
Updated Evidence on Changes in College Applications, Admissions, and Enrollments

Focus on the Fall 2022 Admissions Cycle

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Executive Summary

The Admissions Research Consortium (ARC) is a collaborative research initiative that aims to help participating institutions gain insight into their own and their peers' admissions processes and outcomes, as well as changes in student behavior influenced by the covid-19 pandemic. Guided by a Core Advisory Committee (with representatives from the Association for Institutional Research [AIR], American Association of Collegiate Registrars and Admissions Officers [AACRAO], National Student Clearinghouse [NSC], and senior admission and enrollment practitioners) and a Research Advisory Committee composed of academic and institutional researchers, evidence and insights from ARC will inform future practice and policy in the years following the pandemic. Previously published research from this consortium examined changes in fall 2021 applications, admissions, and enrollment, with a focus on students' test score disclosure choices and stability in the characteristics of the student body over time (Howell et al., 2022a). The Consortium also enabled evidence on how first-year college grades, credit accumulation, and retention into the second year for fall 2022 first-year enrollees compared to prior cohorts of first-year students at ARC institutions (Edwards et al. 2023). This Research Brief provides an update, based on fall 2022 applications, admissions, and enrollment, on the stability of student body composition and students' score disclosure choices at ARC Institutions and situates evidence from the Consortium within broader trends in nationally representative data. These findings can be leveraged to inform discussions on future admission policies and practices as well as student support services.

More than 50 colleges, representing selective public and private four-year institutions in the U.S., provided College Board with data on their applications, admissions, and enrollment from fall 2018 to fall 2022. This information was merged with College Board assessment data to enable research on how college-going trends and outcomes were affected by pandemic-related disruptions. The data and analyses presented in this Research Brief are meant to inform admissions practitioners of point-in-time trends across a subset of institutions. The evidence based on Consortium data does not necessarily generalize to all higher education institutions, nor should the patterns documented be viewed as definitively stable in future years given the potential on-going and evolving effects of the pandemic on both students and institutions. ARC will continue as a multi-year research initiative to better understand longer-term trends and outcomes. Our research efforts will continue to rely on data from ARC institutions, expand to examine data that more broadly represent all higher education institutions, and incorporate findings from other researchers working in this space.

Our analysis of the fall 2021 application cycle featured three themes (Howell et al., 2022a). Below, we restate those three fall 2021 themes and provide updated evidence emerging from the initial analyses of fall 2022 college application cycle.

Theme 1 – Fall 2021: Between fall 2020 and fall 2021, the number of applications, offers of admission, and students enrolled increased at institutions participating in ARC, and at rates above and beyond prior years. Nearly all student subgroups experienced increases in applications, offers of admission, and enrollment between fall 2020 and fall 2021.

Theme 1 – Fall 2022: Between fall 2021 and fall 2022, the number of applications continued to grow at institutions participating in ARC, but offers of admission and enrollment both decreased modestly. Changes between fall 2021 and fall 2022 differed across student subgroups.

- Applications increased 8.2% between fall 2021 and fall 2022 (compared to a 19.0 increase between fall 2020 and fall 2021)
- Offers of admission decreased 0.9% between fall 2021 and fall 2022 (compared to a 5.7% increase between fall 2020 and fall 2021)
- Enrollment decreased 2.3% between fall 2021 and fall 2022 (compared to a 9.2% increase between fall 2020 and fall 2021)
- All four segments of ARC experienced increases in application volume between fall 2021 and fall 2022. Application increases were largest in the More Selective Public segment (13.0%) and smallest in the More Selective Private segment (4.1%). This contrasts with the changes between fall of 2020 and 2021, in which the More Selective Private institutions experienced the largest gains in application volume (Howell et al., 2022a).

Theme 2 – Fall 2021: The composition of ARC applicants, admits, and enrollees, as measured by the proportional representation of student subpopulations, changed very little between fall 2018 and fall 2022, although there is variation across ARC institutions.

Theme 2 – Fall 2022: The student body composition at ARC institutions is slow to change, with minimal changes in the proportional representation of student subpopulations across all institutional segments.

- The share of underrepresented minority (URM) students among ARC enrollees increased less than 1 percentage point each year from fall 2018 to fall 2022, from 23.6% in 2018 to 26.0% in fall 2022. At least some of this growth is due to broader demographic changes that result in annual increases in the share of high school graduates that belong to underrepresented minority student subgroups.

- While the 0.9 percentage point increase in URM student share in fall 2021 was attributable to growth at More Selective Private ARC institutions (Howell et al., 2022a), the 0.7 percentage point increase in URM student share in fall 2022 is attributable to growth among Hispanic student representation at public institutions. There are meaningful differences across institutional segments, including a slight decline in URM student representation at More Selective Private institutions from fall 2021 to fall 2022. These changes are consistent with nationally representative data (Howell et al., 2022b).
- Socioeconomic diversity among ARC enrollees is unchanged or slightly lower in fall 2022 than in fall 2021.

Theme 3 – Fall 2021: Approximately half of applications to ARC institutions in fall 2021 included SAT/ACT scores that students chose to disclose, another 27.5% of applications withheld SAT scores, and roughly 21.8% had no recorded SAT score but may have withheld an ACT score. Students' SAT scores (relative to the college to which they apply) are the strongest single predictor of their decision to disclose a score in the application process.

Theme 3 – Fall 2022: Students' score disclosure choices in fall 2022 are similar to the choices of their peers in the fall 2021 application cycle and test scores continue to be the strongest determinant of a student's decision to disclose a test score in the application process.

- SAT/ACT scores were disclosed on 51.4% of applications to ARC institutions in the fall 2022 cycle (compared to 50.7% in the fall 2021 cycle).
- Among the remaining ARC applications that did not include a disclosed test score in fall 2022, 31.1% of applications withheld an SAT score and the remaining 17.5% of applications came from students with no recorded SAT score but who may have had an ACT score that they withheld (compared to 27.5% for withholders and 21.8% for applications with no recorded SAT or who withheld an ACT in fall 2021).
- Regression analyses continue to reveal that a student's test score, relative to test scores of other applicants at that college, is the strongest predictor of score disclosure choices. Students with similar test scores and high school grades make similar score disclosure decisions regardless of other demographics like race/ethnicity and socioeconomic status.

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The Admissions Research Consortium (ARC)

The Admissions Research Consortium (ARC) is a collaborative research initiative that aims to help participating institutions gain insight into their own and their peers' admissions processes and outcomes, as well as changes in student behavior influenced by the covid-19 pandemic. Guided by a Core Advisory Committee (with representatives from the Association for Institutional Research [AIR], American Association of Collegiate Registrars and Admissions Officers [AACRAO], National Student Clearinghouse [NSC], and senior admission and enrollment practitioners) and a Research Advisory Committee composed of academic and institutional researchers, evidence and insights from ARC will inform future practice and policy in the years following the pandemic. Previously published research from this consortium examined changes in fall 2021 applications, admissions, and enrollment, with a focus on students' test score disclosure choices and stability in the characteristics of the student body over time (Howell et al., 2022a). The consortium also enabled evidence on how first-year college grades, credit accumulation, and retention into the second year for fall 2021 first-year enrollees compared to prior cohorts of first-year students at ARC institutions (Edwards et al. 2023). This Research Brief provides an update, based on fall 2022 applications, admissions, and enrollment, on the stability of student body composition and students' score disclosure choices at ARC Institutions and situates evidence from the Consortium within broader trends in nationally representative data. These findings can be leveraged to inform discussions on future admission policies and practices as well as student support services.

More than 50 institutions, representing more selective public and private four-year institutions in the U.S., provided College Board with data on their applications, admissions, and enrollment from fall 2018 to fall 2022. This information was merged with College Board assessment data to enable research on how college-going trends and outcomes were affected by pandemic-related disruptions. The data and analyses presented in this Research Brief are meant to inform admissions practitioners of point-in-time trends across a subset of institutions. The evidence based on Consortium data does not necessarily generalize to all higher education institutions, nor should the patterns documented be viewed as definitively stable in future years given the potential on-going and evolving effects of the pandemic on both students and institutions. ARC will continue as a multi-year research initiative to better understand longer-term trends and outcomes. Our research efforts will continue to rely on data from ARC institutions, expand to examine data that more broadly represent all higher education institutions, and incorporate findings from other researchers working in this space.

Guiding Principles for Interpreting ARC Data

When examining changes brought about by the pandemic, it is critical to recognize the many things simultaneously affecting students and institutions: a global health crisis, a domestic economic crisis, learning losses, mental health challenges, changes in opportunities to take standardized assessments, and changes to college applications processes and practices including a near-universal shift to test optional admissions policies that allowed students the opportunity to choose whether to disclose or withhold their standardized test scores when applying. The ARC Core Advisory Committee and Research Advisory Committee members have cautioned about the importance of interpreting all data with care according to three principles.

1. **Avoid causal interpretations of descriptive, correlational data as well as confirmation bias.** With so many factors changing simultaneously, the analyses in this Brief describe the combined effect of all factors on students and colleges and do not provide causal evidence on the impact of any one factor on students or colleges. The data in this Brief are presented in a straight-forward manner and without interpretation that confirms any perspective or belief. The data are intended to fuel discussion and further research, both quantitative and qualitative.
2. **Be clear about what is not measurable or not visible in the data and where it is impossible to ensure that analyses are comparing apples to apples.** The pandemic created disruptions to learning, mental health, physical health, opportunities to test, etc. in ways that were not uniformly experienced – geographically, socioeconomically, or demographically. Most of these factors are likely to influence choices and outcomes, yet impossible to measure in existing data and thus may conflate results.
3. **Recognize the dynamic nature of the moment and avoid the urge to craft a definitive narrative based on one point in time or a single data point.** Because the impacts of the covid-19 pandemic are multi-dimensional and not uniformly experienced, the data in this Brief must be viewed as part of a larger story that is still unfolding as we continue to study (a) how the 2021 cohort progresses through college, (b) how future cohorts of students navigate the college-going process, and (c) how college policies and practices continue to change. The student and college behavior documented in this Brief is still evolving in response to the pandemic, longstanding educational disparities, and the interaction of those factors.

ARC Data Sample and Definitions

ARC Data Sample

In 2022, ARC institutions shared administrative data on applications, admissions, and enrollment from fall 2018 to fall 2022. These data, which also include a robust set of student demographic and academic variables, were merged to College Board assessment data to enable insight into students who disclosed and withheld SAT test scores in the first two years of widespread test optional admissions policies brought on by the pandemic. This Research Brief provides updated evidence on student and college choices based on the the combined dataset, which covers a sample of 54 four-year public and private nonprofit institutions.

We categorize these 54 institutions into four ARC institutional segments defined by institutions' segment and selectivity:¹

- **More Selective Private Colleges:** 20 private institutions with admit rates below 25%
- **Selective Private Colleges:** 17 private institutions with admit rates above 25%
- **More Selective Public Colleges:** 10 public institutions with admit rates below 60%
- **Selective Public Colleges:** 7 public institutions with admit rates above 60%

ARC colleges in the More Selective Private and More Selective Public segments are similar to all institutions in those same segments, while ARC colleges in the Selective Private and Selective

¹ Admit rates are based on data from ARC colleges and are calculated as a weighted average using Fall 2018-2020 application data.

Public segments tend to be more selective than non-ARC institutions in those same segments (see Appendix Table A1 for more detail).

ARC Data Definitions

This brief employs the following terms and definitions:

Application cohorts, application cycles, and admission cycles are indexed according to the fall entry term for which students applied (e.g., fall 2022). Because ARC studies the fall admissions process and its outcomes, all analyses in this report group students according to the fall entry term for which they applied, even if students deferred first-year enrollment to a later entry term. Thus, applicants for fall 2020 who deferred enrollment to fall 2021 are grouped as enrollees from the fall 2020 application cohort.

