

Post-Pandemic Onset Public School Student Enrollment and Mobility in Virginia

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Summary

The COVID-19 pandemic created unprecedented disruptions to school systems around the globe and Virginia's public school system was no exception. These disruptions likely impacted families' decisions about whether and where to enroll their children in public schools. However, many basic facts about how public school enrollment changed in the post-COVID era are not yet well established. In partnership with the Virginia Department of Education (VDOE), we analyzed statewide administrative data that allowed us to track individual students over time throughout the Commonwealth of Virginia to highlight how enrollment changed during the first full school year after the onset of the COVID-19 pandemic. Our key findings include the following:

- Statewide enrollment in pre-kindergarten through grade 12 dropped by four percent (53,830 students) between the pre-pandemic fall of 2019 and the first post-pandemic onset fall of 2020.
- Enrollment drops occurred in most grade levels but were concentrated in pre-kindergarten and kindergarten. The largest enrollment declines were among White students and students who were not economically disadvantaged.

- Changes in enrollment were explained mostly by decreases in the number of new students entering the Virginia public school system, although there was also an uptick in students exiting the system. The changes in exits were driven largely by increases in homeschooling and private school enrollment.
- Among students who remained in the Virginia public school system, there was a decline in the share of students who moved between schools (by five percent) and between divisions (by nine percent), from one year to the next. We saw the largest declines in mobility for Black students and students with disabilities.

Continuing to track these patterns will have important implications given the connection between student enrollment and school funding as well as student well-being and development.

Tracking Enrollment Patterns

The COVID-19 pandemic created unprecedented disruptions to school systems around the globe and Virginia's public school system was no exception. These disruptions likely impacted families' decisions about whether and where to enroll their children in public schools. However, many basic facts about how public school enrollment changed in the post-COVID era are not yet well established. How did

student enrollment in the state’s public school system shift after the pandemic began? Did these changes vary by student grade level or demographic characteristics? Were enrollment shifts due to changes in the number of new enrollees or exits from the system? Were students transferring to new schools or divisions at different rates in the pandemic period? In partnership with the Virginia Department of Education (VDOE), we answer these questions with an analysis of statewide administrative data provided by the VDOE. These data allow us to track individual students over time throughout the Commonwealth of Virginia between school year 2009-10 to 2020-21 (the first full post-pandemic onset school year).

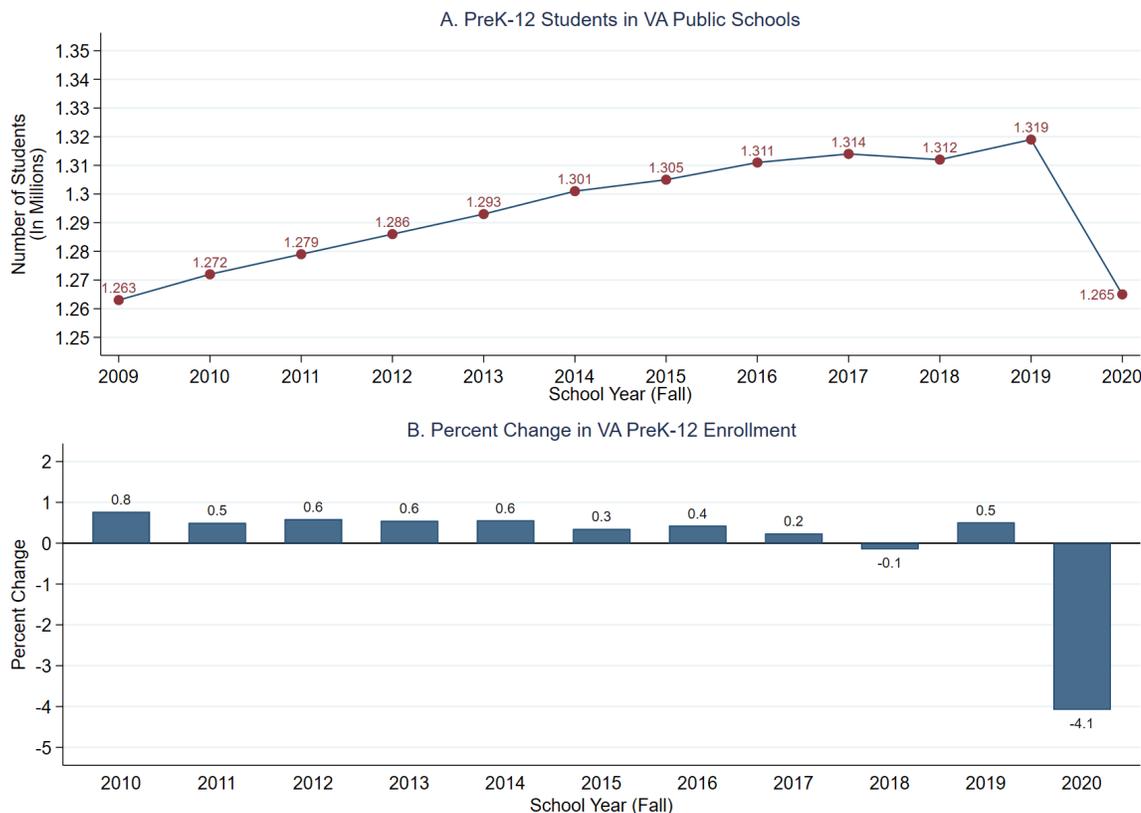
Statewide Post-Pandemic Onset Enrollment

