyway because their previous school did not offer the next grade into which they needed to enroll.

The fourth column of Table 1 describes the effect that those voluntary moves have had on the system as a whole by reporting how much the summer stability rate decreased as a result of transfers into new schools each year.[43] The effect of new schools on student mobility at the system level has been negligible, with a decrease in the summer stability rate of less than 1 percent for both elementary and high schools students in any given year between 1995 and 2007.

Students who enroll in new schools often transfer from a handful of nearby schools. As a result, while the system-wide impact of new schools on student mobility is negligible, the effect on those schools that are "feeders" into new schools is substantially greater. Between 1995 and 2007, for example, at least 50 or more students transferred out of 34 schools to enroll in a new school the following September; more than 100 students transferred out of 22 of those schools to enroll in new schools. On average, those schools experienced a 16 percentage point decrease in their summer stability rate the year they lost students to new schools. However, more than half of those schools were considered overcrowded prior to losing their students.[44] CPS has specifically sought to open new schools in areas where existing schools were overcrowded in order to ease the enrollment burden of those schools.[45] As a result, large numbers of students transferring out of an overcrowded school may actually be beneficial to a school rather than detrimental.

Columns 5 and 6 of Table 1 report the number of elementary and high schools that closed between 1995 and 2007 and the number of students who were forced to transfer out of those schools. This number excludes students who would otherwise have had to make a "natural" move. The table illustrates that elementary students have been disproportionately affected by school closings. Although 13 high schools have closed, the amount of forced mobility has been limited because those schools have typically been phased out one grade at a time.

The system-wide impact of closing schools has also been negligible; the summer in-mobility rate has increased by no more than 1 percent in any given year, as shown in Column 7 of Table 1.[46] Nevertheless, the system-wide effect masks the substantial impact felt by a small number of schools that received large numbers of new students because of the closing of a nearby school. Between 1998 and 2007, for example, 25 schools received 50 or more new students at the start of the school year due to the closing of a nearby school; 12 of those schools received 100 or more students. On average, those schools experienced an increase of almost 13 percentage points in their summer in-mobility rate in the year that they received new students from closing schools.

Because of the close proximity of many of the closed schools to one another (particularly those that closed because of low enrollment numbers due to CHA demolitions), five of those receiving schools had large influxes of students from more than one closing school between 1998 and 2007. For example, Drake received 111 students from Williams in 2002, and it received 75 students from Douglas in 2004. As a result, its summer in-mobility rate increased by 29 percentage points in 2002 and by 19 percentage points in 2004. Smyth received 92 students from Medill in 1998, 49 students from Riis in 2001, and 88 students from Jefferson in 2004; in those years, its summer in-mobility rate increased by 29, 10, and 15 percentage points.

In addition to the one-year effect on the in-mobility rates for the schools receiving large influxes of students, other aspects of school life were impacted. Staff in receiving schools reported feelings of demoralization, stress, and tension because resources needed to integrate new students were lacking.[47]

The Chicago Housing Authority's Plan for Transformation

The Chicago Housing Authority (CHA) launched its Plan for Transformation in 2000, which called for the demolition and redevelopment of many of its public housing projects and the rehabilitation of other public housing units. Although in the 1990s around 7,400 units of public housing were slated for closing and eventually demolished, the scale of the Plan for Transformation is much larger. CHA's Plan includes the construction and rehabilitation of 25,000 units with a net loss of 14,000 public housing units for families.[48] Most of the new buildings replacing demolished high-rises are in smaller mixed-income developments.

Residents of buildings slated for demolition were required to relocate to other housing options. Many chose to move into private housing with the help of Housing Choice Vouchers (formerly known as Section 8 Vouchers), while others chose to move to public housing complexes not slated for demolition. Some of these relocations were intended to be temporary, given that some families could apply for one of the units in the new developments. For many children living in public housing units affected by CHA's Plan, relocation of housing resulted in a change of schools. This policy has disproportionately affected the African American population attending CPS, since almost 93 percent of the families living in public housing units are African American.

Table 2 summarizes the direct impact that CHA's Plan has had on student mobility in Chicago. Column 2 (below) reports the number of elementary and high school students who resided in CHA housing as of September of each year between 1995 and 2006, and

TABLE 2

CHA related moves and their impact on the school year and summer in-mobility rates

School Year		CHA Residents Attending CPS in September	CHA Residents Attending CPS with Residential Move	Residential Movers Who Changed Schools	Increase in In-Mobility Rate
1995	Elem	21,254	2,044 (9.6%)	1,461 (71.5%)	0.5%
	High	5,139	340 (6.6%)	82 (24.1%)	0.1%
1996	Elem	19,897	1,706 (8.6%)	1,074 (63.0%)	0.4%
	High	4,859	300 (6.2%)	50 (16.7%)	0.1%
1997	Elem	19,299	1,454 (7.5%)	1,057 (72.7%)	0.4%
	High	4,333	322 (7.4%)	48 (14.9%)	0.1%
1998	Elem	18,577	1,690 (9.1%)	1,261 (74.6%)	0.4%
	High	3,761	303 (8.1%)	48 (15.8%)	0.1%
1999	Elem	17,777	1,630 (9.2%)	1,061 (65.1%)	0.4%
	High	3,570	334 (9.4%)	67 (20.1%)	0.1%
2000	Elem	16,933	1,919 (11.3%)	1,026 (53.5%)	0.3%
	High	3,307	416 (12.6%)	44 (10.6%)	0.1%
2001	Elem	15,911	1,669 (10.5%)	907 (54.3%)	0.3%
	High	3,105	284 (9.1%)	40 (14.1%)	0.0%
2002	Elem	14,604	1,758 (12.0%)	960 (54.6%)	0.3%
	High	3,064	361 (11.8%)	49 (13.6%)	0.1%
2003	Elem	12,738	1,710 (13.4%)	928 (54.3%)	0.3%
	High	2,892	282 (9.8%)	30 (10.6%)	0.0%
2004	Elem	10,805	1,167 (10.8%)	654 (56.0%)	0.2%
	High	2,943	353 (12.0%)	40 (11.3%)	0.0%
2005	Elem	9,057	1,245 (13.7%)	691 (55.5%)	0.2%
	High	2,750	392 (14.3%)	47 (12.0%)	0.0%
2006	Elem	7,491	862 (11.5%)	384 (44.5%)	0.1%
	High	2,561	347 (13.5%)	24 (6.9%)	0.0%

Column 3 (p. 32) reports the number of those students who made a residential move during the school year. Although our data do not directly indicate whether a residential move was the result of CHA demolition or some other factor, we find that the percent of residents who make residential moves and school changes (signaling a move outside a CHA project) increases after 2000, particularly during the summer. Column 4 (p. 32) reports the number of residential movers who also changed schools, and Column 5 (p. 32) describes the impact that these moves had on the school year in-mobility rate. Columns 6 through 9 (see below) provide the same information for moves that occur during the summer.

In general, the direct effect of CHA's Plan on the district as a whole has been relatively small. Between 1995 and 2006, for example, the school year and summer in-mobility rates increased by no more than 1 percent in each year.

In addition to the direct effect on student mobility that occurred when students moved out of units slated for demolition, there were other indirect effects that CHA's Plan had on student mobility, particularly for students attending schools that were located near CHA projects that were closed or demolished. For example, CHA residents were enrolled in at least 12 of the elementary schools that were closed because of underutilization. Four schools that were closed for low academic achievement also suffered declining enrollments because of CHA's Plan. Other schools are still in the process of losing a substantial portion of their student population as residents move out of CHA high-rises. For example, Beethoven's enrollment has gone from 836 students in 1995 (of which 751

		Summer			
		CHA Residents Attending CPS in May	CHA Residents Attending CPS with Residential Move	Residential Movers Who Changed Schools	Increase in In-Mobility Rate
1995	Elem	17,528	1,945 (11.1%)	1,268 (65.2%)	0.5%
	High	3,900	270 (6.9%)	75 (27.8%)	0.1%
1996	Elem	17,271	1,850 (10.7%)	1,195 (64.6%)	0.5%
	High	3,628	243 (6.7%)	48 (19.8%)	0.1%
1997	Elem	16,824	2,341 (13.9%)	1,482 (63.3%)	0.6%
	High	3,259	266 (8.2%)	50 (18.8%)	0.1%
1998	Elem	16,017	2,264 (14.1%)	1,523 (67.3%)	0.6%
	High	2,871	225 (7.8%)	52 (23.1%)	0.1%
1999	Elem	15,394	1,995 (13.0%)	1,331 (66.7%)	0.5%
	High	2,739	211 (7.7%)	49 (23.2%)	0.1%
2000	Elem	14,667	1,731 (11.8%)	1,033 (59.7%)	0.4%
	High	2,523	161 (6.4%)	29 (18.0%)	0.0%
2001	Elem	13,633	1,509 (11.1%)	1,129 (74.8%)	0.4%
	High	2,380	106 (4.5%)	22 (20.8%)	0.0%
2002	Elem	11,857	1,445 (12.2%)	1,062 (73.5%)	0.4%
	High	2,365	122 (5.2%)	26 (21.3%)	0.0%
2003	Elem	10,063	1,429 (14.2%)	1,065 (74.5%)	0.4%
	High	2,263	146 (6.5%)	40 (27.4%)	0.1%
2004	Elem	8,432	1,138 (13.5%)	871 (76.5%)	0.3%
	High	2,240	106 (4.7%)	30 (28.3%)	0.0%
2005	Elem	7,248	1,070 (14.8%)	745 (69.6%)	0.3%
	High	1,996	117 (5.9%)	22 (18.8%)	0.0%
2006	Elem	6,020	695 (11.5%)	476 (68.5%)	0.2%
	High	1,928	110 (5.7%)	18 (16.4%)	0.0%

students were CHA residents) to 471 students in 2007 (of which only 15 students were CHA residents). The closing of those schools creates further student mobility for students who were still enrolled in those schools a few years after the demolition of the high-rises.