Applications refers to the aggregate number of applications ARC institutions collectively received and evaluated, which is notably larger than the number of unique applicants who applied to ARC institutions, since some students applied to several ARC institutions.

Admissions refers to the aggregate number of admissions offers ARC colleges collectively extended, while admits and admitted students refer to unique students offered admission, and admit rate refers to the fraction of applications offered admission.

Underrepresented Minority (URM) students are defined as students who are Black, Hispanic/Latinx, Native American, Native Hawaiian/Pacific Islander, and Two or More Races.

Parental education and Income status data come from ARC colleges and are based on the institutions' own ways of collecting and designating parental education and which students are low-income and not low-income.

Neighborhood challenge is a neighborhood-level attribute constructed based on U.S. Census data and a nationally representative sample of high school graduates. It is a composite measure of factors known to be related to educational opportunities and outcomes and in this analysis, serves as a proxy for socioeconomic status. Neighborhood challenge is expressed on a 1 – 100 percentile scale, where higher values indicate higher levels of challenge related to educational opportunities and outcomes. For example, a neighborhood with a challenge level of 64 has a higher level of educational challenge than 64% of neighborhoods in the U.S. Likewise, 20% of U.S. neighborhoods fall into each quintile of neighborhood challenge. **High neighborhood challenge** is defined to be above the median value of 50.²

Thirty-seven participating colleges provided data on applicants' **recalculated high school grade point averages (HSGPAs)**. Because different colleges employ different grade scales when recalculating applicant HSGPAs, we created five HSGPA quintiles using college-specific HSGPA quintile cut-points based on the HSGPA distribution among each college's fall 2018–2020

² For more data and methodology detail, see <https://secure-media.collegeboard.org/landscape/comprehensive-data-methodology-overview.pdf>.

applicants. At each college reporting recalculated HSGPAs, roughly 20% of fall 2018–2020 applicants fall into each quintile of recalculated HSGPA.

Data from ARC institutions were merged with College Board assessment data to enable research insights into test score disclosure. Because the final dataset includes all observable test scores from either the institution or College Board, when considering SAT/ACT scores, we distinguish between disclosed SAT/ACT scores, withheld SAT scores, and students with no test score or a withheld ACT score. **Disclosed SAT/ACT scores** are SAT/ACT scores that students submitted to ARC colleges for consideration in the admissions process. **Withheld SAT scores** are SAT scores that applicants withheld from colleges, but that are observable in College Board administrative data. We define withheld SAT scores from College Board administrative data by the highest combination of SAT section scores across all of a student’s SAT scores. Finally, a third category of students, referred to as **No-Test / ACT Withheld scores**, are students who did not disclose an SAT or ACT score to the ARC institution, who do not have a recorded SAT score on file with College Board, and who may either have an ACT score that they withheld or no SAT or ACT score. In the figures below, we often display data for all three of these categories of students. Occasionally, the latter two categories are combined and referred to as **Non-Disclosers** to simplify the visual representation of the data.

Feeder high schools are defined as high schools that sent more than 30 applications to an institution over the fall 2018-2020 application cycles.

Throughout this brief, data for groups of fewer than 10 observations are suppressed.

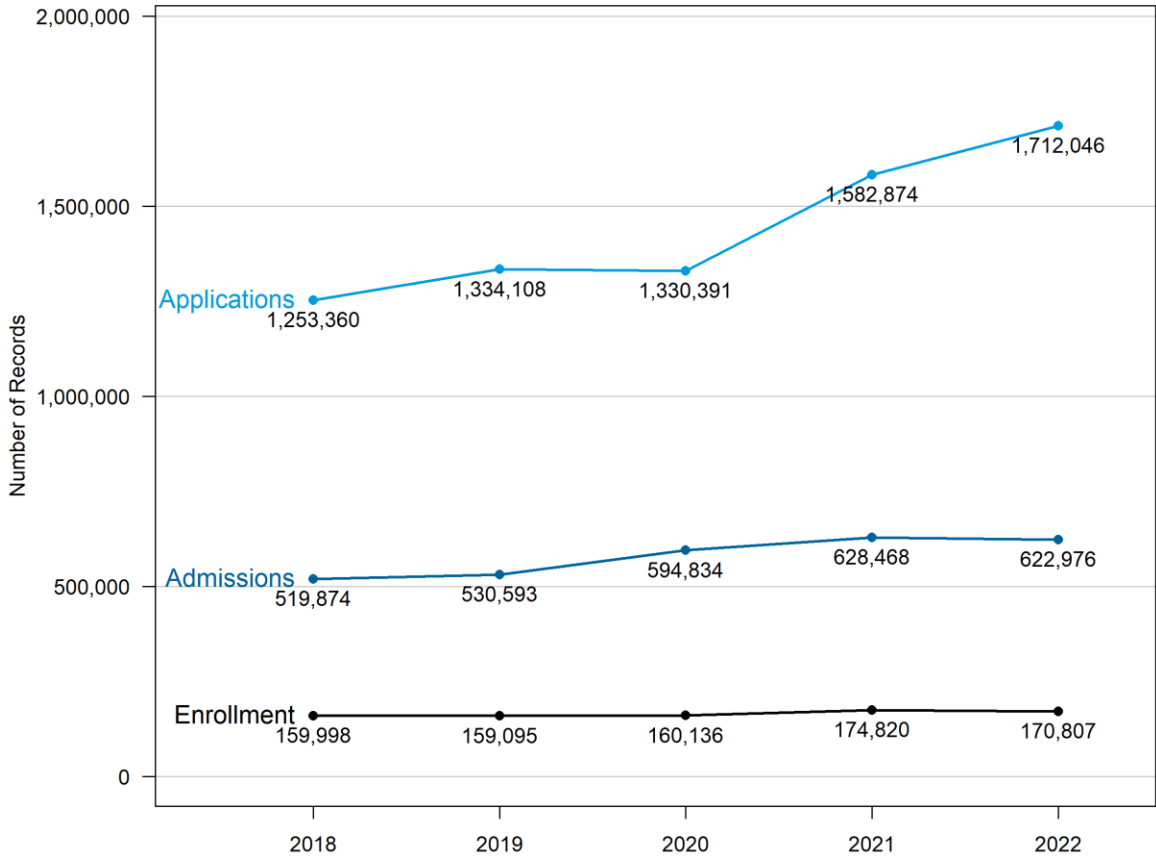
Theme 1: Aggregate Changes in College Applications, Admissions, and Enrollment

Aggregate Enrollment Funnel Insights

Between the fall 2018 and fall 2022 admission cycles, ARC institutions received nearly 7.2 million applications, extended nearly 2.9 million offers of admission, and enrolled approximately 825,000 first-year students. This sample comprises the dataset analyzed in this research.³

Figure 1 displays counts of applications, admissions offers, and first-year enrollment at all ARC institutions from fall 2018 through fall 2022. After sharp increases between fall 2020 and fall 2021, applications to ARC institutions increased further from fall 2021 to fall 2022. Offers of admission and enrollment were both slightly lower in fall 2022 than fall 2021.

Figure 1: ARC Institutions' Enrollment Funnel, Fall 2018 to 2022



³ The analysis sample excludes about 775,000 applications to ARC institutions that were incomplete or withdrawn before an admissions decision was reached.

Figure 2 compares funnel trends over time at all ARC institutions and the four segments of ARC institutions. To better compare funnel trends across institution segments that differ in size and selectivity, we express each data series as an index anchored to the fall 2018 academic year, which corresponds to the start of the historical data considered here. Each index has a value of 100 in the base year.

Key takeaways from Figure 2:

- Between the fall 2018 and fall 2022 application cycles, total applications to ARC colleges increased by 37%. The increases ranged from 24% in Selective Private institutions to 44% in More Selective Public institutions.
- From fall 2018 to fall 2022, admissions offers from ARC institutions grew by 20%. Admissions growth occurred in all institutional segments except for the More Selective Private institutions, where admissions offers declined by 7%.
- In all four segments, except for More Selective Private institutions, yield rates were lower in fall 2022 compared to fall 2018. At the More Selective Private institutions, yield rates were 8% higher in fall 2022 than in fall 2018. The More Selective Public institutions experienced the biggest decline in yield rates (17%) between fall 2018 and fall 2022.
- Increases in enrollment at ARC institutions between fall 2018 and fall 2022 ranged from 1% at More Selective Private institutions to 11% at Selective Public institutions.

Figure 2: Enrollment Funnel for ARC Institutions and Segments, Fall 2018 to Fall 2022