We find that statewide student enrollment dropped quite dramatically in the fall of 2020. In Panel A of **Figure 1**, we plot the absolute number of students

in pre-kindergarten through grade 12 in the Virginia public school system as of the fall of a given year. Between fall of 2019 and fall of 2020, enrollment dropped by 53,830 students (from 1.319 million to 1.265 million). This equated to a four percent change in total statewide, more than five times the size of the largest year-to-year change in the previous decade, as shown in Panel B of **Figure 1**. Year-to-year changes in enrollment between 2009 and 2019 show that this post-pandemic onset drop is a marked departure from the pre-pandemic enrollment trend which saw enrollment increase by 0.44 percent annually on average.

Post-Pandemic Onset Enrollment Changes by Grade Level

Enrollment declines were not uniform across all grade levels. In **Figure 2**, shown on the following page, we show the percent change in enrollment between fall 2019 and fall 2020 by grade level in



light blue (relative to the average annual changes in the pre-COVID period in dark blue). The declines were much larger in the earliest grades, specifically, in pre-kindergarten, which saw a 26 percent decline that was more than six times the average percentage decrease across all students, and in Kindergarten where the 13 percent decline was more than three times the four percent decline in total

Figure 1. Trends in total statewide student enrollment and annual fall-to-fall percent change in total statewide student enrollment, 2009 to 2020

enrollment. Given pre-kindergarten is not compulsory in Virginia, we also explore enrollment changes after excluding pre-kindergarten students from our sample. When we do, we find that overall statewide enrollment dropped by three percent (compared to a four percent decline when including them). Grades one through six all saw similarly-sized declines between four and five percent. All of the declines represented a departure from the typical annual pre-COVID enrollment changes shown in dark blue. In contrast, grades seven through twelve all saw smaller changes (or no change at all). The exception was grade nine—typically a school transition grade—where the four

percentage decrease was similar in size to the average decline in grades one through six. The post-pandemic onset enrollment decline does not appear to be due primarily to changes in birthrates. In **Figure 3**, we plot the number of births statewide by year based on publicly available data from the National Center for Health Statistics. To impact pre-kindergarten and kindergarten enrollments in fall 2020, the birthrate would have had to substantially