Many of the moves out of units slated for demolition or rehabilitation were temporary while new units were being constructed. Thus, this led to additional school changes for CHA residents. Other children might transfer in subsequent years if their families opted to move into the private rental market by using Housing Choice Vouchers. If their new rental units did not pass annual inspections, they would have to move yet again.

No Child Left Behind Act

The passage of NCLB sought to improve the quality of education by increasing the standards of accountability for schools, districts, and states. In addition, it provided parents with greater flexibility in choosing schools that their children would attend. NCLB allows students who attend schools that do not make adequate yearly progress (AYP) two years in a row to transfer to a different school that is making AYP.

In Chicago, the school district has not been able to accommodate all of the requests for transfers to better schools because of a lack of enrollment availability in schools making AYP. The first year the program was implemented, 120,000 students were eligible to request a transfer to a school making AYP. Approximately 26,000 students applied for the 2,500 slots available. Some of the students who were awarded slots in better schools chose to remain in their original school, and eventually only 737 students actually transferred to a new school. While the number of eligible students increased in subsequent years, the number of applications and spots declined. And the actual number of transferring students dwindled to a few hundred.

Schools that fail to make AYP typically enroll a predominantly African American student body.[49] While African American students might have benefitted tremendously from school transfers guaranteed by the NCLB legislation, in fact few have been able to realize the opportunities available under NCLB guidelines due to a lack of space in schools making AYP.

Although NCLB probably increased awareness about school choice, CPS has had a long-standing policy of "open enrollment" so that students may enroll in any school in the district with available spaces that does not have selective admissions requirements. Around 30 percent of elementary students exercise some form of school choice each year. In 1995, 80 percent of the students not attending their attendance area school chose to enroll in other neighborhood schools, while the remaining students attended charter and magnet schools. Over time, as more charter and magnet schools opened, the percent of elementary students choosing neighborhood schools other than their own steadily decreased to less than three-fourths. High school students tend to enroll in schools outside their attendance area in larger numbers than elementary students. Around 54 percent attend a school other than their attendance area school. In 1995, more than 70 percent of these students attended other neighborhood schools; by 2005, only 63 percent of the high school students exercising choice enrolled in other neighborhood schools, while 37 percent enrolled in charter or magnet schools.

Chapter 5

Explaining the Race Gap in Student Mobility

In previous sections, we highlighted the increasing disparity observed since 2000–01 in the student mobility indicators when disaggregated by race. Not only are African American students more likely to change schools but the gap between them and other CPS students since 2000–01 has grown wider, especially at the elementary school level. We also highlighted the role that residential mobility, school academic quality, and policies had on student mobility and their disproportionate effect on African American students. In this section, we examine whether any of these factors explain why African American students in elementary schools have diverged from other CPS students in their mobility trends since 2000–01.[50]

> Residential mobility is the most important factor explaining the gap in transfers between African American students and white and Asian students.

We use statistical models to predict students' probability of transferring from one CPS school to another CPS school, taking into account a variety of student and school factors. These models tell us to what degree different factors explain the mobility gap between African American students and white and Asian students in elementary schools. We run separate models for school moves that occur during the school year and those that occur during the summer. The sample includes students enrolled in 507 elementary schools between 1999–2000 and 2005–06, nearly 300,000 students each year.[51] Details about the statistical models and sample size can be found in Appendix C.

Five types of predictors are included in each model. The first group describes the backgrounds of students, including race and poverty status. In addition, we include an indicator of whether a student previously lived in CHA housing; as we reported earlier, students who leave CHA housing and move

to the private rental market often face higher levels of housing instability, which can lead to more moves.

The second group of predictors describes two kinds of residential moves that students can make: CHA-related moves and non-CHA-related moves. The third group of predictors describes students' access to school choice options. To capture options available to students, we create a number of variables describing the type and quality of the schools attended by other students in each census block. Students and their families are more likely to know about schools other than their attendance area school when a substantial number of students living in their census block attend non-neighborhood schools.[52] Students who have access to options that are perceived to be better than their own neighborhood school may be more likely to change schools.

Fourth, we include predictors that describe characteristics of the schools in which students are currently enrolled. We measure school quality by the percent of students meeting or exceeding national norms on the Illinois Standards Achievement Test (ISAT) in each year from 2000 to 2006.[53] We also include an indicator for whether a school was either on probation or not making AYP. NCLB began identifying schools that did not make AYP in 2003. Since our analysis begins in 2000, we needed some sort of proxy for AYP status for the years 2000 and 2002. Given the similar meaning between not making AYP and being on probation, we combine the two into a single indicator to determine whether students enrolled in schools identified as not performing well academically are more likely to transfer to different schools within CPS.[54]

The fifth type of predictor is whether or not a school is slated for closing at the end of the school year. Previously we saw that closing schools has some, although limited, impact on student mobility during the summer. School closings are usually announced before the end of the school year. In our analysis of moves occurring during the school year, we identify those schools that will close at the end of the school year to determine whether the closing announcement generates mobility before the end of the school year.[55] (Additional details about the predictors and the model can be found in Appendix C.)

Explaining the Race Gap

Figure 11A shows the race gap in school year transfers and those variables that had a significant effect on explaining the gap. The top line with black circles shows the percent of African American students who transferred from one CPS school to another CPS school during each school year between 2000 and 2006, and the black line with triangles shows the percent of white and Asian students who transferred during the same period. The black line with diamonds indicates the percent of African American students who would have transferred if they had the same characteristics as white and Asian students. In other words, this line represents the percent of African American students who would have transferred if they had the same level of residential mobility as white and Asian students, lived in neighborhoods with similar poverty status, been enrolled in schools of similar academic quality, and so on. The difference between this line and the top line represents the portion of the race gap that has been explained by the model, while the difference between this line and the line for white and Asian students represents the unexplained race gap. Overall, the model explains around 85 percent of the difference in school transfers that exists between African American students and white and Asian students.[56]

Residential mobility is the most important factor explaining the gap in school year transfers between African American students and white and Asian students. Between 45 and 50 percent of the gap can be attributed to differences in non-CHA related residential mobility. For example, in 2006, 11 percent of African American students made a non-CHA residential move during the school year, while only 5 percent of white and Asian students did so.

While only a small percent of African American students (ranging between 1 and 0.6 percent from 2000 to 2006) made CHA related residential moves, no white or Asian students made these kinds of moves. These kind of residential moves account for almost 11 percent of the gap in the early 2000s. By 2006, these moves account for only 5 percent of the race gap, reflecting the dwindling CPS population living in CHA housing.

Residential mobility and school quality are the most important factors explaining the school year and summer race gaps, while school choice helps explain the summer race gap