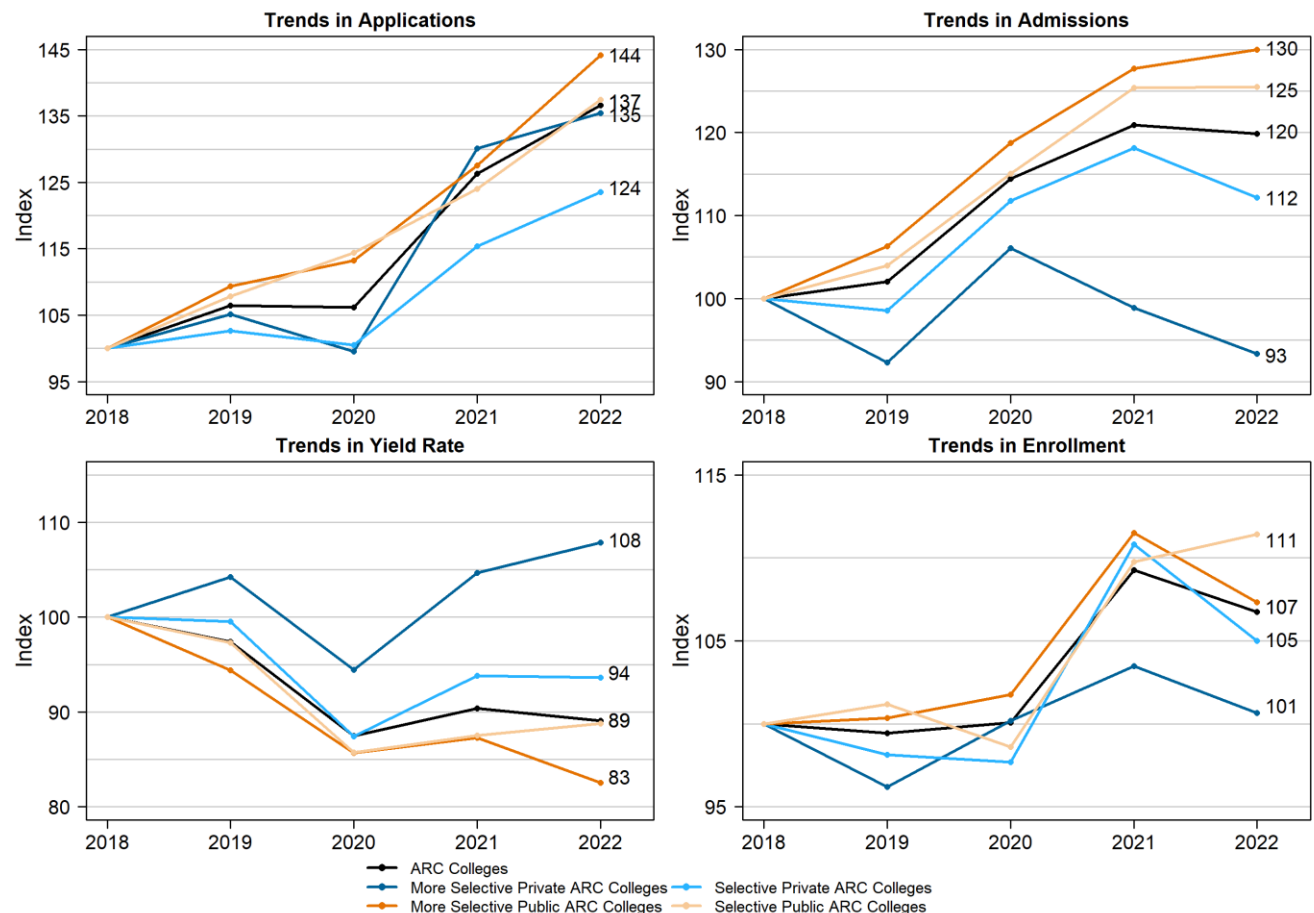
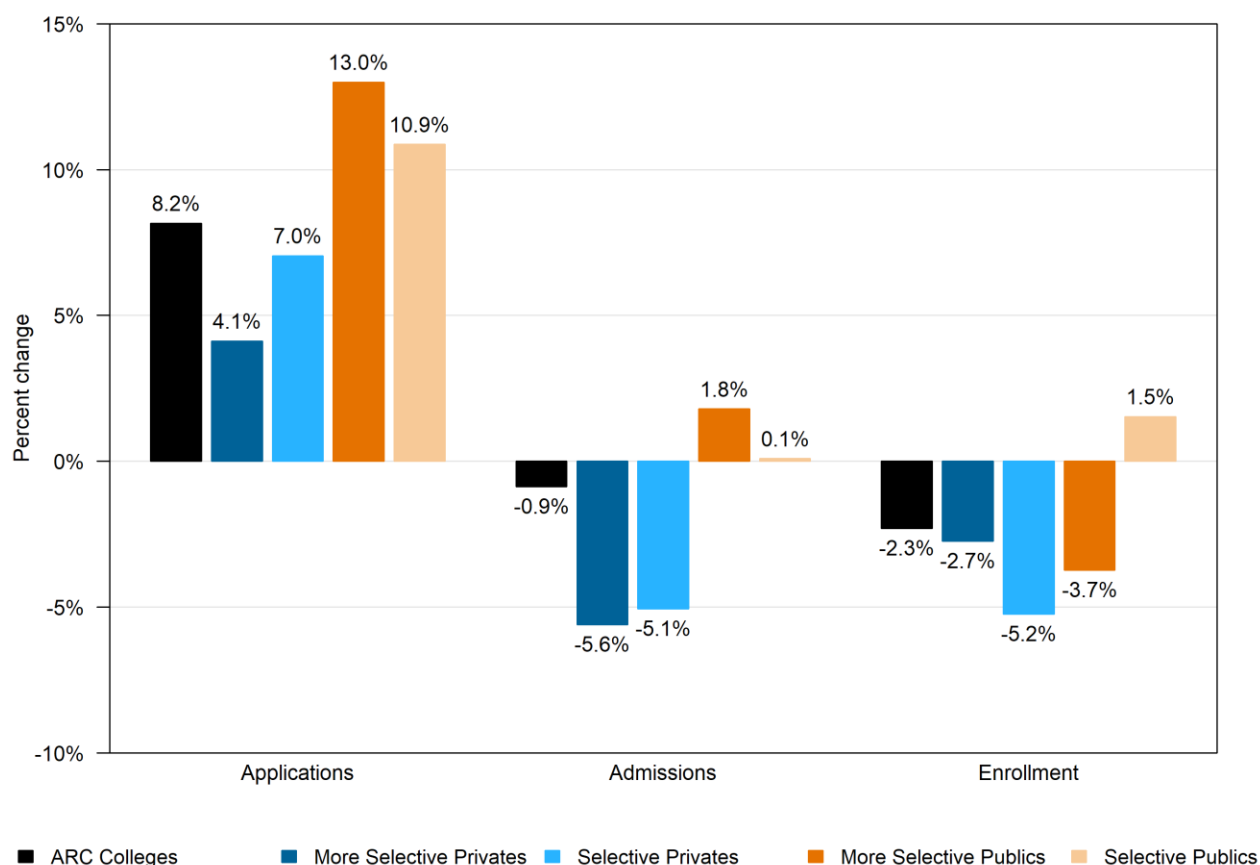


Figure 3 shows aggregate changes in the funnel of all ARC institutions and each ARC segment from the fall 2021 to the fall 2022 cycle.

Key takeaways from Figure 3:

- Between fall 2021 and fall 2022, applications to ARC institutions increased by 8.2% and all four institutional segments experienced application increases between these two cohorts, ranging from 4.1% at More Selective Private institutions to 13.0% at More Selective Public institutions.⁴
- Between fall 2021 and fall 2022, both private institutional segments (blue) extended fewer offers of admission, while both public institutional segments (orange) extended slightly more offers of admission.
- In the aggregate, enrollment at ARC institutions declined 2.3% between fall 2021 and fall 2022, ranging from declines of 5.2% at Selective Private institutions to declines of 2.7% at More Selective Private institutions. Selective Public ARC institutions experienced a 1.5% increase in enrollment between fall 2021 and fall 2022.

Figure 3: Percentage Change in Applications, Admissions, and Enrollment Between Fall 2021 and Fall 2022, ARC Institutions and Segments



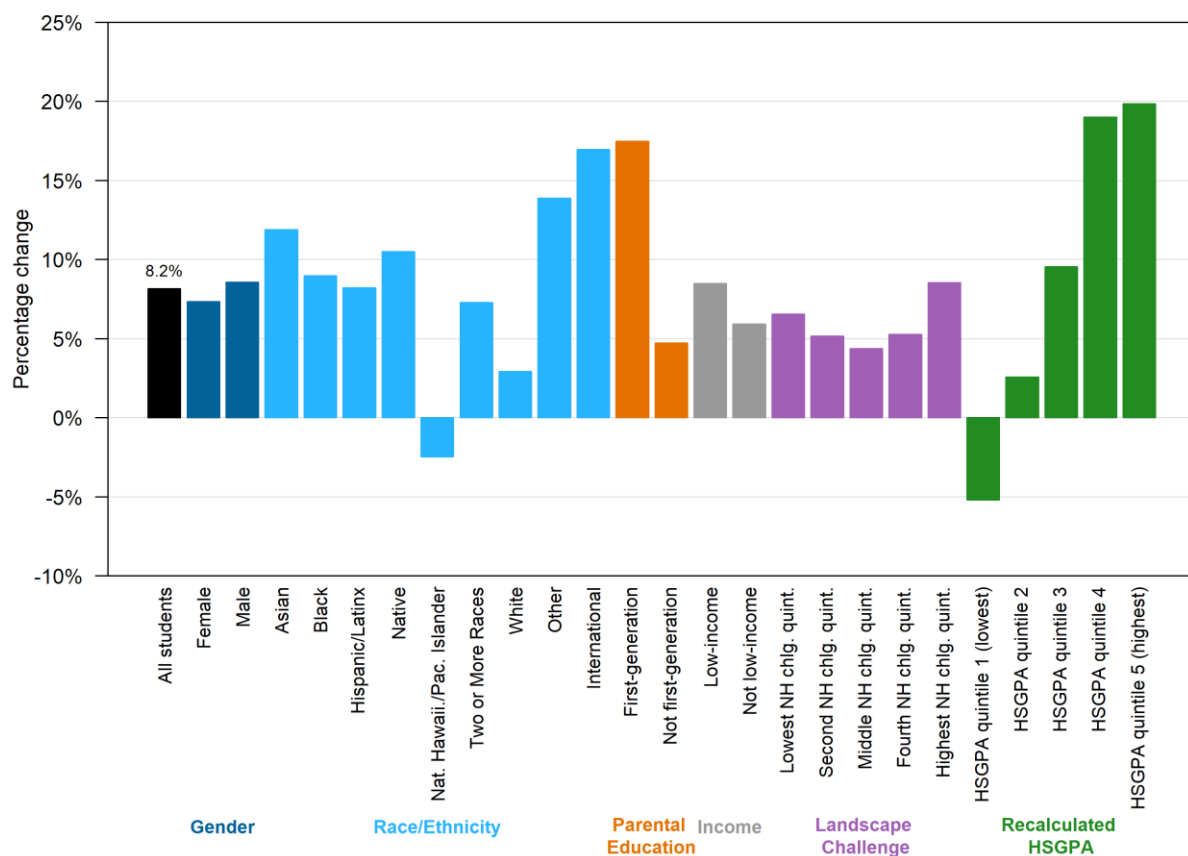
⁴ These findings are corroborated by other research reporting increases in the number of applications submitted by students (Kim et al., 2022).

Figure 4 shows how the 8.3% growth in **application** volume across all ARC institutions breaks down across different student subgroups.

Key takeaways from Figure 4:

- Between fall 2021 and fall 2022, applications to ARC institutions grew among all student subgroups, except for Native Hawaiian/Pacific Islander students and students with the lowest HSGPAs.⁵
- Application growth between fall 2021 and fall 2022 was larger for international students than for students from other racial/ethnic subgroups.
- Application growth between fall 2021 and fall 2022 was nearly four times larger for first-generation than for non-first-generation students.
- The relationship between neighborhood challenge and application growth between fall 2021 and fall 2022 was u-shaped with students from the lowest and highest neighborhood challenge quintiles experiencing the largest application growth.

Figure 4: Percentage Change in Applications to ARC Colleges Between Fall 2021 and Fall 2022, by Student Characteristics



⁵ Between fall 2021 and fall 2022, HSGPAs increased among applicants at 95% of the colleges that reported HSGPA through ARC. Since fall 2018, the average HSGPAs among applicants to ARC colleges has increased by approximately 0.10 GPA points on a 4.0 scale. Nearly 40% of this increase occurred between fall 2021 and fall 2022. These increases in applications among most HSGPA quartile students are likely driven by grade inflation, rather than true increases in the academic preparation of applicants. This grade inflation also explains why we observe sharp upticks in high HSGPA students and corresponding declines in lower HSGPA students. Pandemic-accelerated high school grade inflation is also documented by Sanchez & Moore (2022).

Figure 5 shows how the 0.9% decline in aggregate **admission offers** among ARC institutions breaks down across different student subgroups.

Key takeaways from Figure 5:

- Between fall 2021 and fall 2022, changes in aggregate admissions offers varied across student subgroups. Offers of admission increased by 3% to 5% for Asian, Hispanic, and Two or More Races students, and were essentially unchanged for Black, Native, and Native Hawaiian/Pacific Islander students. Offers of admission declined by nearly 5% for White students.
- Admissions offers to first-generation students increased by approximately 8% between fall 2021 and fall 2022, while offers to non-first-generation students declined by about 4% between these two periods.
- Admissions offers to students in the highest neighborhood quintile increased by about 1% between fall 2021 and fall 2022, which contrasts with decreases in the number of admissions offers in all other neighborhood challenge quintiles.
- Offers of admission declined substantially between fall 2021 and fall 2022 for applicants in the lowest three HSGPA quintiles.