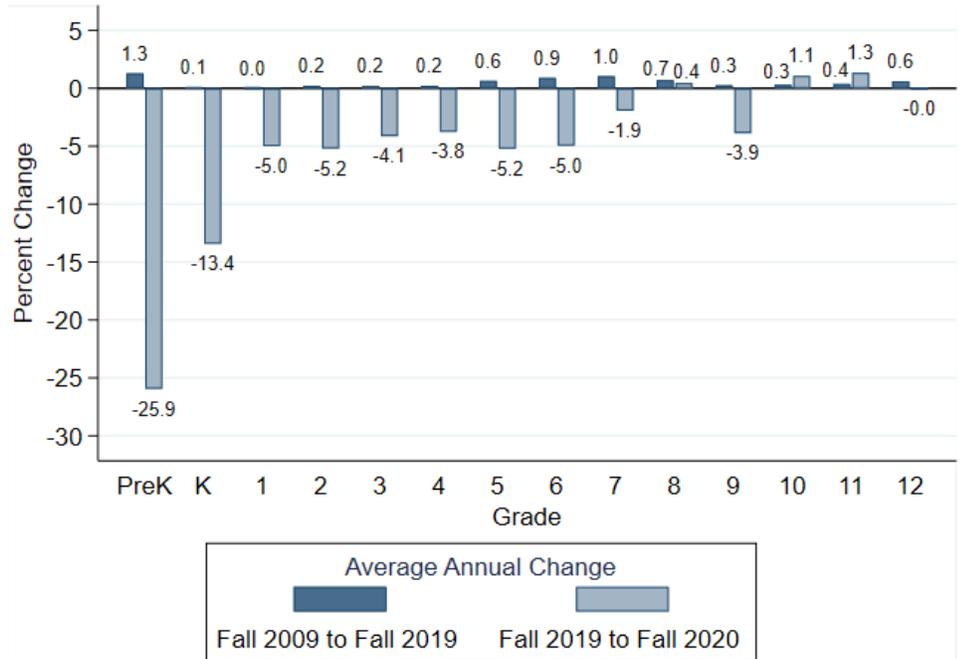


Figure 2. Percent change in enrollment, by grade, 2009 to 2019 and 2019 to 2020

and abruptly decline between 2014 and 2017 (the years when students in the pre-kindergarten and kindergarten cohorts in 2020 would have been born). We do see gradual declines in the number of births between 2015 and 2017, however, the magnitude is small when compared to the 2020 enrollment drop. Specifically, between 2014 and 2017 there was an overall decline of 2,909 births. This represents only about five percent of the 53,829-student decline in the total number of

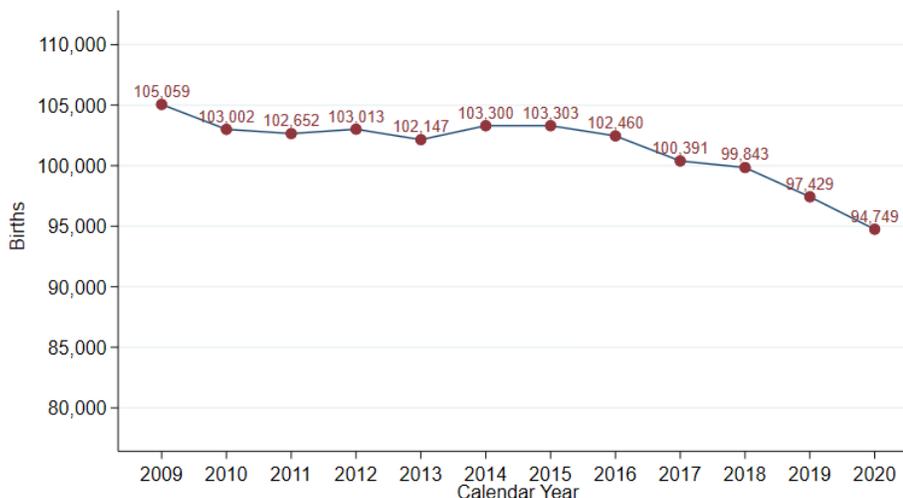


Figure 3. Number of births statewide, 2009 to 2020
 Source: National Center for Health Statistics

enrollees between 2019 and 2020 and only 13 percent of the 22,851-student decline in pre-kindergarten and kindergarten enrollment. While we cannot rule out birth rate changes as a contributor to the post-pandemic onset enrollment changes, it does not appear to be the sole or primary factor.