FIGURE 11A

School Year Mobility Rates by Race/Ethnicity

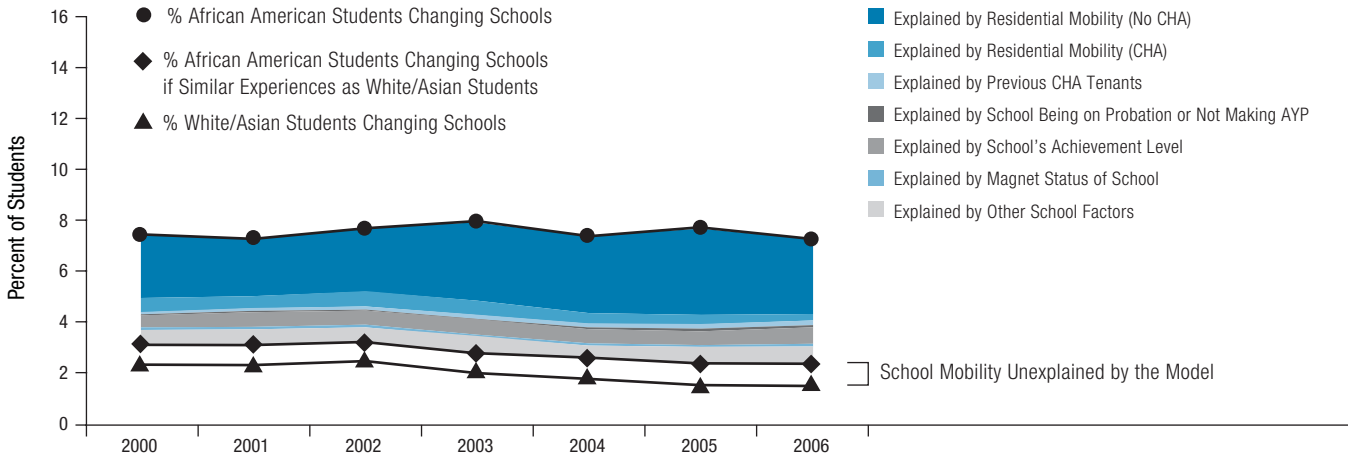
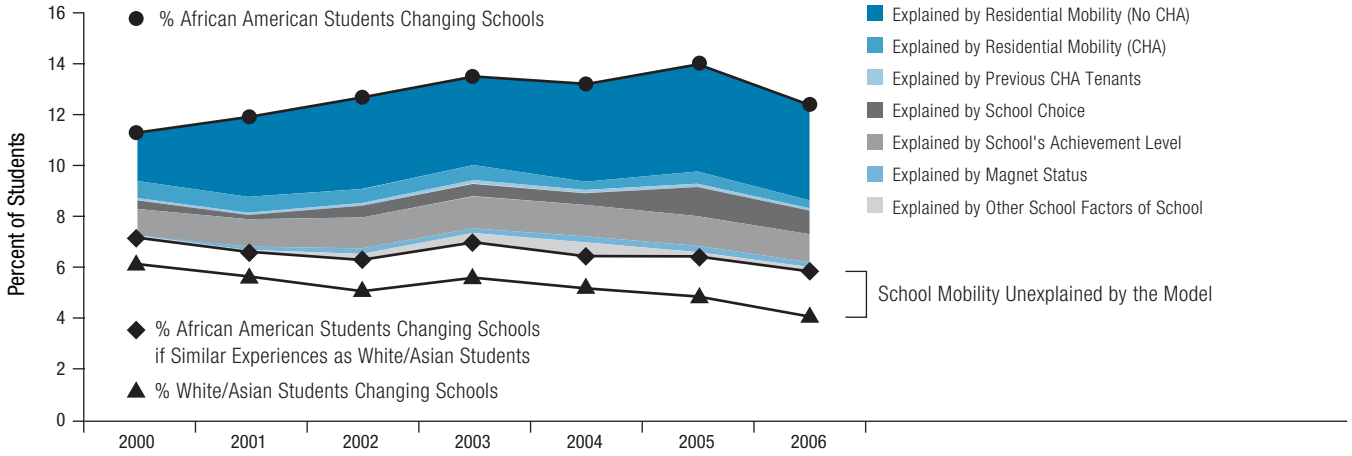


FIGURE 11B

Summer Mobility Rates by Race/Ethnicity



A small portion of the gap (around 1 percent) is explained by students who previously lived in CHA housing, suggesting that these students (all of whom are African American) face instability and other difficult situations after they leave public housing.

An additional 10 to 12.5 percent of the race gap is explained by differences in the average achievement level of schools attended by African American students and white and Asian students. African American students tend to be enrolled in schools with low average levels of achievement, which they leave at higher rates; white and Asian students tend to be enrolled in schools with substantially higher average levels of achievement, in which they are more likely to remain stable. In 2006, for example, African American students were enrolled in schools where on average only 52 percent of students were meeting national norms on the ISAT; white and Asian students were enrolled in schools where 77 percent of students were meeting ISAT norms.

Since the 2003–04 academic year, attending a school that fails to make AYP or is on probation explains about 1 percent of the race gap. Students who are enrolled in those schools are more likely to leave them, and these students are disproportionately likely to be African

American. A small but significant portion of the gap, around 1 percent, is explained by enrollment in magnet schools, even after controlling for school achievement. Students who attend a magnet school tend to change schools at lower rates during the school year, and white and Asian students tend to have much higher rates of enrollment in those schools than African American students. In 2006, for example, 13 percent of white and Asian students were enrolled in magnet schools compared to only 6 percent of African American students. Between 9 and 15 percent of the gap is explained by school related factors not specified in the model.

Figure 11B shows the race gap in summer transfers and the variables that are important in explaining the gap. Like the graph in Figure 11A, the top black line is the percent of African American students who transferred to another CPS school during the summers between 2000 and 2006. The black line with triangles is the percent of white and Asian students who transferred, and the black line with diamonds is the percent of African American students who would have transferred if they had the same characteristics as white and Asian students. The model explains around 80 percent of the gap between African American students and white and Asian students in school transfers that occur during the summer.

Several of the variables that are instrumental in explaining the race gap in summer transfers are similar to those that explained the gap in school year transfers. In 2006, for example, residential moves (both CHA and non-CHA moves) account for nearly 50 percent of the difference between African American and white and Asian students. As was the case with school year moves, non-CHA related residential mobility accounts for most of the effect, explaining around 45 percent of the gap. CHA-related moves account for an additional 10 percent of the gap in 2000; by 2006, these moves account for only 4 percent of the gap. A small portion of the gap (around 1 percent) is explained by students who previously lived in CHA housing.

Schools' average levels of achievement account for an additional 13 to 21 percent of the race gap, depending on the year. Interestingly, attending a school that is on probation or not making AYP does not explain any of the race gap in summer transfers. There is a small but significant magnet school effect that explains an additional 2 to 4 percent of the overall race gap.

An essential difference between summer transfers and school year transfers is the importance of the school choice variables in explaining the race gap. While these variables had no role in explaining the race gap in school year transfers, they become increasingly important over time in explaining the gap in summer transfers. During the summer of 2000, these variables explain only 7 percent of the race gap. But by 2006, they explain almost 12 percent of the race gap.

Two variables, in particular, are instrumental in explaining the race gap: access to new schools, and access to other neighborhood schools that are academically better than one's own neighborhood school. Having access to new schools increases the likelihood that a student will transfer to another CPS school during the summer; in 2006, for example, 9 percent of African American students had access to new schools, compared to only 3 percent of white and Asian students.

Access to neighborhood schools with higher levels of average achievement also increases the likelihood of changing schools during the summer, and African American students have access to more of those schools than white and Asian students. For example, in 2006, African American students had access to an average of 2.1 schools that were better than their own school; white and Asian students had access to less than one school (0.7).

A large portion of the mobility gap is determined by economic conditions and policy initiatives in Chicago that affected African American students disproportionately since 2000. These non-strategic school moves are mainly the result of residential mobility (either CHA related or non-CHA related). Interestingly, a small portion of the race gap is explained by school moves made by African American students that are more strategic in nature. These school moves include those that were motivated by escaping schools not making AYP or on probation, those that sought to take advantage of school choice transfers, and those in which students left schools of low academic quality.

Chapter 6

Conclusion

Our analysis of student mobility in CPS yielded several important findings. First, mobility decreased among elementary and high school students between 1995 and 2007. At the elementary school level, most of this decrease was limited to school year mobility trends; since 2005, however, summer mobility indicators have also shown a significant decrease. At the high school level, mobility decreased both during the school year and during the summer. Student mobility in CPS is largely a phenomenon of transfers within the district, and the decrease in mobility is mostly due to fewer students transferring from one CPS school to another CPS school.[57]

Another important finding is that the decreases in student mobility observed for the system as a whole have not been true for different groups of students. Although African American students exhibited higher mobility rates than Latino, white, and Asian students since 1995, this gap has widened since 2000–01 (particularly at the elementary school level).

Much of the race gap in mobility can be attributed to the particular economic and policy environments that characterized the early 2000s. For example, residential mobility is the most important factor in explaining the gap between African American students and white and Asian students. Higher rates of residential mobility among African American students appear to have been influenced by the economic downturn that started in late 2001. Higher unemployment and poverty levels, combined with fewer affordable housing options, collectively led to an increase in residential mobility among African American students, which in turn led to more students changing schools both during the school year and during the summer. In all, the higher rates

of residential mobility experienced by African American students explain about half of the difference in school transfers between them and white and Asian students.

The Plan for Transformation launched by CHA has also had a significant effect on the school mobility of African Americans. Although this policy had a negligible impact on student mobility at the system level, its effect was disproportionately felt by African American students and contributed to their increased mobility after 2000. Requiring families to vacate buildings slated for demolition often meant a change in schools for their children. Perhaps even more important, however, is the fact that even after students have left CHA they are still more likely to move from one school to another, both during the school year and the summer. Although the effect is small, the proportion of the race gap that it explains increases over time, particularly during the school year. And given the tightening of the housing market, it may become increasingly difficult for families who at one time were living in CHA to maintain stable housing situations outside of CHA. Meanwhile, the evidence is mixed as to whether children in families receiving vouchers to leave public housing are likely to enroll in schools that are substantially better than the ones they attended while living in public housing.[58]

Another small but growing policy effect on African American mobility, albeit only on transfers that occur during the school year, is due to identifying a school as not making AYP or being on probation. Although the direct effect of NCLB on student transfers was negligible, given the paucity of enrollment spaces in schools making AYP, it may be the case that the passage of NCLB legislation heightened the awareness of students and families about the problems associated with schools that do not make AYP or are on probation. As a result, some families may have moved their students out of these schools and into other schools even without the assistance of the NCLB transfers.

It is also possible that the NCLB legislation increased general awareness about school choice options in Chicago. This, coupled with the growing number of new schools, may explain the fact that school choice options become increasingly important factors explaining the mobility of African American students during the summer.

Most of the race gap that is explained by economic conditions and policy initiatives in Chicago is the result of more non-strategic school moves by African American students, particularly those that occurred as a result of residential mobility (either CHA related or non-CHA related). However, a small portion of the race gap is explained by African American school moves that were strategic in nature, including those that were motivated by escaping schools not making AYP or on probation, as well as those that sought to take advantage of school choice transfers. In addition, moves in which students leave schools of low academic quality may also be strategic in nature, although these are not directly motivated by particular policies.