Figure 5: Percentage Change in Admission Offers at ARC Colleges Between Fall 2021 and Fall 2022, by Student Characteristics

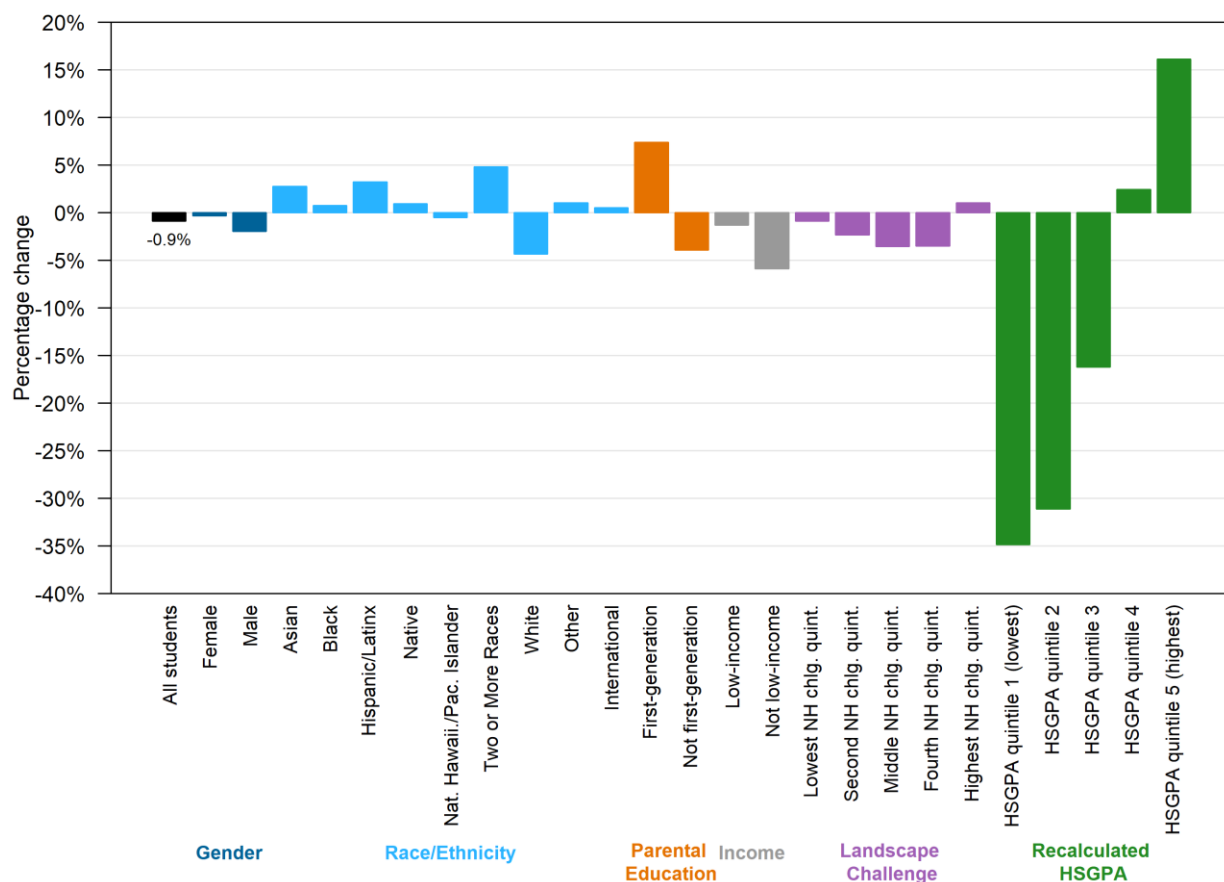
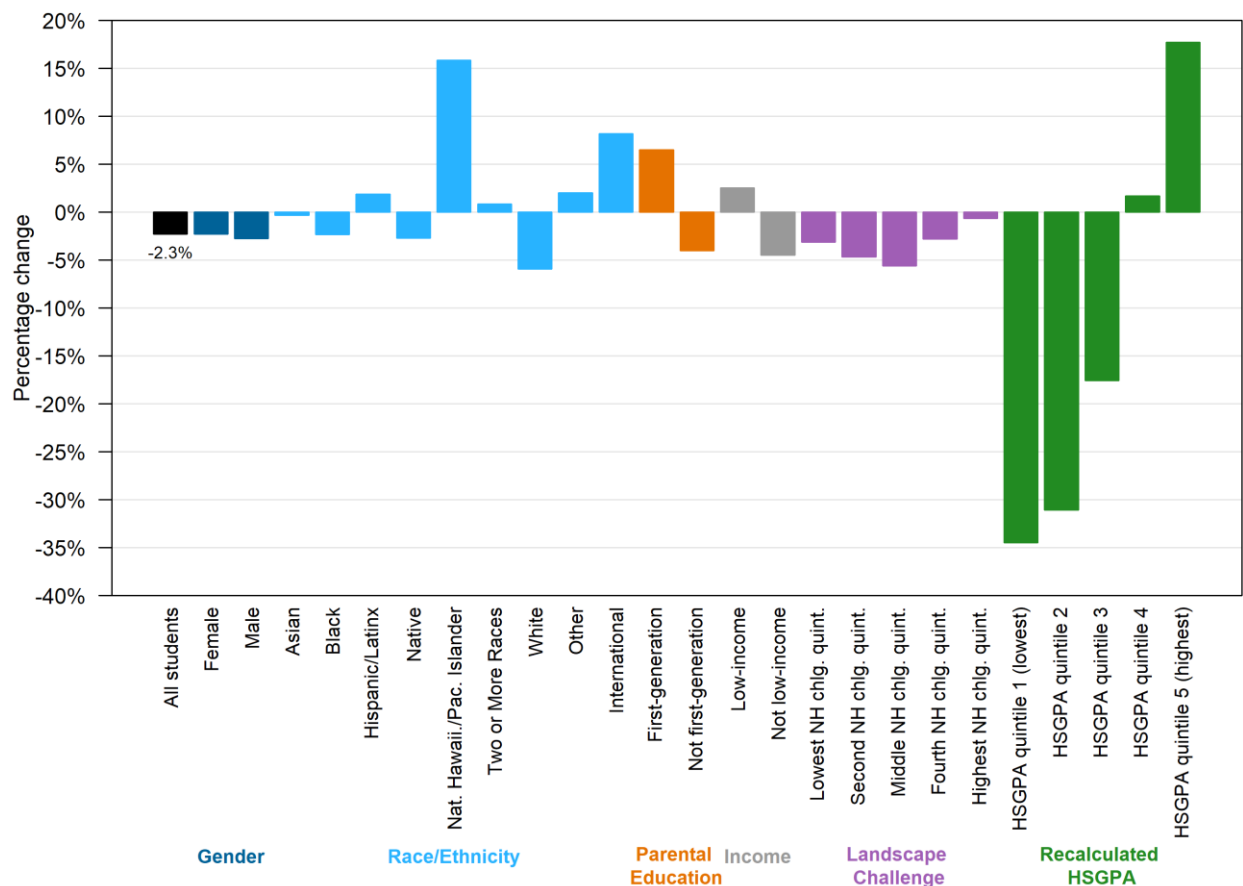


Figure 6 shows how the 2.3% decline in **enrollment** at ARC institutions breaks down across different student subgroups.

Key takeaways from Figure 6:

- The 2.3% aggregate decline in enrollment at ARC institutions between fall 2021 and fall 2022 was primarily driven by the 6% enrollment decline among White students. Enrollment among Asian, Black, and Native students declined by about 3% or less, and enrollment increased for all other racial/ethnic groups between fall 2021 and fall 2022.
- The 6% increase in enrollment between fall 2021 and fall 2022 among first-generation students was offset by a 4% decrease in enrollment among non-first-generation students.
- Enrollment declined in each of the neighborhood challenge quintiles between fall 2021 and fall 2022, and declines were the smallest in the highest neighborhood challenge quintile and largest in the middle neighborhood challenge quintile.
- Enrollment declined substantially between fall 2021 and fall 2022 for students in the lowest three HSGPA quintiles.

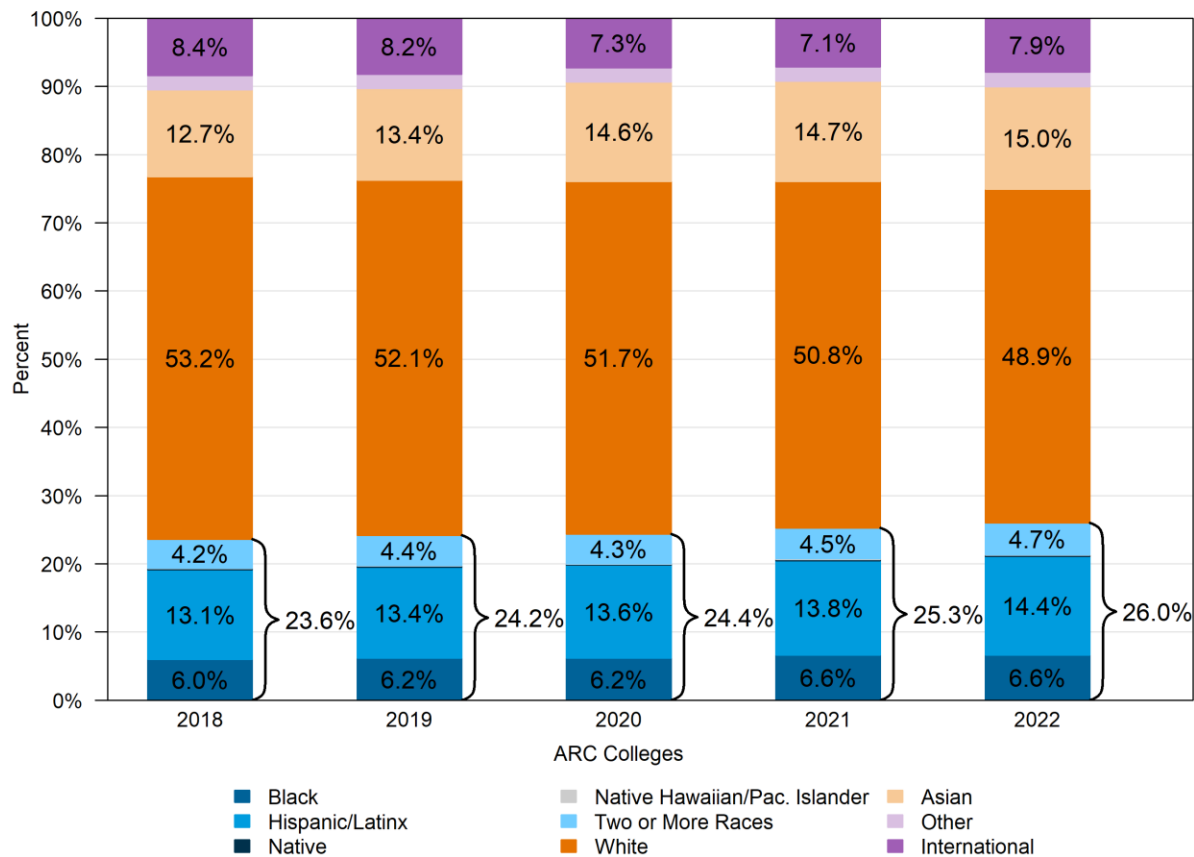
Figure 6: Percentage Change in Enrollment at ARC Colleges Between Fall 2021 and Fall 2022, by Student Characteristics



Theme 2: Aggregate Insights in Racial and Economic Diversity

Figure 7 shows how the racial/ethnic composition of ARC institutions' first-year enrollees changed between fall 2018 and fall 2022. Over the past five years, there have been very gradual increases in the share of underrepresented minority students among first-year students at ARC institutions. The gains in underrepresented minority student enrollment shares are largely driven by annual increases in Hispanic student representation. These increases are at least partially due to the diversification of American high school graduates rather than college policies. Over recent years, the representation of Hispanic high school graduates has been increasing by 0.5 to 0.7 percentage points per cohort (Irwin et al., 2022).⁶ Between fall 2021 and fall 2022, the share of underrepresented minority enrollees increased by 0.7 percentage points (from 25.3% to 26.0%).