Post-Pandemic Onset Enrollment Changes by Subgroup

Enrollment changes also varied based on other student

characteristics. In **Figure 4**, we show the percent changes in enrollment from fall 2019 to fall 2020 in light blue, both overall and separately for a series of demographic characteristics as well as qualifications for educational services. Most notably, although we observe enrollment declines among all racial and ethnic groups examined, we find that the declines were largest among White students (a six percent drop). Declines were smaller among economically disadvantaged students (two percent) than those not classified as disadvantaged (six percent). Enrollment did not appear to decrease more among students classified as having a disability or students classified as an English Learner than students that were not identified for these services in a given year. For all subgroups examined, enrollment declines from fall 2019 to fall 2020 represented a departure from the average annual enrollment changes within that subgroup during the pre-COVID period, shown in dark blue in **Figure 4**.

New Enrollees Versus Exiters

These changes in overall enrollment are the sum of two types of enrollment decisions that families make each fall. First, families that had not enrolled their child in the public schools the prior year, decided whether to newly enroll their child. Second, families that had already enrolled their child in the public schools in the prior year decided whether to re-enroll their child. While rates of both new enrollments and re-enrollments decreased, we find that the bulk of the enrollment declines can be explained by a decrease in the number of students newly enrolling in

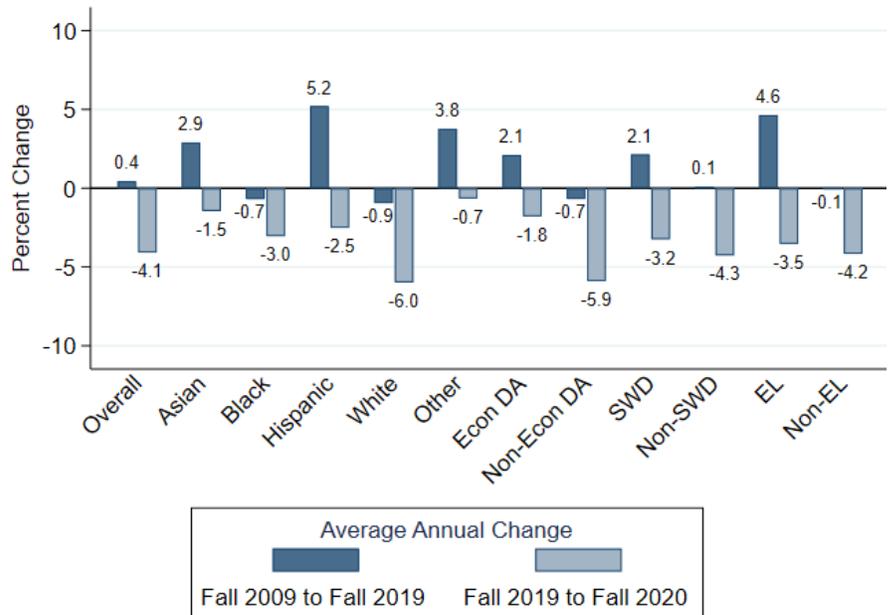


Figure 4. Percent change in enrollment, by student subgroup, 2009 to 2019 and 2019 to 2020

Note: Econ DA = economically disadvantaged; SWD = students with disabilities; EL = English Learners

the Virginia public school system more so than a decrease in the number of students who decided not to re-enroll. In **Figure 5**, we plot the number of “new enrollees” and the number of “re-enrollees” by year. New enrollees are defined as students who we observe in the fall of a given year in any public school in Virginia but who were not present for the fall of the previous year. [1] Re-enrollees are those