Are African American students who make strategic school changes enrolling in substantially better schools? In general, nearly 37 percent of African American students who made strategic schools changes in 2005 (i.e., transfers that occurred during the summer without residential moves) enrolled in a substantially better school. Among white students, 43 percent enrolled in substantially better schools. While more than one-third of these African American students are transferring into schools of substantially better academic quality, in general they continue to lag behind white students in their access to these schools.

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Appendix A:
Defining Stable and Mobile Students

Determining whether a student is stable or mobile requires a comparison of school enrollment information at two different points in time. A student is classified as mobile if:

- she is actively enrolled in CPS at both time periods and is enrolled in two different schools, or,
- she is actively enrolled in CPS at both time periods and is enrolled in the same school but appears to have been enrolled in a different school at some point between the two time periods, or,
- she is enrolled in a CPS school at the first point in time but not at the second point, or,
- she is not enrolled in a CPS school at the first point in time but is enrolled in a CPS school at the second point.

If none of these conditions is true, the student is classified as stable.

Not all students who are classified as mobile are included in the calculation of our mobility indicators. Namely, students who make "natural moves" between two time periods are excluded from these calculations.[59] Natural moves that are excluded from the stability indicator occur when students cannot continue at their current school, usually because they have graduated or because that school can no longer serve their academic needs. A mobile student is classified as making a natural move out of a school if:

- she graduates, or
- she leaves a school when she is promoted to a grade not served by this school,[60] or,
- she leaves a school to enter an Academic Preparatory Center or an Achievement Academy,[61] or,
- she leaves a school due to the closing of that school.

A mobile student is classified as making a natural move into a school if:

- she enters a school in the first grade offered by that school,[62] or
- she enters a school in a grade where transition from a previous grade is not possible,[63] or,
- she enters a high school after attending an Academic Preparatory Center or an Achievement Academy, or,
- she enters a school that just opened.

Although many students make natural moves out of one school and into another, this is not always the case. Some students who make a natural move out of a school might not make a natural move into a school. While their mobility is not reflected in the stability or out-mobility indicator, it might be reflected in the in-mobility indicator.

The distinction between natural moves and other moves is most important when calculating the summer indicators. Moves that occur during the school year do not typically fall into the category of natural moves.

Using enrollment data from 1994–95 to 2000–07, we classified all CPS students enrolled in grades K–12 as either stable or mobile; in addition, mobile students were classified as having made a natural move or not. Once these student level classifications were made, we then calculated the mobility indicators at the system level.[64]

Appendix B:
Data on Mobility Rates

Appendix B includes tables showing the data for the mobility indicators presented in this report. The information is organized by chapter.

Data Presented in Chapter 1

TABLE B1

Stability and In-Mobility Rates for Elementary School Students

	Stability Rate		In-Mobility Rate	
	School Year	Summer	School Year	Summer
1995	87.9%	83.4%	11.4%	15.5%
1996	88.9%	82.1%	10.4%	16.0%
1997	88.9%	83.3%	10.3%	15.2%
1998	89.4%	83.2%	10.1%	15.5%
1999	89.2%	82.7%	10.2%	15.3%
2000	89.4%	83.1%	10.0%	14.6%
2001	89.7%	82.3%	9.4%	15.2%
2002	89.4%	83.7%	9.2%	15.0%
2003	89.0%	82.8%	9.2%	15.2%
2004	90.0%	83.3%	8.7%	15.3%
2005	89.7%	82.0%	8.7%	15.6%
2006	90.3%	84.3%	8.5%	13.9%
2007	91.2%	86.3%	7.1%	12.6%

TABLE B2

Disaggregating the Out-Mobility Rates for Elementary School Students

	School Year Out-Mobility Rate				Summer Out-Mobility Rate			
	Total	Left Chicago	CPS School	Other	Total	Left Chicago	CPS School	Other
1995	12.1%	2.8%	6.9%	2.3%	16.6%	3.2%	11.1%	2.3%
1996	11.1%	2.7%	6.2%	2.3%	17.9%	3.2%	12.5%	2.2%
1997	11.1%	2.7%	6.2%	2.2%	16.7%	3.4%	11.0%	2.3%
1998	10.6%	2.6%	6.1%	1.9%	16.8%	3.5%	11.0%	2.3%
1999	10.8%	2.8%	6.1%	1.9%	17.3%	3.5%	10.9%	2.9%
2000	10.6%	2.9%	5.6%	2.0%	17.0%	3.4%	11.6%	2.0%
2001	10.3%	3.0%	5.3%	2.0%	17.7%	3.6%	12.1%	2.1%
2002	10.6%	3.2%	5.4%	2.0%	16.3%	3.6%	11.0%	1.6%
2003	11.0%	3.5%	5.4%	2.0%	17.2%	4.2%	11.2%	1.8%
2004	10.0%	3.2%	5.2%	1.7%	16.7%	4.2%	10.6%	1.9%
2005	10.3%	3.4%	5.2%	1.8%	18.0%	4.3%	11.6%	2.1%
2006	9.7%	3.2%	4.9%	1.7%	15.7%	4.0%	9.8%	1.9%

TABLE B3

Disaggregating the In-Mobility Rates for Elementary School Students

	School Year In-Mobility Rate			Summer In-Mobility Rate		
	Total	CPS School	Other	Total	CPS School	Other
1995	11.4%	6.9%	4.5%	15.5%	10.0%	5.4%
1996	10.4%	6.1%	4.3%	16.0%	10.5%	5.5%
1997	10.3%	6.2%	4.1%	5.2%	9.9%	5.3%
1998	10.1%	6.0%	4.1%	15.5%	10.1%	5.4%
1999	10.2%	5.9%	4.3%	15.3%	9.9%	5.4%
2000	10.0%	5.6%	4.4%	14.6%	9.1%	5.5%
2001	9.4%	5.2%	4.1%	15.2%	9.8%	5.4%
2002	9.2%	5.4%	3.8%	15.0%	10.0%	5.1%
2003	9.2%	5.5%	3.7%	5.2%	10.3%	4.9%
2004	8.7%	5.2%	3.5%	15.3%	10.3%	4.9%
2005	8.7%	5.2%	3.5%	15.6%	10.6%	5.0%
2006	8.5%	4.8%	3.7%	13.9%	9.3%	4.6%

TABLE B4

Stability and In-Mobility Rates for High School Students

	Stability Rate		In-Mobility Rate	
	School Year	Summer	School Year	Summer
1995	84.5%	85.0%	6.7%	8.4%
1996	85.2%	85.3%	6.1%	7.3%
1997	85.2%	85.7%	5.4%	6.9%
1998	85.2%	86.9%	5.0%	7.3%
1999	85.9%	86.6%	6.7%	7.1%
2000	86.5%	87.8%	5.4%	6.7%
2001	86.6%	87.5%	5.1%	6.8%
2002	87.3%	88.6%	5.1%	6.7%
2003	86.6%	87.6%	4.8%	7.3%
2004	88.5%	88.5%	4.7%	6.2%
2005	87.5%	87.4%	4.8%	5.9%
2006	88.0%	88.8%	4.7%	5.7%
2007	87.6%	90.5%	3.6%	6.3%

TABLE B5

Disaggregating the Out-Mobility Rates for High School Students

	School Year Out-Mobility Rate					Summer Out-Mobility Rate				
	Total	Left Chicago	Dropout	CPS School	Other	Total	Left Chicago	Dropout	CPS School	Other
1995	15.5%	2.6%	7.1%	3.3%	2.5%	15.0%	3.0%	5.8%	4.5%	1.8%
1996	14.8%	2.5%	6.8%	3.4%	2.1%	14.7%	2.7%	6.4%	4.0%	1.7%
1997	14.8%	2.5%	7.1%	2.8%	2.3%	14.3%	2.8%	5.5%	4.3%	1.7%
1998	14.8%	2.8%	7.1%	2.8%	2.1%	13.1%	2.7%	5.2%	3.9%	1.4%
1999	14.1%	2.6%	7.2%	2.5%	1.8%	13.4%	2.6%	5.6%	3.7%	1.5%
2000	13.5%	2.5%	6.9%	2.2%	1.9%	12.2%	2.6%	4.6%	3.6%	1.4%
2001	13.4%	2.6%	6.8%	2.2%	1.8%	12.5%	2.6%	5.0%	3.6%	1.3%
2002	12.7%	2.7%	5.9%	2.2%	1.9%	11.4%	2.6%	3.7%	4.2%	0.9%
2003	13.4%	3.2%	5.9%	2.3%	1.9%	12.4%	2.9%	3.8%	4.7%	1.0%
2004	11.5%	3.1%	4.4%	2.4%	1.5%	11.5%	3.1%	3.5%	3.8%	1.0%
2005	12.5%	3.2%	3.4%	2.8%	3.2%	12.6%	3.3%	3.1%	4.1%	2.0%
2006	12.0%	3.3%	3.2%	2.7%	2.7%	11.2%	2.9%	2.8%	3.8%	1.7%