Figure 7: Racial/Ethnic Composition of Enrolled Students from Fall 2018 to Fall 2022, ARC Institutions



⁶ Data available online through the Digest of Education Statistics, [Table 219.30](#).

Figures 8A-8D show the racial/ethnic composition over the past five years in each of the four ARC institutional segments. Between fall 2018 and fall 2020, prior to widespread test-optional policies, the fraction of students who belong to underrepresented minority student subgroups increased slightly (from 0.1 to 1.9 percentage points) in all four segments. Between fall 2020 and fall 2021, the first year of widespread test-optional policies, the share of underrepresented minority students increased at More Selective Privates by 2.3 percentage points, though in the second year of test-optional policies, between fall 2021 and fall 2022, the share of underrepresented minority students fell slightly in this segment. Conversely, the share of underrepresented minority students decreased at Selective Publics in the first year of test-optional policies between fall 2020 and fall 2021, but increased in the second year.

Figures 8A-8D: Racial/Ethnic Composition of Enrolled Students from Fall 2018 to Fall 2022 Fall 2022, ARC Institutions and ARC Segments

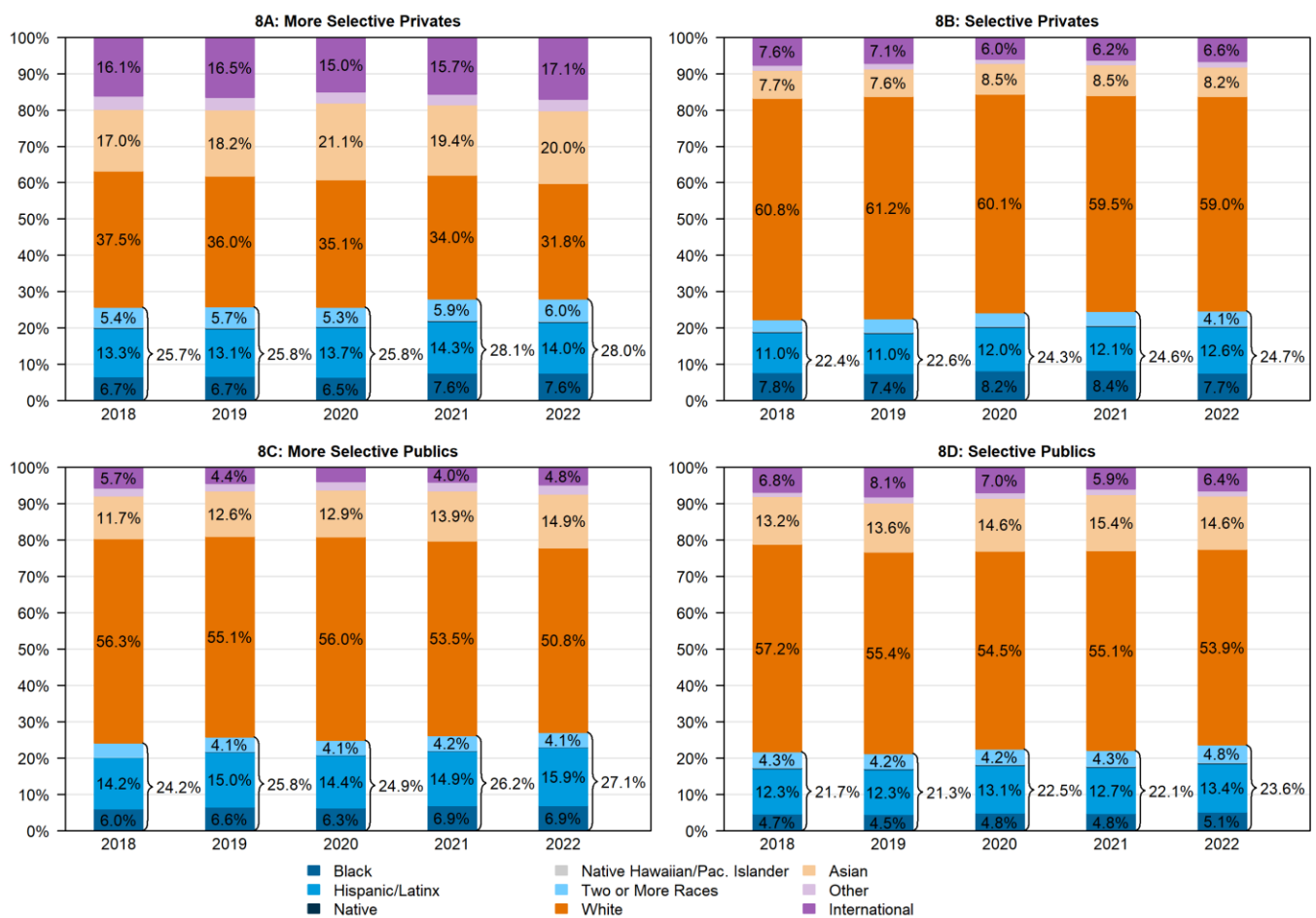
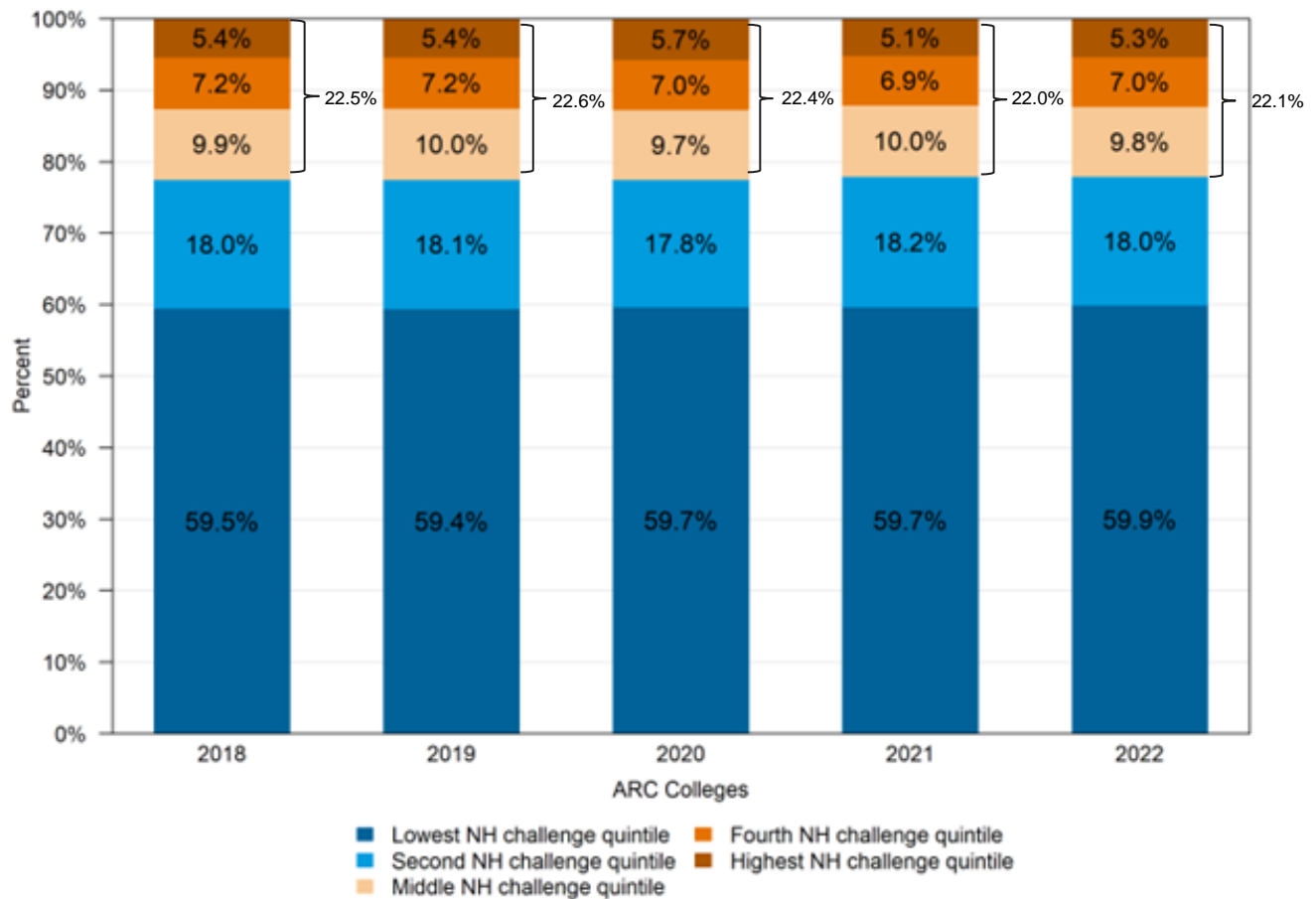


Figure 9 shows how the socioeconomic composition of ARC institutions' first-year enrollees changed between fall 2018 and fall 2022. This socioeconomic measure captures educational challenge in a student's neighborhood and is constructed from census tract-level data on college attendance, household structure, median family income, housing stability, education level, and crime.⁷ Across all ARC institutions, the share of domestic first-year enrollees from neighborhoods in the three highest challenge quintiles—a measure of lower-socioeconomic status—remained quite stable over time, declining slightly from 22.5% in fall 2018 to 22.1% in fall 2022.

Figure 9: Socioeconomic Composition of Enrolled Students from Fall 2019 to Fall 2022, ARC Institutions