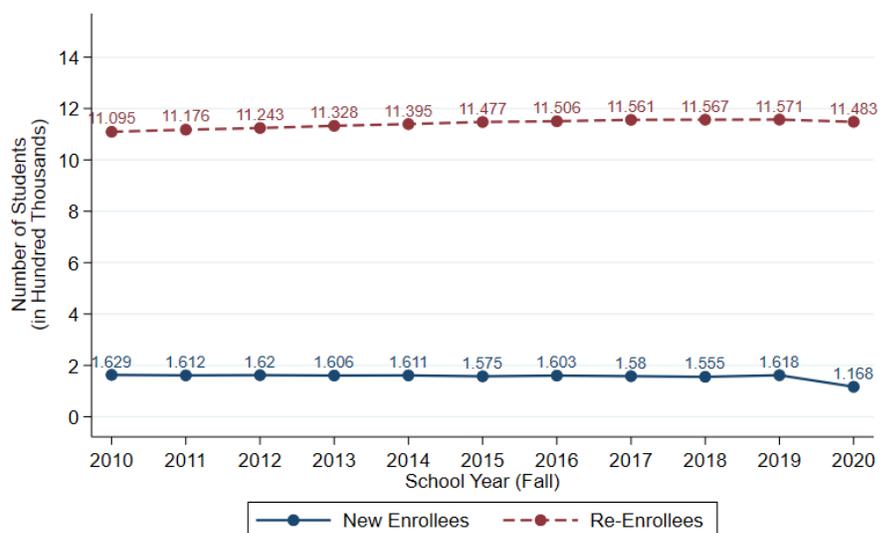


Figure 5. Number of new enrollees and re-enrollees statewide, 2010 to 2020

who were present in the fall of the previous year and who were also present in the fall of the given year. **Figure 5** shows both a decrease in the number of new enrollees as of the fall of 2020 and a decrease in the number of re-enrollees by fall 2020. However, the magnitude of the change in new enrollment is larger than the change in the number of re-enrollees. Specifically, the decline in the number of new enrollees represents 84 percent of the overall student enrollment decline between 2019 and 2020.

Any student who did not re-enroll is considered to have exited the Virginia public school system, and school divisions record a reason for each student's exit. Exiting the system could represent a variety of outcomes, including graduation, a move to a private school or homeschool arrangement, a move out of state, dropping out of school entirely, or an even more tragic outcome such as a student death. Panel A of Figure 6 shows the percent of exiting students by reason, among students who did not re-enroll in the fall of 2020. The majority did not re-enroll because they graduated from

high school (53 percent). Another 19 percent of the exiting students left to enroll in schools in another state while 9 percent left to be homeschooled and 8 percent enrolled in a private school.

The distribution of reasons that families gave for why their children did not re-enroll in fall 2020 was meaningfully different than the reasons given for why students did not re-enroll in fall 2019. We find that the increase in exits during the pandemic was largely driven by increases in the rate that families reported enrolling their children in homeschool and private school. In Panel B of Figure 6, we show that there was a 197 percent increase in the number of students exiting to be homeschooled and a 92 percent increase in the number of students exiting to enroll in private schools. The changes in exits to

homeschool and private school were much larger than the changes in rates of graduation, dropout, leaving the state, or any other type of exit—all of which declined modestly between fall of 2019 and fall 2020. However, the exact magnitudes of these changes may be somewhat