TABLE B6

Disaggregating the In-Mobility Rates for High School Students

	School Year In-Mobility Rate			Summer In-Mobility Rate		
	Total	CPS School	Other	Total	CPS School	Other
1995	6.7%	3.0%	3.7%	8.4%	3.3%	5.1%
1996	6.1%	2.6%	3.5%	7.3%	2.8%	4.5%
1997	5.4%	2.2%	3.2%	6.9%	3.2%	3.7%
1998	5.0%	2.1%	2.9%	7.3%	3.3%	4.0%
1999	6.7%	3.3%	3.4%	7.1%	3.0%	4.1%
2000	5.4%	2.2%	3.2%	6.7%	2.8%	3.9%
2001	5.1%	2.1%	3.0%	6.8%	2.6%	4.1%
2002	5.1%	2.1%	2.9%	6.7%	2.6%	4.0%
2003	4.8%	2.0%	2.8%	7.3%	3.2%	4.0%
2004	4.7%	2.0%	2.7%	6.2%	2.9%	3.3%
2005	4.8%	1.9%	2.8%	5.9%	2.5%	3.4%
2006	4.6%	1.9%	2.8%	5.7%	2.3%	3.4%

Data Presented in Chapter 2

TABLE B7

Mobility Rates by Age

	School Year In-Mobility Rate		Summer In-Mobility Rate	
	6 Years Old	13 Years Old	6 Years Old	13 Years Old
1995	13.1%	8.5%	16.0%	13.0%
1996	11.8%	8.0%	16.7%	14.3%
1997	11.3%	7.7%	15.7%	13.3%
1998	11.3%	7.2%	15.7%	14.8%
1999	11.6%	8.5%	15.8%	13.5%
2000	11.3%	7.2%	15.2%	13.1%
2001	10.7%	7.1%	15.7%	14.8%
2002	10.3%	6.9%	15.0%	14.3%
2003	10.2%	6.9%	16.0%	14.0%
2004	9.6%	6.6%	15.3%	13.4%
2005	9.6%	6.8%	16.2%	13.5%
2006	9.5%	6.4%	14.1%	12.5%
2007	7.9%	5.4%	13.0%	11.1%

TABLE B8

Mobility Rates by Gender

	Elementary School Students				High School Students			
	School Year Stability Rate		Summer Stability Rate		School Year Stability Rate		Summer Stability Rate	
	Male	Female	Male	Female	Male	Female	Male	Female
1995	87.6%	88.2%	83.2%	83.6%	82.1%	86.8%	84.0%	85.9%
1996	88.6%	89.1%	81.8%	82.4%	82.9%	87.4%	84.4%	86.1%
1997	88.7%	89.2%	83.0%	83.5%	83.4%	87.0%	84.8%	86.5%
1998	89.2%	89.5%	82.8%	83.5%	83.4%	86.9%	86.1%	87.7%
1999	88.8%	89.5%	82.3%	83.1%	83.9%	87.9%	85.4%	87.7%
2000	89.1%	89.8%	83.0%	83.1%	84.6%	88.4%	86.7%	88.9%
2001	89.2%	90.2%	82.0%	82.6%	84.7%	88.4%	86.5%	88.5%
2002	89.1%	89.8%	83.5%	83.9%	85.2%	89.4%	87.8%	89.3%
2003	88.6%	89.5%	82.5%	83.0%	84.6%	88.6%	86.7%	88.4%
2004	89.6%	90.3%	83.1%	83.5%	86.7%	90.2%	87.6%	89.4%
2005	89.4%	90.0%	81.9%	82.2%	85.5%	89.3%	86.1%	88.6%
2006	90.0%	90.5%	84.2%	84.4%	85.8%	90.1%	88.2%	89.4%
2007	90.9%	91.5%	86.3%	86.4%	85.4%	89.6%	89.9%	91.1%

TABLE B9

Mobility Rates by Race/Ethnicity

Elementary School Students

	School Year In-Mobility Rate				Summer In-Mobility Rate			
	White Students	African American Students	Asian Students	Latino Students	White Students	African American Students	Asian Students	Latino Students
1995	8.4%	12.5%	8.4%	10.9%	14.3%	16.5%	14.4%	14.2%
1996	7.8%	11.6%	6.9%	9.7%	15.4%	17.0%	14.3%	14.6%
1997	7.9%	11.6%	7.7%	9.1%	14.5%	16.9%	13.2%	13.0%
1998	7.3%	11.7%	7.8%	8.8%	14.5%	17.2%	13.7%	13.2%
1999	7.3%	11.5%	7.5%	9.2%	14.0%	16.9%	12.8%	13.4%
2000	7.0%	11.0%	8.0%	9.5%	13.5%	15.9%	13.2%	13.0%
2001	6.5%	10.6%	7.4%	8.5%	13.1%	17.2%	14.2%	13.1%
2002	5.9%	10.8%	6.9%	7.9%	12.9%	17.5%	12.9%	12.2%
2003	5.8%	11.1%	6.4%	7.8%	12.1%	18.2%	11.9%	12.3%
2004	5.3%	10.7%	6.6%	6.9%	11.6%	18.9%	11.5%	11.7%
2005	4.8%	11.1%	6.1%	6.8%	11.2%	18.9%	11.7%	12.7%
2006	5.0%	10.7%	6.5%	6.9%	10.8%	17.3%	11.1%	10.7%
2007	4.3%	9.5%	4.9%	5.0%	9.7%	16.1%	10.5%	9.4%

High School Students

	School Year In-Mobility Rate				Summer In-Mobility Rate			
	White Students	African American Students	Asian Students	Latino Students	White Students	African American Students	Asian Students	Latino Students
1995	6.4%	7.5%	4.8%	5.3%	8.8%	8.9%	7.7%	7.4%
1996	5.5%	7.1%	4.1%	4.7%	7.7%	7.8%	6.1%	6.1%
1997	5.3%	6.2%	4.1%	4.0%	7.8%	7.5%	6.4%	5.5%
1998	4.7%	5.7%	3.6%	4.1%	7.5%	8.3%	5.7%	5.9%
1999	6.4%	7.5%	4.9%	5.7%	7.5%	7.9%	5.4%	6.0%
2000	5.4%	5.9%	4.5%	4.6%	7.8%	7.1%	6.1%	5.7%
2001	4.6%	5.7%	3.9%	4.6%	6.9%	7.5%	5.9%	5.6%
2002	4.4%	5.8%	4.4%	4.2%	6.9%	7.6%	5.0%	5.3%
2003	4.0%	5.6%	3.2%	4.1%	6.6%	8.6%	4.4%	5.8%
2004	3.8%	5.8%	3.4%	3.5%	6.2%	7.1%	5.3%	4.9%
2005	3.3%	5.8%	3.2%	3.8%	5.9%	6.6%	4.7%	5.0%
2006	3.1%	5.6%	2.2%	3.9%	5.6%	6.3%	5.4%	4.7%
2007	2.4%	4.4%	2.3%	2.8%	5.5%	7.6%	4.4%	4.9%

TABLE B10

Within-District Transfers by Race/Ethnicity

Elementary School Students

	School Year Within-District Transfers				Summer Within-District Transfers			
	White Students	African American Students	Asian Students	Latino Students	White Students	African American Students	Asian Students	Latino Students
1995	3.8%	8.6%	2.1%	5.5%	6.4%	11.6%	6.2%	9.0%
1996	3.1%	7.9%	1.6%	4.8%	7.0%	11.9%	6.2%	9.7%
1997	3.2%	8.0%	1.8%	4.5%	6.1%	11.9%	6.3%	8.5%
1998	2.9%	8.1%	2.1%	4.2%	5.8%	12.3%	6.6%	8.3%
1999	2.6%	7.8%	1.6%	4.3%	5.6%	12.0%	5.5%	8.3%
2000	2.7%	7.3%	1.5%	4.2%	5.4%	10.8%	5.3%	7.8%
2001	2.3%	7.1%	1.4%	3.7%	5.3%	12.0%	5.5%	8.2%
2002	2.3%	7.3%	1.4%	3.8%	5.2%	12.6%	5.4%	7.9%
2003	2.1%	7.7%	1.2%	3.7%	5.0%	13.2%	5.6%	8.1%
2004	2.0%	7.4%	1.5%	3.5%	4.7%	13.8%	4.9%	7.7%
2005	1.7%	7.5%	0.9%	3.4%	4.3%	13.7%	4.5%	8.6%
2006	1.7%	7.1%	1.0%	3.1%	4.1%	12.3%	3.9%	7.1%

High School Students

	School Year Within-District Transfers				Summer Within-District Transfers			
	White Students	African American Students	Asian Students	Latino Students	White Students	African American Students	Asian Students	Latino Students
1995	1.4%	4.1%	0.5%	1.8%	1.4%	4.5%	1.3%	2.1%
1996	0.8%	3.7%	0.3%	1.5%	1.3%	3.9%	0.9%	1.6%
1997	0.8%	3.1%	0.4%	1.2%	1.4%	4.2%	1.7%	2.1%
1998	0.8%	2.9%	0.5%	1.3%	1.3%	4.7%	0.8%	2.1%
1999	1.0%	4.5%	0.7%	2.5%	1.1%	4.2%	1.3%	2.0%
2000	0.9%	3.0%	0.4%	1.5%	1.4%	3.8%	1.3%	2.0%
2001	0.9%	2.8%	0.5%	1.6%	1.1%	3.7%	0.8%	1.7%
2002	0.7%	3.0%	0.4%	1.6%	0.9%	3.8%	0.6%	1.7%
2003	0.8%	2.8%	0.3%	1.4%	1.1%	4.8%	0.9%	1.9%
2004	0.7%	2.9%	0.5%	1.1%	1.3%	4.0%	1.3%	1.8%
2005	0.6%	2.8%	0.3%	1.2%	1.0%	3.5%	0.9%	1.7%
2006	0.6%	2.7%	0.2%	1.2%	1.1%	3.1%	0.9%	1.5%