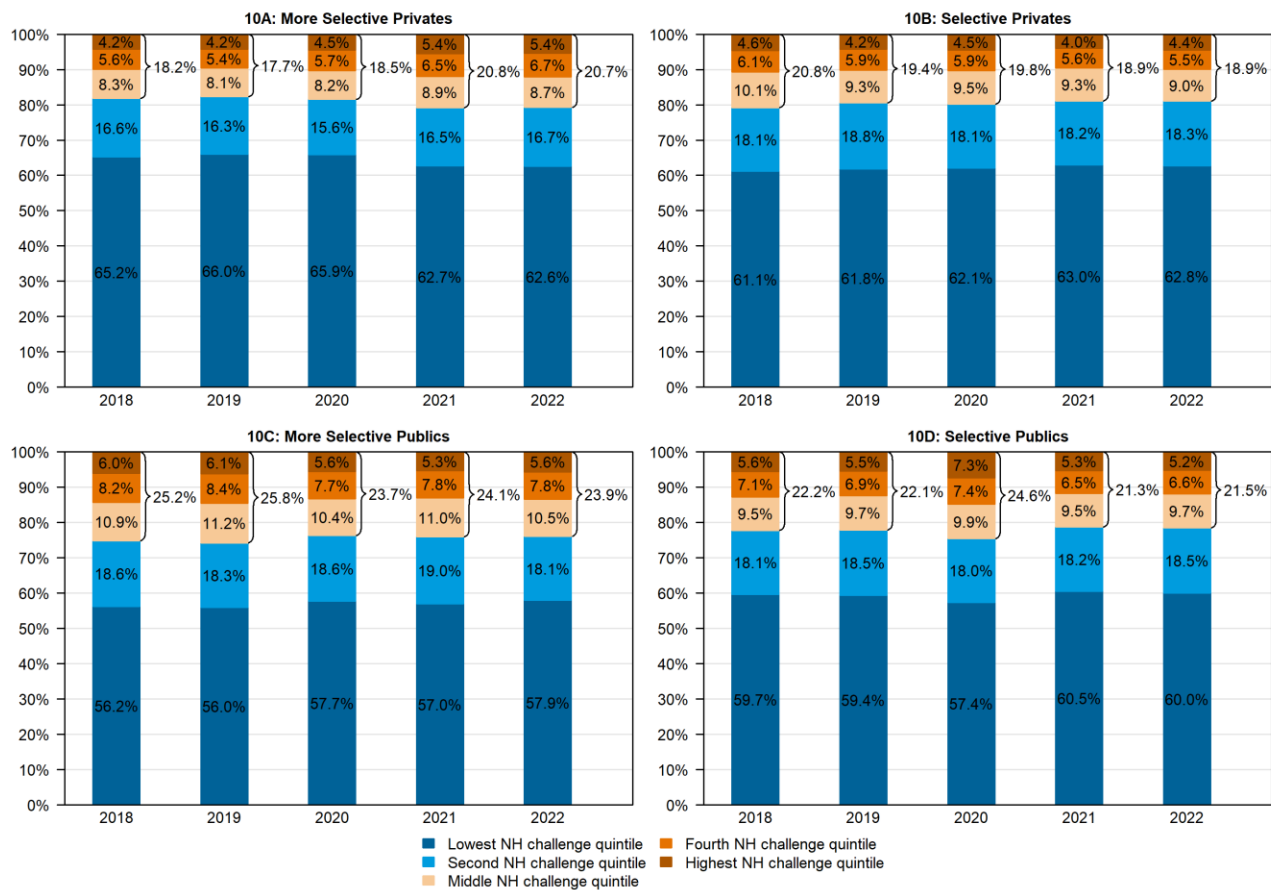


⁷ Figure 9 excludes students missing neighborhood challenge information. Since challenge data are not available for international students, Figure 10 represents the socioeconomic composition of domestic enrollees by neighborhood challenge quintile. See <https://secure-media.collegeboard.org/landscape/comprehensive-data-methodology-overview.pdf> for more information on neighborhood challenge data.

Focusing on the past five admission cycles, Figures 10A-10D show how the socioeconomic composition of enrolled students changed between fall 2018 and fall 2022 within each institutional segment. Over this period, the share of enrolled students in the three highest neighborhood challenge quintiles decreased in three of the four ARC institutional segments. The exception, More Selective Private ARC institutions, experienced a 2.3 percentage point increase in the share of students in the highest three challenge quintiles between fall 2000 and fall 2021, which then remained constant in fall 2022.

Despite growth in the number of first-generation and low-income enrolled students documented in Figure 6, the socioeconomic composition of enrollees in most ARC institutional segments changed minimally between fall 2021 and fall 2022, both overall and in each of the four segments.

Figures 10A-10D: Socioeconomic Composition of Enrolled Students in Fall 2021 and Fall 2022, ARC Institutions and ARC Segments

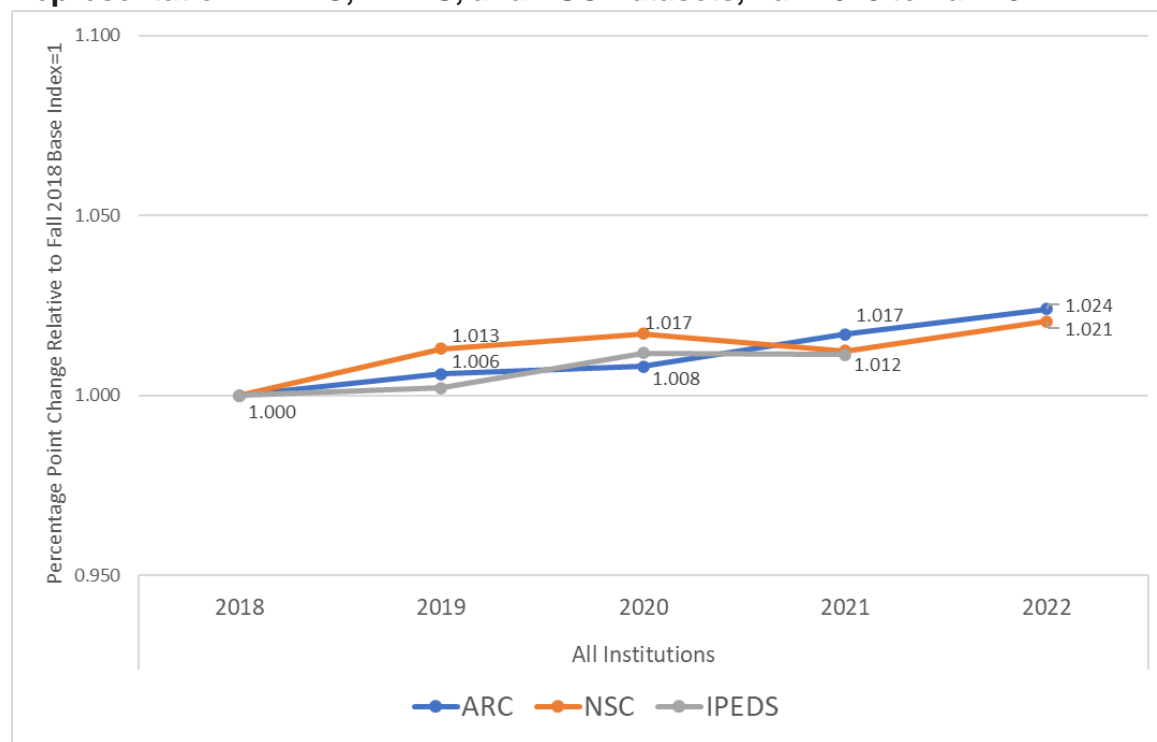


Diversity Patterns in ARC Consistent with National Data

The data in this Brief are based on a sample of 54 four-year institutions participating in the Admissions Research Consortium. While there are no datasets with national scope containing detailed demographic data on *application* and *admissions* changes, we do have several sources of national data on postsecondary *enrollment* patterns against which to compare findings from the ARC sample. Using data from the Integrated Postsecondary Education Data System (IPEDS) and National Student Clearinghouse (NSC) enrollment data for all domestic College Board assessment takers (inclusive of PSAT, SAT, and AP students) in the U.S., we confirm that the empirical enrollment findings from the ARC dataset on racial/ethnic composition are representative of trends in the universe of postsecondary U.S. institutions.

Figure 11 confirms that changes in the shares of underrepresented minority students enrolled at ARC institutions follow the same patterns of change over time observed in both NSC data and IPEDS data.⁸ Using fall 2018 as the base year indexed to 1, Figure 11 shows that changes in URM representation are similar between the ARC sample (blue), the NSC sample (orange), and the universe of institutions in IPEDS (grey). All three datasets reveal that URM student representation changed by less than 2 percentage points between 2018 and 2021. IPEDS enrollment data are not yet available for fall 2022, but a comparison between the ARC sample (blue) and the nationally representative NSC dataset (orange) reveals very similar changes in URM student representation through fall 2022. These comparisons affirm that findings from ARC on racial/ethnic diversity changes are broadly generalizable to all U.S. institutions.

Figure 11: Consistent Percentage Point Changes in Underrepresented Minority Student Representation in ARC, IPEDS, and NSC Datasets, Fall 2018 to Fall 2022



⁸ Appendix Figures A1 and A2 contain the complete data on the racial/ethnic composition of enrolled students using College Board assessment takers linked to National Student Clearinghouse data and for IPEDS data, respectively. IPEDS data are only available through fall 2021.

Theme 3: Aggregate Insights into Test Score Disclosure and Withholding

Linking ARC institutions' applicant records to College Board data enables us to distinguish fall 2021 and fall 2022 applicants with no recorded SAT score, applicants who disclosed scores, and applicants who withheld scores. Specifically, we categorize applicants into three groups:

1. **Disclosed SAT/ACT** applicants provided colleges with an SAT/ACT score for consideration in admissions.
2. **Withheld SAT** applicants had an SAT score and withheld it from consideration in admissions.
3. **No-Test / Withheld ACT** applicants had no SAT score and either withheld an ACT score or had no ACT score.⁹

Institutions are unable to distinguish between the latter two groups, which we often group together and refer to as “non-disclosers,” but these two groups are distinguishable using College Board data. The students first entering college in fall 2021 were uniquely impacted by the pandemic as they faced a reduction in available SAT/ACT testing. Opportunities for testing mostly returned to normal for students first entering college in fall 2022. Both SAT and ACT testing volumes increased between the 2021 and 2022 high school cohorts, though testing volumes for both assessments have not returned to pre-pandemic levels.¹⁰

Patterns in Score Disclosure, Withholding, and Absence

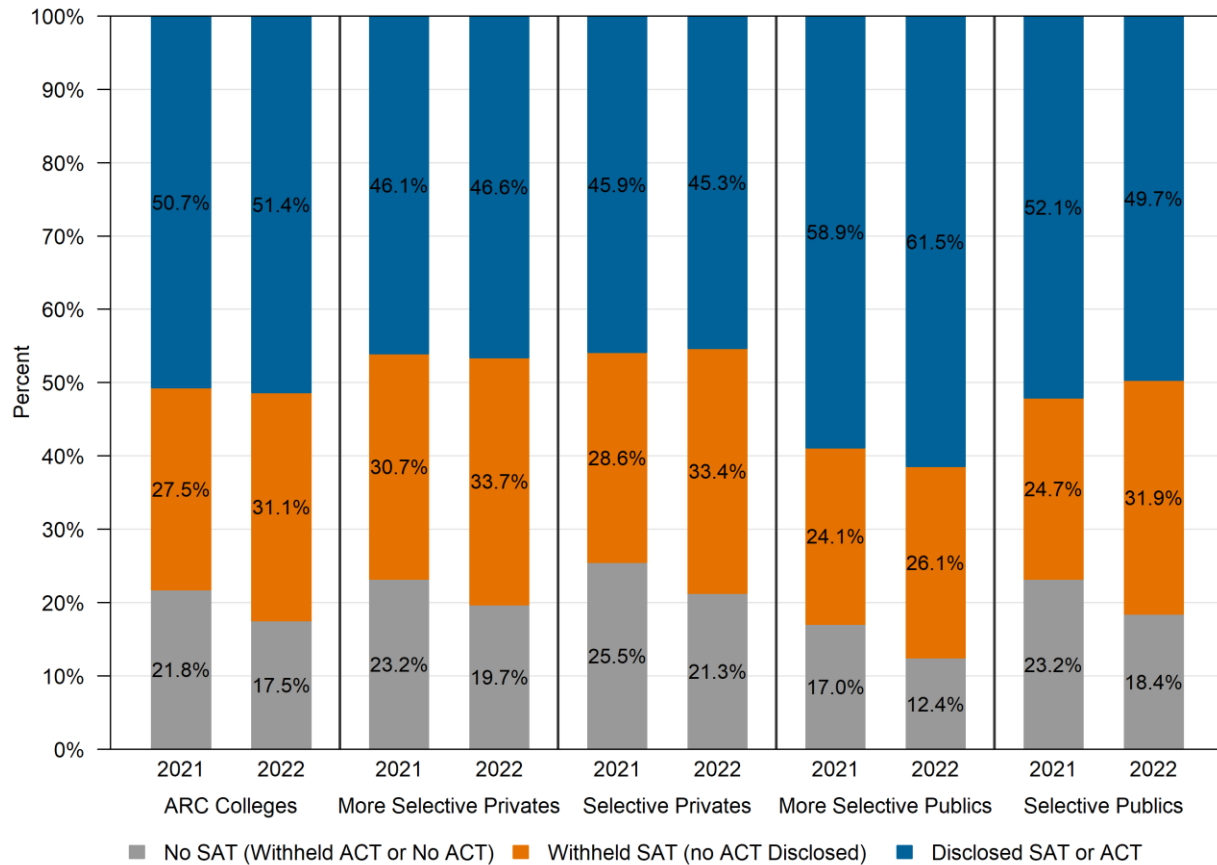
Figure 12 shows consistency across fall 2021 and fall 2022 applicants in their score disclosure choices in each institutional segment and at all ARC institutions.¹¹ In fall 2022, test score disclosure rates increased slightly to 51.4% from 50.7% in fall 2021. By contrast, the share of students without any test score or who withheld an ACT score declined by about 4.3 percentage points (from 21.8% in fall 2021 to 17.5% in fall 2022) and the share of applications with a withheld SAT score increased by 3.6 percentage points (from 27.5% in fall 2021 to 31.1% in fall 2022). This pattern occurred in all four ARC segments. The shifts toward more score disclosure *and* more withholding likely reflect increases in standardized test taking with a return to normal in the openness and capacity of SAT and ACT testing centers following the pandemic.