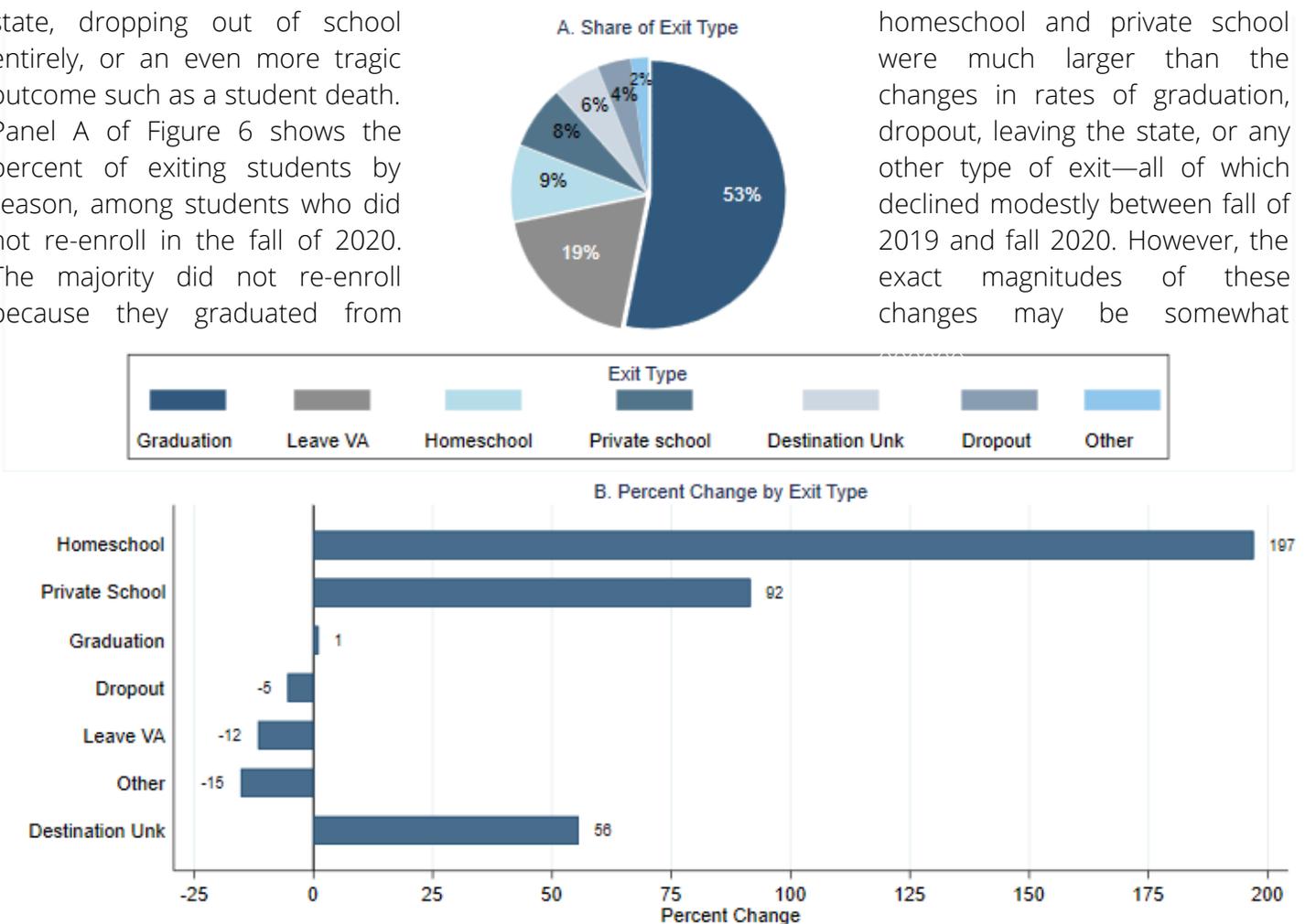


Figure 6. Reasons why students exited: share of exiting students by reason for fall 2020 and percent change in the number of exiting students by reason between fall 2019 and fall 2020

inaccurate given that we also observe a 56-percent increase in the number of exiting students whose destination is unknown.

Between-Division and Between-School Mobility

Finally, given there was variation in the pandemic response across schools and divisions, we examine changes in the share of re-enrollees that transferred between schools and between divisions. In **Figure 7**, shown on the next page, we plot the share of re-enrollees who

transferred schools sometime between fall of the previous year and the fall of a given year. Because school transfers could occur between or within divisions, we also show the share of re-enrollees who transferred between divisions (representing a subset of the between-school transfers). We find a decline in the share of re-enrollees who transferred both between divisions and between schools after the pandemic began. The overall change between fall 2019 and fall 2020 represents a five percent decline in between-school mobility and a nine percent decline in between-division mobility among re-enrollees. However, **Figure 7** shows that the magnitude of this change was not unprecedented in the pre-COVID period although these changes do not appear to be the continuation of a pre-pandemic trend of declining mobility. We note that between-school mobility as we have measured it includes expected structural moves, such as a move from a middle school to a high school (which is in part why we are most interested in whether there was a change in mobility rates over time).