TABLE B11

Out of Chicago Transfers by Race/Ethnicity

Elementary School Students

	School Year Out of Chicago Transfers				Summer Out of Chicago Transfers			
	White Students	African American Students	Asian Students	Latino Students	White Students	African American Students	Asian Students	Latino Students
1995	3.9%	2.4%	4.1%	3.0%	6.0%	2.6%	5.1%	2.9%
1996	3.8%	2.3%	3.9%	2.9%	6.2%	2.6%	5.3%	3.0%
1997	3.7%	2.4%	3.3%	2.9%	5.9%	2.9%	5.7%	3.2%
1998	3.5%	2.3%	3.2%	2.8%	6.3%	3.0%	5.2%	3.1%
1999	4.0%	2.3%	4.0%	3.1%	6.1%	3.0%	5.1%	3.4%
2000	4.0%	2.5%	3.7%	3.2%	6.1%	2.9%	5.6%	3.3%
2001	4.3%	2.6%	4.1%	3.1%	5.9%	3.1%	5.5%	3.6%
2002	4.2%	2.8%	4.4%	3.3%	5.6%	3.2%	5.5%	3.5%
2003	4.3%	3.3%	4.5%	3.4%	6.5%	4.0%	5.6%	3.8%
2004	4.1%	3.1%	3.6%	3.1%	6.6%	3.9%	5.7%	4.0%
2005	4.0%	3.2%	3.9%	3.4%	6.4%	3.9%	6.4%	4.2%
2006	3.4%	3.1%	3.8%	3.2%	5.2%	3.9%	5.7%	3.7%

High School Students

	School Year Within-District Transfers				Summer Within-District Transfers			
	White Students	African American Students	Asian Students	Latino Students	White Students	African American Students	Asian Students	Latino Students
1995	3.0%	2.2%	2.1%	3.2%	4.7%	2.2%	2.8%	3.7%
1996	3.2%	2.0%	1.7%	3.3%	4.6%	2.0%	3.6%	3.2%
1997	3.4%	1.9%	1.9%	3.5%	4.5%	2.2%	3.9%	3.1%
1998	3.7%	2.0%	2.7%	4.1%	4.1%	2.2%	3.0%	2.8%
1999	3.2%	1.9%	1.7%	3.7%	4.1%	2.1%	3.3%	2.8%
2000	3.2%	1.9%	2.1%	3.4%	4.0%	2.2%	3.7%	2.7%
2001	3.4%	2.0%	2.2%	3.3%	3.9%	2.2%	4.1%	2.8%
2002	3.1%	2.1%	2.7%	3.4%	3.5%	2.3%	3.7%	2.8%
2003	3.8%	2.6%	2.8%	4.1%	3.8%	2.7%	3.2%	3.0%
2004	2.7%	2.9%	2.1%	3.7%	4.6%	2.8%	2.8%	3.2%
2005	3.2%	2.7%	3.0%	4.0%	4.3%	3.1%	3.4%	3.5%
2006	2.9%	2.8%	1.6%	4.4%	3.3%	2.9%	2.9%	2.9%

TABLE B12

Mobility Rates by Socio-Economic Status

	Elementary School Students				High School Students			
	School Year In-Mobility Rate		Summer In-Mobility Rate		School Year In-Mobility Rate		Summer In-Mobility Rate	
	Low SES	High SES	Low SES	High SES	Low SES	High SES	Low SES	High SES
1995	10.1%	5.5%	12.5%	7.4%	5.4%	2.1%	5.8%	2.3%
1996	9.5%	5.1%	13.3%	8.7%	5.4%	2.2%	4.6%	1.7%
1997	9.4%	5.2%	13.5%	7.6%	4.7%	1.8%	5.4%	2.0%
1998	9.6%	4.7%	13.9%	7.6%	3.7%	1.5%	5.4%	2.1%
1999	9.2%	4.5%	13.5%	7.8%	5.6%	2.2%	5.1%	2.0%
2000	8.5%	5.0%	12.0%	7.4%	3.7%	1.6%	4.3%	2.1%
2001	10.1%	5.4%	15.2%	9.4%	5.7%	3.1%	7.2%	3.7%
2002	10.5%	5.1%	16.5%	9.1%	6.0%	3.1%	7.4%	4.1%
2003	11.0%	5.1%	17.2%	9.2%	5.6%	2.8%	8.4%	4.3%
2004	10.7%	4.7%	18.2%	9.1%	6.0%	2.4%	7.0%	3.7%
2005	11.1%	4.6%	18.2%	9.5%	5.7%	2.6%	6.5%	3.9%
2006	10.7%	4.7%	16.6%	8.4%	6.1%	2.7%	6.1%	3.7%

TABLE B13

Within-District Transfers and Residential Mobility

	Elementary School Students				High School Students			
	School Year Within-District Transfers		Summer Within-District Transfers		School Year Within-District Transfers		Summer Within-District Transfers	
	Total	With a Residential Move	Total	With a Residential Move	Total	With a Residential Move	Total	With a Residential Move
1995	6.9%	5.5%	10.0%	7.1%	3.0%	1.0%	3.3%	1.2%
1996	6.1%	4.2%	10.5%	6.9%	2.6%	0.7%	2.8%	0.9%
1997	6.2%	4.0%	9.9%	7.4%	2.2%	0.6%	3.2%	1.0%
1998	6.0%	4.9%	10.1%	7.3%	2.1%	0.8%	3.3%	1.0%
1999	5.9%	4.7%	9.9%	7.1%	3.3%	1.0%	3.0%	0.9%
2000	5.6%	4.5%	9.1%	6.6%	2.2%	0.7%	2.8%	0.9%
2001	5.2%	4.2%	9.8%	6.9%	2.1%	0.6%	2.6%	0.8%
2002	5.4%	4.3%	10.0%	6.7%	2.1%	0.7%	2.6%	0.9%
2003	5.5%	4.4%	10.3%	7.0%	2.0%	0.7%	3.2%	1.1%
2004	5.2%	4.2%	10.3%	7.0%	2.0%	0.7%	2.9%	0.9%
2005	5.2%	4.2%	10.6%	7.2%	1.9%	0.7%	2.5%	0.8%
2006	4.8%	3.8%	9.3%	6.2%	1.9%	0.7%	2.3%	0.7%

TABLE B14

Residential Mobility among CPS Students

	All Students	White Students	African American Students	Asian Students	Latino Students
1995	20.0%	15.0%	21.1%	16.0%	20.3%
1996	19.6%	15.0%	20.4%	13.6%	20.5%
1997	18.6%	13.3%	20.1%	13.5%	18.3%
1998	18.5%	12.8%	20.7%	12.6%	17.4%
1999	18.2%	12.2%	20.3%	11.5%	17.4%
2000	17.4%	12.0%	19.2%	12.4%	16.6%
2001	17.2%	11.1%	19.3%	12.4%	16.3%
2002	18.0%	11.3%	20.4%	12.3%	16.7%
2003	18.1%	10.8%	21.2%	12.4%	16.1%
2004	17.6%	10.4%	20.5%	12.1%	15.9%
2005	18.2%	10.3%	21.1%	10.8%	16.8%
2006	17.4%	9.9%	20.2%	11.9%	16.0%

TABLE B15

Moving to Substantially Better Schools

Elementary School Movers Within-District

	School Year			Summer		
	All	No Residential Move	Residential Move	All	No Residential Move	Residential Move
1995	21.6%	13.0%	23.3%	28.9%	38.1%	26.9%
1996	20.6%	16.8%	21.7%	28.9%	33.8%	27.6%
1997	22.6%	19.9%	23.8%	27.6%	36.1%	25.7%
1998	21.5%	15.3%	22.6%	29.4%	38.5%	27.1%
1999	21.5%	16.4%	22.3%	28%	37.2%	25.7%
2000	21.0%	15.2%	22.0%	28.3%	36.2%	26.5%
2001	21.0%	15.3%	22.1%	27.3%	34.6%	25.5%
2002	21.3%	13.3%	22.7%	28.9%	39.4%	26.0%
2003	21.0%	16.5%	21.8%	31.2%	41.7%	28.3%
2004	21.0%	14.6%	22.1%	30.8%	41.2%	27.8%
2005	21.1%	17.9%	21.7%	31.0%	40.7%	28.3%
2006	20.5%	12.2%	22.2%			

High School Movers Within-District

	School Year			Summer		
	All	No Residential Move	Residential Move	All	No Residential Move	Residential Move
1995	15.2%	12.2%	19.4%	27.1%	25.6%	28.1%
1996	11.3%	8.9%	15.9%	29.4%	26.2%	33.2%
1997	16.3%	13.7%	21.2%	28.5%	26.9%	30.2%
1998	15.3%	9.5%	22.0%	31.7%	28.3%	34.0%
1999	16.2%	12.4%	21.3%	28.0%	26.2%	29.4%
2000	14.5%	12.0%	17.5%	27.7%	25.7%	29.7%
2001	15.9%	13.4%	19.3%	28.0%	24.3%	31.8%
2002	19.4%	12.8%	27.6%	33.7%	30.8%	36.3%
2003	20.9%	17.5%	25.0%	32.0%	32.7%	31.4%
2004	18.3%	13.9%	23.9%	39.4%	40.7%	38.0%
2005	15.2%	10.5%	21.8%	32.0%	29.9%	33.9%
2006	17.3%	15.0%	20.6%			

Appendix C:
Modeling the Race Gap in Student Mobility

In order to determine which factors contribute to the growing gap between African American students and white and Asian students in elementary schools, we use a statistical model to estimate the probability of transferring from one CPS school to another CPS school, taking into account a variety of student and school factors. The analysis uses data from 1999–2000 to 2005–06 and includes students enrolled in 507 elementary schools. The school year analysis is based on 2,036,333 student records, and the summer analysis is based on 1,764,562 student records.[65] Separate analyses are run for transfers that occur during the school year and transfers that occur during the summer.