⁹ We cannot distinguish ACT withholders from applicants who had no ACT score. As a result, our count of score withholders represents a lower bound on the true number of score withholders; conversely, our count of no-test applicants is an upper bound.

¹⁰ ACT testing volumes were 1.670 million, 1.295 million, and 1.350 million for the 2020, 2021, and 2022 cohorts, respectively (<https://www.act.org/content/dam/act/unsecured/documents/2022/2022-National-ACT-Profile-Report.pdf>). SAT testing volumes were 2.198 million, 1.509 million, 1.738 million for the 2020, 2021, and 2022 cohorts, respectively.

¹¹ Fall 2021 statistics on score disclosure, withholding, and “No SAT” in Figure 12 do not match previously published fall 2021 statistics in Howell et al. (2022a) because of small changes in the sample of colleges. Participation in ARC increased from 51 institutions in fall 2021 to 54 institutions in fall 2022.

Figure 12: Score Disclosure, Withholding, and Absence Among Fall 2021 and Fall 2022 Applicants, ARC Institutions and Segments



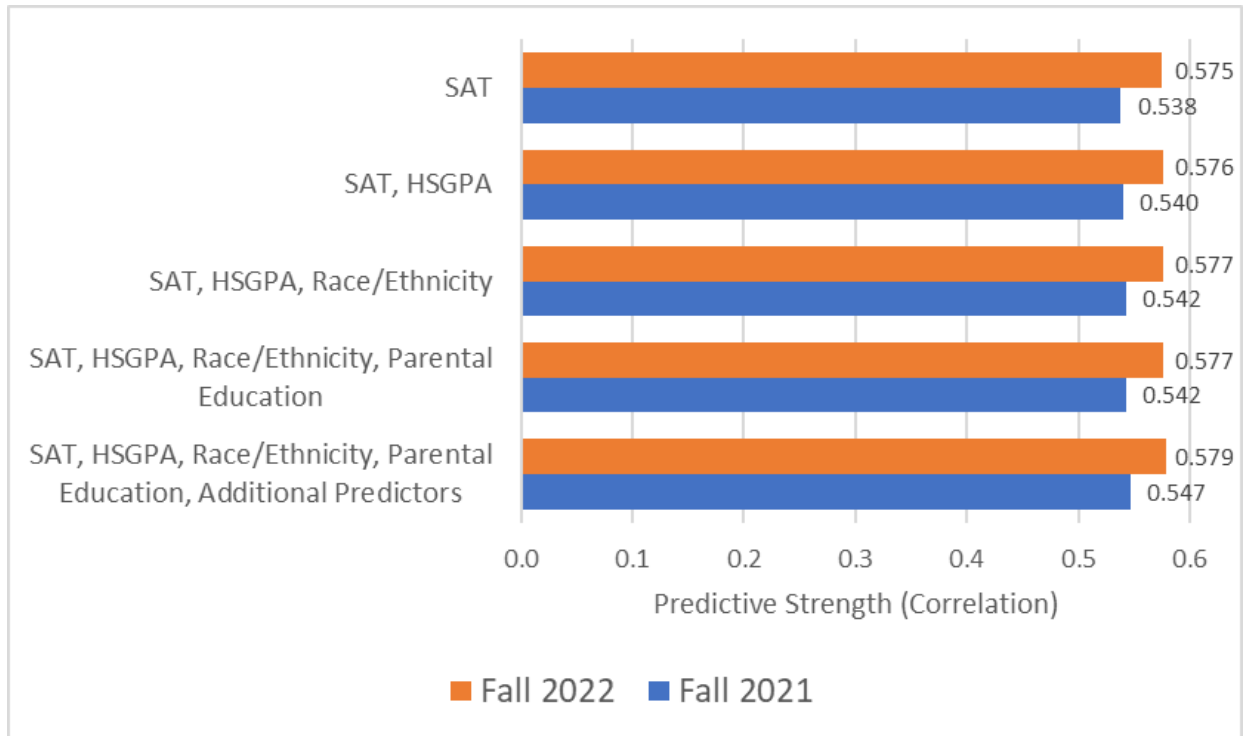
Ordinary Least Squares (OLS) regression is the most common statistical method used to understand what factors influence an outcome. The outcome we examine in this case is test score disclosure. We use OLS to estimate the variation in test score disclosure decisions that is explained by data represented in Figure 13 and find that SAT score is the strongest predictor of students’ decision to disclose a test score.¹² Figure 13 shows the strong correlation between a student’s SAT score (relative to the college they are applying to) and the probability of disclosing a score on their application for fall 2022 (orange) and fall 2021 (blue).

Examining combinations of predictors, like SAT score and HSGPA, further reveals that HSGPA adds minimal incremental predictive strength. Continuing to add predictors that include student demographic characteristics, like race/ethnicity and parental education, adds minimal to no incremental predictive strength.

Although we find that adding additional predictors yields little in the way of additional explanatory power, we do find that the explanatory power of the SAT in predicting test score disclosure increased slightly between fall 2021 and fall 2022, suggesting that student test scores were more influential in the score disclosure decision in fall 2022 compared to fall 2021.

¹² Rodriguez (2023) also finds that student score is the most important determinant of the decision to disclose scores for consideration in admission.

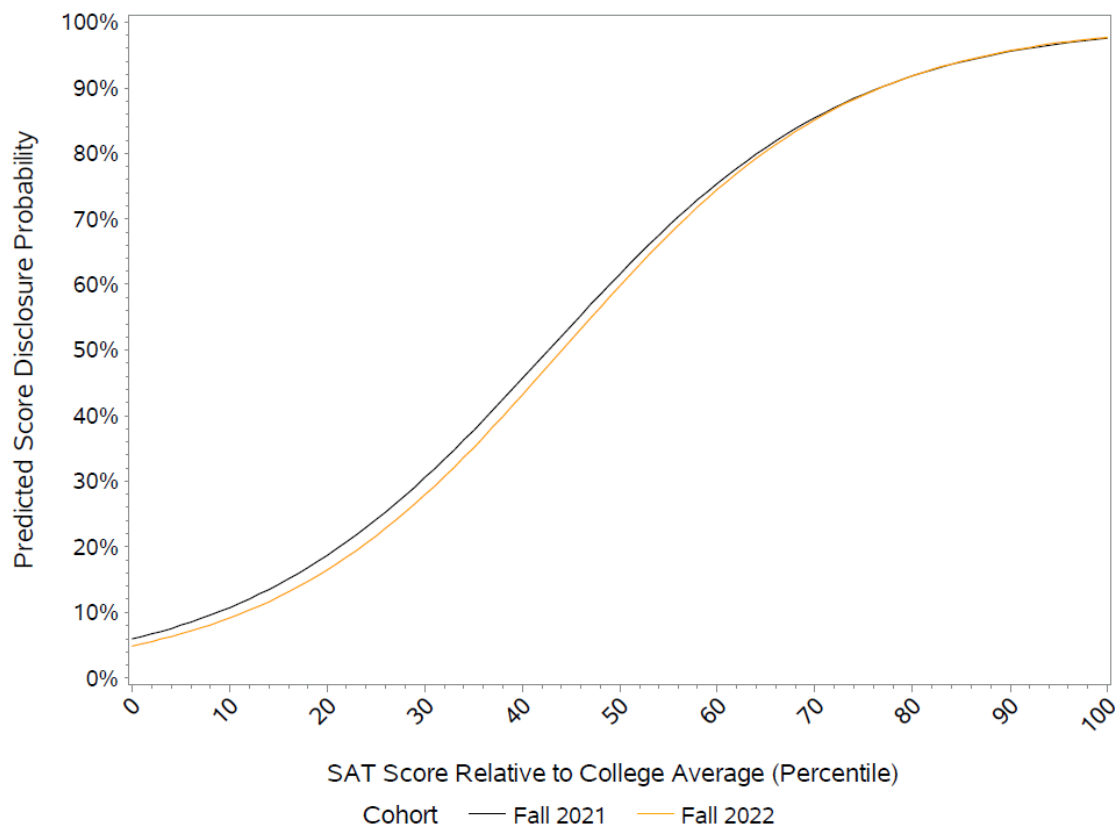
Figure 13: Predictors of Test Score Disclosure for Fall 2021 and Fall 2022



Note: Additional predictors includes in-state status, feeder high school status, and neighborhood and high school challenge.

Results from the fully specified model with all predictors (see Appendix for regression details) can be displayed in an alternate way. Figure 14 shows predicted probabilities of test score disclosure for applicants with different test scores relative to the college to which they applied. For example, a student with a 30th percentile SAT score relative to the college average has a score that is in the 30th percentile compared to the distribution of applicants' scores at the ARC college to which they applied. Figure 14 shows that the relationship between SAT scores and score disclosure probabilities is slightly steeper for fall 2022 applicants, compared to fall 2021 applicants, which is consistent with the data in Figure 13. Applicants with relatively low test scores continue to have a low predicted probability of disclosing those scores, while applicants with relatively high test scores continue to have a high predicted probability of disclosing those scores.

Figure 14: Probability of Test Score Disclosure Among ARC Applications, Fall 2022



The relationship between test scores and disclosure probability reflected in Figure 14 may not be strictly causal. Through statistical models, we attempt to control for a host of academic and socio-demographic characteristics that simultaneously impact both SAT scores and score disclosure (e.g., race, college fixed-effects, parental education, HSGPA, feeder school status, in-state status, and the challenge level of both the high school and neighborhood). However, unobservable characteristics of students may continue to influence the relationships between SAT scores and disclosure in Figures 14-17. To address this possibility, McManus et al. (2023) harness data from students applying to multiple ARC institutions who disclosed scores in a subset of applications. The within-student statistical models in this research effectively controls for *all* student level characteristics, both observed and unobserved, that are constant across the colleges to which students applied. Within students, McManus et al. (2023) find that a 10 percentile increase in college-specific SAT scores increases the probability that a student will disclose scores to that college by approximately 5 percentage points.

Plotting score disclosure probability curves for applicants with different HSGPAs in Figure 15 reveals modest differences in disclosure behavior among applicants with different high school grades. For example, ARC applications from students with high school grades of B+ are somewhat more likely to disclose a test score compared to applications from students with grades of A+ and A.¹³ The relationship between HSGPA and score disclosure is nearly identical in fall 2022 as it was in fall 2021.

¹³ High school grades below B+ are not displayed because 90% of applications to ARC colleges have HSGPAs of B+ or higher.