In **Figure 8**, on the next page, we show the percent change in between-division and between-school

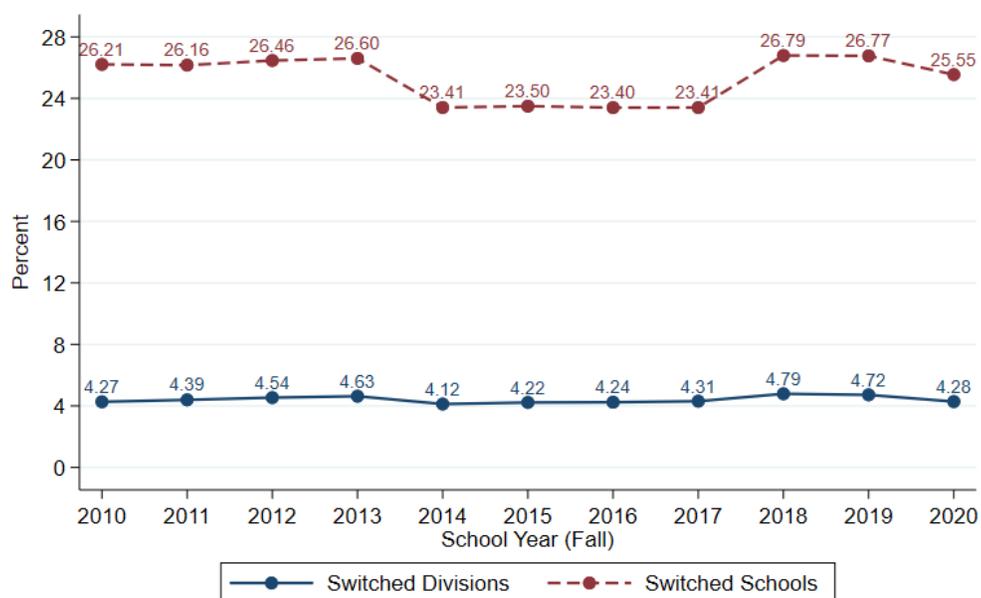


Figure 7. Percent of re-enrollees who switched schools (both within and between divisions) and percent who switched divisions, 2010 to 2020

mobility from fall 2019 to fall 2020 among re-enrollees by grade level and demographic subgroup. The declines in between-school mobility were quite a bit smaller among students in grades six to nine and among kindergarteners than the other grades. The between-division changes in mobility rates were similar across grade levels, although somewhat smaller for students in kindergarten through grade six (excepting grade 2). Interestingly, the change in both between-school and between-division mobility was much more pronounced among Black students than any other racial or ethnic group we examined. In other words, as of the fall of 2020, Black students stayed in their 2019 schools at higher rates than non-Black students. Additionally, economically disadvantaged students and students with disabilities saw larger declines in mobility than non-economically disadvantaged students and students without a disability.

Closing

The first full school year after the pandemic began came with dramatic changes to student enrollment