Given the structure of the data, we use three-level hierarchical models to take into account the nesting of students within years and within schools. Level one represents students, level two represents time/years, and level three represents schools. Students are nested in the school in which they are enrolled at the beginning of the period under study. For example, students are nested in the school where they are enrolled in September for the school year analysis and in May for the summer analysis.

The model for transfers for elementary students that take place during the school year takes the following form:

Level 1 Model

$$\Pr(\text{Changing Schools Within District} = 1) = \varphi_{itj}$$

$$\text{Log}\left(\frac{\varphi_{itj}}{1-\varphi_{itj}}\right) = \eta_{itj}$$

$$\begin{aligned}\eta_{itj} = {} & \pi_{0tj} + \pi_{1tj}(\text{Latino})_{itj} + \pi_{2tj}(\text{African American})_{itj} + \pi_{3tj}(\text{Non CHA Residential Move})_{itj} + \\ & \pi_{4tj}(\text{CHA Residential Move})_{itj} + \pi_{5tj}(\text{Previous Resident of CHA})_{itj} + \\ & \pi_{6tj}(\text{Living in High Poverty Neighborhood})_{itj} + \pi_{7tj}(\text{Living in Low Poverty Neighborhood})_{itj} + \\ & \pi_{8tj}(\text{Access to New Schools})_{itj} + \pi_{9tj}(\text{\% Going to Magnet School in Same Area})_{itj} + \\ & \pi_{10tj}(\text{\% Going to Charter School in Same Area})_{itj} + \\ & \pi_{11tj}(\text{Number of Neighborhood Schools Better than Own School})_{itj} + \\ & \pi_{12tj}(\text{Number of Magnet Schools Better than Own School})_{itj} + \\ & \pi_{13tj}(\text{Number of Charter Schools Better than Own School})_{itj} + \\ & \pi_{14tj}(\text{No Information on Schools Better than Own School})_{itj} + \pi_{15tj}(\text{Male})_{itj} + \\ & \pi_{16tj}(\text{Special Education})_{itj} + \pi_{17tj}(\text{Retained})_{itj} + \pi_{18tj}(\text{Grade K})_{itj} + \pi_{19tj}(\text{Grade 1})_{itj} + \\ & \pi_{20tj}(\text{Grade 2})_{itj} + \pi_{21tj}(\text{Grade 4})_{itj} + \pi_{22tj}(\text{Grade 5})_{itj} + \pi_{23tj}(\text{Grade 6})_{itj} + \\ & \pi_{24tj}(\text{Grade 7})_{itj} + \pi_{25tj}(\text{Grade 8})_{itj} + e_{itj}\end{aligned}$$

Level 2 Model

$$\pi_{0tj} = \beta_{00j} + \beta_{01j}(\text{Trend})_{tj} + \beta_{02j}(\text{School Achievement Level})_{tj} + \beta_{03j}(\text{No Score})_{tj} + \beta_{04j}(\text{On Probation or Not Making AYP})_{tj} + \beta_{05j}(\text{Closing Announcement})_{tj}$$

$$\pi_{1tj} = \beta_{10j} + \beta_{11j}(\text{Trend})_{tj} + \beta_{12j}(\text{School Achievement Level})_{tj} + r_{1jt}$$

$$\pi_{2tj} = \beta_{20j} + \beta_{21j}(\text{Trend})_{tj} + \beta_{22j}(\text{School Achievement Level})_{tj} + r_{2jt}$$

$$\pi_{ptj} = \beta_{p0j} + \beta_{31j}(\text{Trend})_{tj} \text{ for p = 3 through 25 if Trend needed, otherwise, } \pi_{ptj} = \beta_{p0j}$$

Level 3 Model

$$\beta_{00j} = \gamma_{000} + \gamma_{001}(\text{Magnet})_j + \gamma_{002}(\text{Charter})_j + u_{00j}$$

$$\beta_{01j} = \gamma_{010} + \gamma_{011}(\text{Magnet})_j + \gamma_{012}(\text{Charter})_j$$

$$\beta_{10j} = \gamma_{100} + \gamma_{101}(\text{Magnet})_j + \gamma_{102}(\text{Charter})_j + u_{10j}$$

$$\beta_{20j} = \gamma_{200} + \gamma_{201}(\text{Magnet})_j + \gamma_{202}(\text{Charter})_j + u_{20j}$$

$$\beta_{pqj} = \gamma_{pq0} \text{ for the rest of the coefficients}$$

The model for transfers that take place during the summer does not include the dummy variable that describes which schools were slated for closing, but the rest of the analysis is the same.

Description of Variables Used in the Analyses

Student-Level Variables

Residential Mobility: Based on administrative records, we compare the address of students at different points in time to determine whether they changed residences. The variable was coded 1 for students who made a residential move during the time period; coded 0 otherwise. To measure the effect of residential moves originating from CHA, we parcel out residential mobility into moves out of private housing and moves out of CHA housing.

Previous CHA Resident: To capture whether previous residents of CHA were subject to further instability in housing and how that affects school mobility, we create a dummy variable to identify students who lived previously in public housing but are not CHA residents currently.

Economic Status: Based on the 2000 U.S. Census data information, we attach economic information to each student based on the census block group where they reside. Our model uses two dummy variables to characterize (1) students living in a neighborhood characterized by high poverty and (2) students living in a neighborhood characterized by low poverty. These groups are based on the distribution of all CPS students; students one standard deviation above or below are classified as living in high poverty or low poverty neighborhoods.

School Choice: This set of variables captures other options available to students based on the enrollment patterns of other students living in the same census block group.

- Access to New Schools: Coded 1 for students who live in a census block group where other students in her same grade attend a new school; coded 0 otherwise.
- Percent Going to Magnet Schools in Same Area: For each student, the percent of students in the same grade in her census block group attending a magnet school.
- Percent Going to Charter Schools in Same Area: For each student, the percent of students in the same grade in her census block group attending a charter school.
- Number of Schools Better than Current School: For each student, the number of the other neighborhood/magnet/charter schools attended by students in the same grade in the same census block group that have achievement levels higher than her school. Achievement levels are measured by the percent of students meeting or exceeding norms in the reading portion of the ISAT.
- No Information about Schools Better than Current School: There was a very small percentage of students for whom the previous variables about schools better than the current one are not available. For these students, this variable was coded 1; the previous three variables were coded 0. For students with information on schools better than their current one, this variable takes a value of 0.

Other Demographic and Academic Information

- Gender, Special Education Status, Retained, and Current Grade: These are a series of dummy variables that are coded 1 for males, for students in special education, for students who were retained in the same grade, and for the grade in which the student is enrolled (a series of dummy variables representing each grade—kindergarten through eighth grade—where third grade is the omitted variable).

School Level Variables

The school level variables can be characteristics of the school that do not change over time (e.g., whether the school is a magnet school) or they could be characteristics of the school that change over time (e.g., whether a school is on probation). The following time invariant variables are entered in level three:

- Magnet: Coded 1 for magnet schools; coded 0 otherwise.
- Charter: Coded 1 for charter school; coded 0 otherwise.

The following time varying variables are entered in level two:

- School Achievement: Percent of students meeting or exceeding standards on reading ISAT.
- No Score: Coded 1 for schools for which no achievement information was available because of grade structure or new school; coded 0 otherwise.

- On Probation or Not Making AYP: Coded 1 for schools that were either on probation or were not making AYP; coded 0 otherwise.
- Closing Announcement: Coded 1 for schools that were closing at the end of the school year; coded 0 otherwise (only included in the school year analysis).

Endnotes

Executive Summary

1 Kerbow (1995a); Kerbow (1996); Kerbow et al. (2003).
2 Kerbow (1997).
3 Lipman and Person (2007); Fisher et al. (2002); Lash and Kirkpatrick (1990).
4 Lash and Kirkpatrick (1990); Fisher et al. (2002).
5 Teske and Schneider (2001).
6 Kerbow (1995b).
7 Kerbow (1996).
8 Rumberger et al. (1999).
9 Bureau of Labor Statistics (2008); Goerge et al. (2007).
10 Chicago Rehab Network (2008); Chicago Rehab Network (2007).
11 Schachter (2004); Crowley (2003).
12 Two schools were closed prior to 2000: one in 1998 and one in 1999. After 2000, four schools were closed because of poor building conditions. Three schools were closed for purposes of alternative use, and five schools were closed for changes in educational focus. All eight of these schools had displayed chronically low levels of academic achievement, and plans were underway to open new schools in these buildings. Six schools were closed for unknown reasons.
13 Most new schools did not require construction of a new building. In some cases, new schools were opened in buildings that had previously housed Catholic or CPS schools. In addition, a number of new schools share the same building.
14 A voluntary school move occurs when a student chooses to transfer to a new school. It is the opposite of a natural move, which can occur, for example, when students change school because they are promoted to a grade not served by their previous schools. See Appendix A for a complete description of natural moves.
15 See Allensworth (2005) for more information regarding the declining dropout rate in CPS high schools.
16 Bureau of Labor Statistics (2008); Goerge et al. (2007); Chicago Rehab Network (2008).
17 After 2000, 42 schools were closed.
18 Lipman and Person (2007).