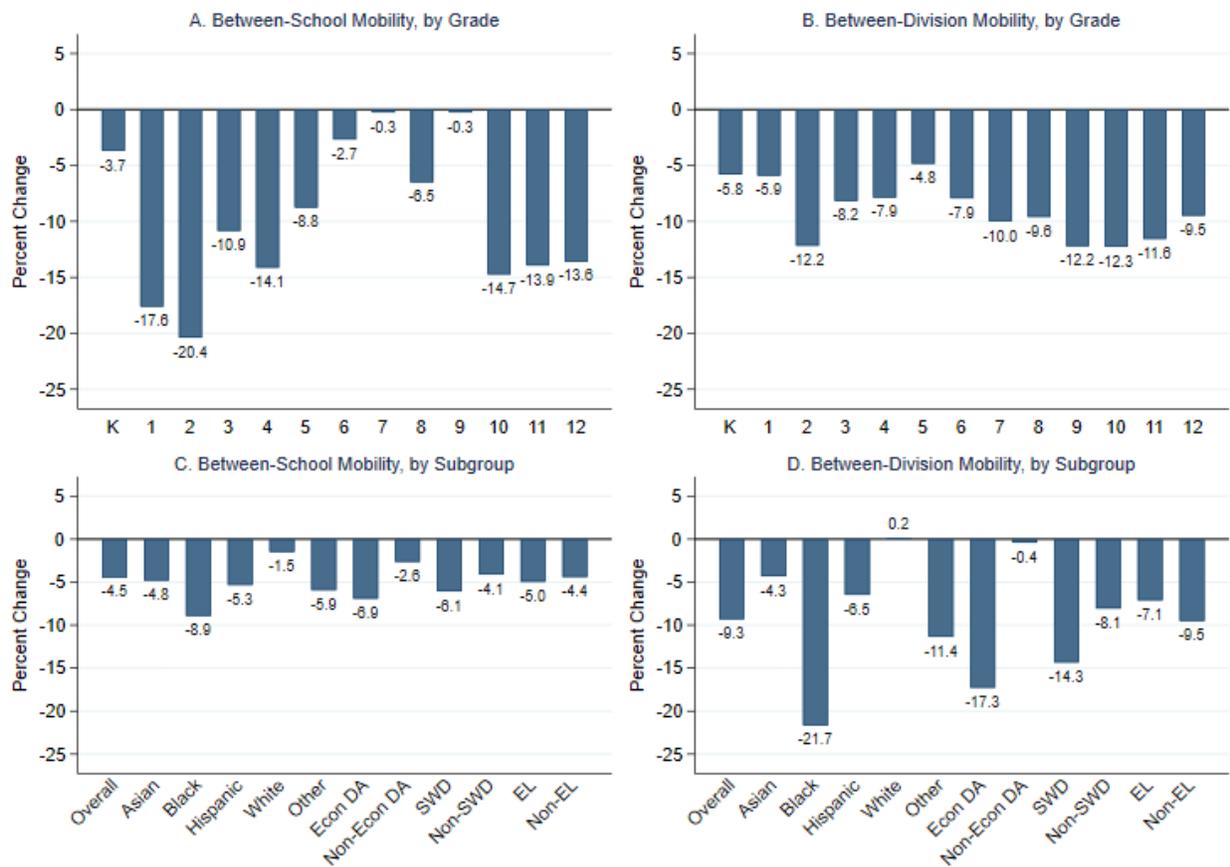


Figure 8. Percent change in share of re-enrollees switching schools and divisions from fall 2019 to fall 2020 by grade and student subgroup

Note: “Econ DA” = economically disadvantaged; SWD = students with disabilities; EL = English Learners

and mobility in Virginia’s public school system. Enrollment dropped significantly with the greatest declines among pre-kindergarten and kindergarten students, White students, and students not classified as economically disadvantaged. As a result, the overall composition of the statewide student population in fall 2020 became slightly older, less white, and more economically disadvantaged. Although we document these patterns, we are not yet able to provide clear explanations for them. Future research should tackle the extent to which these changes are the result of the pandemic, various divisions’ policy response to the pandemic, economic conditions, other factors, or some combination thereof. Our analysis leaves additional important questions unanswered including the issue of whether enrollment rebounded in the fall of 2021 and beyond. The fall 2021 enrollment data will not be available for our analysis until October 2022 at

the earliest. Continuing to track these patterns will have important implications given the connection between student enrollment and school funding as well as student well-being and development. Our research team plans to explore many of these questions in future work.

Endnote

[1] Note that if an individual student re-enrolls after an exit, that student will count as a “new enrollee” in two different years.

Acknowledgement

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