Chapter 1

19 In a review of mobility indicators used by 54 school districts and state boards of education, Ligon and Paredes (1992) found as many as 33 different mobility formulas in use.
20 Ligon and Paredes (1992).
21 The disaggregated out-mobility and in-mobility rates only include data through 2006. In the fall of 2007, CPS began using a new student database system. This new system required a different set of codes for identifying the reasons why students left their previous school; however, it appears that these new codes were not consistently used at the school level. Consequently, the "leave reasons" for 2007 do not appear to be reliable; as a result, we cannot disaggregate the out-mobility or in-mobility statistics for this year.
22 Goerge et al. (2007).
23 Cunningham et al. (2001).
24 As of January 1, 2005, the legal age for any Illinois student to dropout increased to 17. Allensworth (2005) documents the decrease in dropout rates even before this change takes place. In 2005, however, there is a slight increase in the "other" category in Figures 4A and 4C. This indicates that some students who were previously coded as dropouts might have been coded as "other," which would further reduce the dropout rate.

Chapter 2

25 Alexander et al. (1996); Kerbow (1996); Rumberger (2003).
26 Goerge et al. (2007); Cunningham et al. (2001).

Chapter 3

27 Rumberger (2003); Kerbow et al. (2003).
28 Rumberger et al. (1999).
29 We focus on students who transfer within the district because we can determine whether they change residences and we can gather information about the school they ended up transferring into. We lack this kind of information for students who transfer outside CPS.
30 Bureau of Labor Statistics (2008); Goerge et al. (2007).
31 Chicago Rehab Network (2008); Chicago Rehab Network (2007).
32 Schachter (2004).
33 Schachter (2004).
34 Hacker (2000).
35 Beginning in 2001, there was a small increase in the gap between African American high school students and other CPS students. This gap, however, was substantially smaller than the one that appeared among elementary students.
36 We measure academic quality of schools based on the reading portion of the Iowa Test of Basic Skills (ITBS). For elementary schools, we aggregate the test scores for all students in the school in grades three to eight. For high schools, we aggregate ITBS scores from the previous year for incoming ninth grade students. We use the Normal Curve Equivalent (NCE) scores to calculate the school level measure because they do not reflect the grade structure of the school. We define a substantially better school as one that has an NCE score that is at least 4 points higher than the previous school. In 2005, an elementary school at the 25th percentile had a NCE score of 40 points. An elementary school in the 50th percentile had a NCE score of 44 points, and an elementary school in the 75th percentile had a NCE score of 48 points. In general, and for most years, four NCE points is the difference between schools in different quartiles of the distribution. Most students who change schools within the district move to very similar schools. The average is 0 points for moves that take place during the school year and around 1 point for moves that happen during the summer.

37 Students in sixth through tenth grade who changed schools within the last three years were asked whether any of the following factors were reasons for their change in schools: a move to a different house or apartment, old school was not safe, bad grades at old school, getting into trouble at old school, better academic program at new school, or better sports program at new school.
38 This analysis reflects the fact that the ITBS test was given for the last time in the spring of 2005. School year data can be calculated up to 2005; summer data includes the summer of 2006, since it is based on the spring data of 2005.
39 Results from the 2007 survey support this hypothesis. Among students who changed schools during the summer, those who also made a simultaneous residential move were less likely to name a better academic program at their new school as the reason for their move than students who did not make a simultaneous residential move.
40 Results from the 2007 survey of high school students partially support this claim. Students who changed schools during the school year were more likely to name one of the following as the reason for their transfer: a residential move, concerns about safety at the old school, bad grades at the old school, or getting into trouble at the old school. There was no significant difference between students who moved during the school year and students who moved during the summer in naming a better academic program at the new school as a reason for their move.

Chapter 4

41 Between 1995 and 2000, two regular CPS schools were closed.
42 Seven of these schools were also part of the Chicago High School Redesign Initiative.
43 We only examine the effect on stability rates because students who transfer into new schools are not included in the in-mobility indicator. See Appendix A for an explanation.
44 CPS considers schools with enrollments greater than 80 percent of their design capacity to be overcrowded.
45 In their Request for Proposals, the Office of New Schools states that it "encourage[s] proposals from school developers who can locate their own buildings, particularly in the 25 priority communities and in those areas of the city that are experiencing severe overcrowding."
46 We only look at the effect on the in-mobility rates because students who are forced to move out of a closing school are not included in the stability indicator. See Appendix A for an explanation.
47 Lipman and Person (2007).
48 Popkin et al. (2002).
49 In 2007, schools that failed to make AYP had, on average, student populations that were nearly two-thirds African American.

Chapter 5

50 We focus on elementary students since the gap is most evident at this level. Among high schools, a mobility gap is only evident in summer in-mobility trends, and it is quite small in size.
51 We do not include data from the 2006–07 year because we lack some of the necessary variables for the analysis.
52 Teske and Schneider (2001) find that families are most likely to learn about school choice options through friends and relatives.
53 We use the ISAT to measure school academic quality because the ITBS was discontinued after 2005.
54 The probation policy was first implemented in 1996, and it is still in force. Previously schools that did not have a sufficient percent of students meeting or exceeding national norms on the ITBS were placed on probation. Currently schools are put on probation based on the level and progress on different indicators.
55 Students who transfer during the summer because they were previously enrolled in closing schools are classified as making natural moves. As a result, they are excluded from the analysis of summer transfers, similar to other students making other kinds of natural moves.
56 The unexplained portion of the race gap might be a result of differences between African American students and white and Asian students in their concerns about school safety, discipline issues, or bad grades, which the 2007 survey results show are significant reasons for changing schools during the school year. Unfortunately, student level data measuring these factors between 2000 and 2006 is not available.

Chapter 6

57 Among high school students, higher stability rates are the result of fewer students dropping out, while lower in-mobility rates are the result of fewer within-district transfers.
58 Jacob (2004).

Appendix A

59 These moves may also be called promotional school changes (Rumberger, 2003) or systemic changes (Ligon and Paredes, 1992).
60 Most typically, this occurs when students leave K–8 elementary schools after completing eighth grade. There are a few elementary schools with grade structures other than K–8. A student who attends a K–3 school and leaves that school after completing third grade is classified as making a natural move out of that school.
61 Achievement Academies (AA) are two-year programs for students who are no longer eligible to be enrolled in elementary schools because of their age but who have not yet met the promotion criteria for entry into a high school. They are housed inside regular high schools where students typically transfer upon completion of the AA program. Academic Preparatory Centers (APC) targeted the same population of students as AAs and had a similar mission, but they were not housed within regular high schools. Typically students only spent one year at an APC. APCs were first introduced in 1996, but they were phased out by 2003 when they were replaced by AAs.
62 Most typically, this occurs when students enter kindergarten, when they enter ninth grade for the first time or when they enter an Academic Preparatory Center or an Achievement Academy. There are, however, a few high schools with a grade structure that includes seventh and eighth grades. In most cases, the size of the ninth grade cohort increases dramatically when compared to the eighth grade cohort. Students who joined these schools in ninth grade are described as making a natural move, even though ninth grade is not the first grade served by the school.
63 This is a rare circumstance, occurring mainly when the grade structure of a school changes from one year to the next. For example, a school might offer grades K–2 and 5–6 one year and offer grades K–3 and 5–7 the next year. All of the students entering fifth grade the second year are new to the school; but because there were no fourth grade students in the school the previous year, these students were not counted in the in-mobility indicator.
64 We do not include alternative schools, Academic Preparatory Centers, and Achievement Academies in our analyses.

Appendix C

65 The school year analysis uses enrollment data from September of each year, while the summer analysis uses enrollment data from May of each year. In general, there is some attrition in a school's enrollment between September and May, which accounts for the difference in the two sample sizes. In addition, the summer analysis does not include students who make natural moves out of or into schools.

About the Authors

Marisa de la Torre

Marisa de la Torre is a Senior Research Analyst at the Consortium on Chicago School Research. Before joining the Consortium, she worked for the Chicago Public Schools at the Office of Research, Evaluation, and Accountability. Her previous research focused on the Chicago High School Redesign Initiative. She received a master's degree in economics from Northwestern University.

Julia Gwynne

Julia Gwynne is a Senior Research Analyst at the Consortium on Chicago School Research. Her prior research focused on the effects of the probation policy on elementary schools in Chicago and on the transition from high school to postsecondary opportunities. She received a PhD in sociology from the University of Chicago.

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CHICAGO SCHOOL RESEARCH
AT THE UNIVERSITY OF CHICAGO
URBAN EDUCATION INSTITUTE

ccsr.uchicago.edu | 1313 East 60th Street | Chicago, Illinois 60637 | T 773-702-3364 | F 773-702-2010

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