Figure 15: Probability of Test Score Disclosure Among ARC College Applications for Fall 2021 and Fall 2022, by HSGPA

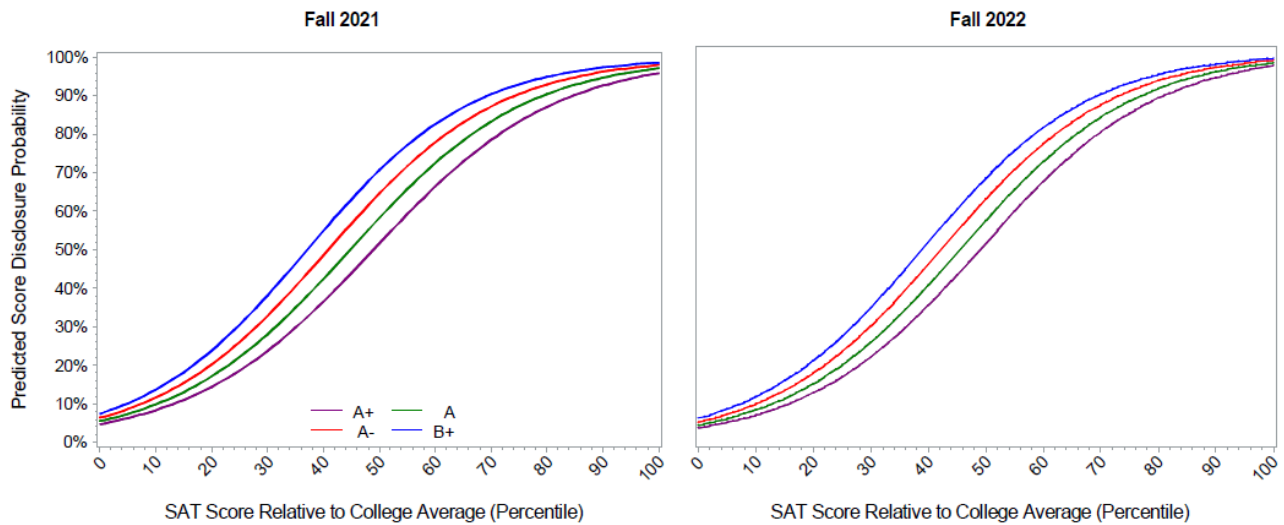


Figure 16 shows score disclosure probability curves by parental education. Figure 16 demonstrates that first-generation and non-first-generation applicants with the same relative test scores have virtually identical probabilities of disclosing that score to ARC institutions. This is true for both the fall 2021 and the fall 2022 cohorts.

Figure 16: Probability of Test Score Disclosure Among ARC College Applications for Fall 2021 and Fall 2022, by First Generation Status

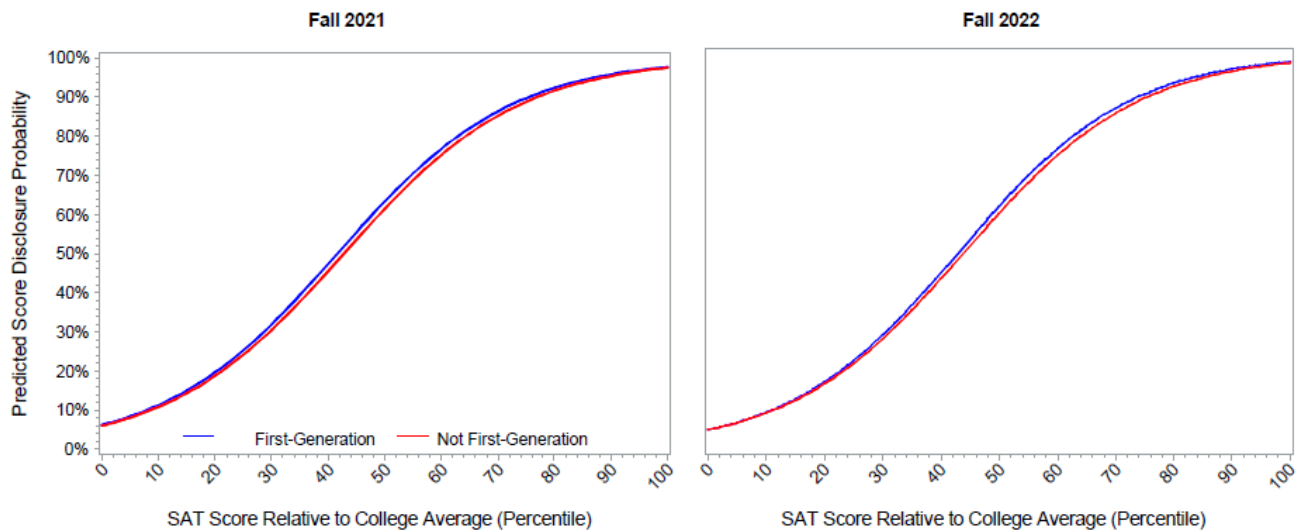
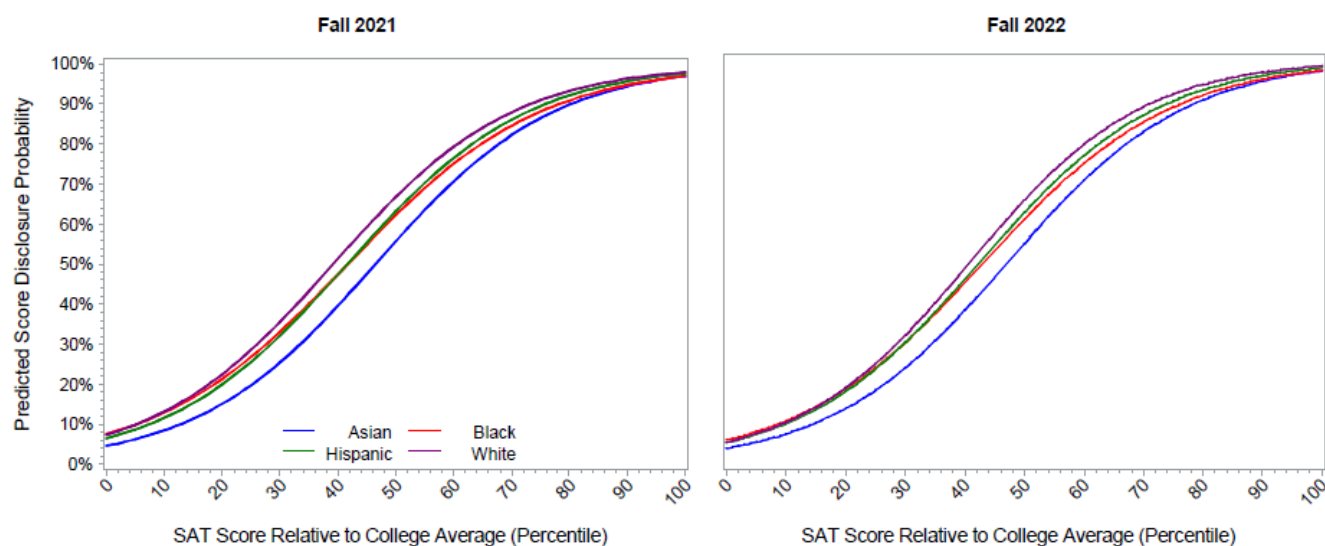


Figure 17 shows score disclosure probability curves by race/ethnicity. Figure 17 demonstrates small differences in disclosure behavior among applicants from different racial/ethnic subgroups. For example, among applications with low relative scores (e.g., 20th percentile), all racial/ethnic subgroups share a low probability of disclosing their scores though the disclosure rate is somewhat lower for Asian students than for other student subgroups.

Figure 17: Probability of Test Score Disclosure Among ARC College Applications for Fall 2021 and Fall 2022, by Race/Ethnicity



Conclusion

The ARC initiative enabled a unique set of data and analyses to better understand changes in college and student behavior influenced by the covid-19 pandemic. This Research Brief provides initial evidence based on 54 ARC institutions on applications, admissions, enrollment, and score disclosure behaviors for first-year students in fall 2022 relative to prior cohorts. Three key themes emerged from the initial analyses of the second application cycle under widespread test-optional college policies brought about by the pandemic:

1. Between fall 2021 and fall 2022, the number of applications continued to grow at institutions participating in ARC, but offers of admission and enrollment both decreased modestly. Changes between fall 2021 and fall 2022 differed across student subgroups.
2. The student body composition at ARC institutions remains nearly constant over time, with minimal changes in the proportional representation of student subpopulations across all institutional segments.
3. Students' score disclosure choices in fall 2022 are similar to the choices of their peers in the fall 2021 application cycle and test scores continue to be the strongest determinant of a student's decision to disclose a test score in the application process.

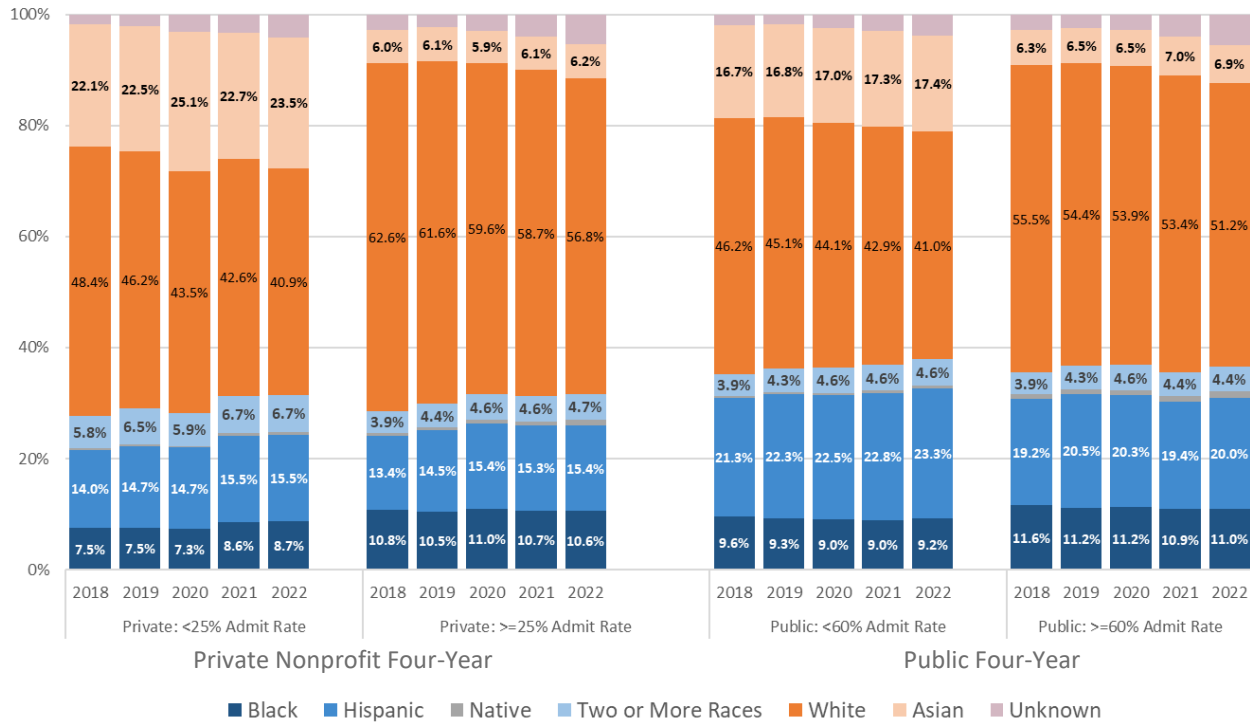
The three themes identified for the fall 2022 cohort are similar to the themes identified for the fall 2021 cohort in Howell et al. (2022a), although somewhat different patterns in institutions' funnel trends emerged as the effects of the pandemic continued to ebb. Notably, students' test score disclosure behavior, both in terms of broad disclosure and withholding patterns as well as the drivers of students' score disclosure decisions, was very similar between fall 2021 and fall 2022.

Appendix

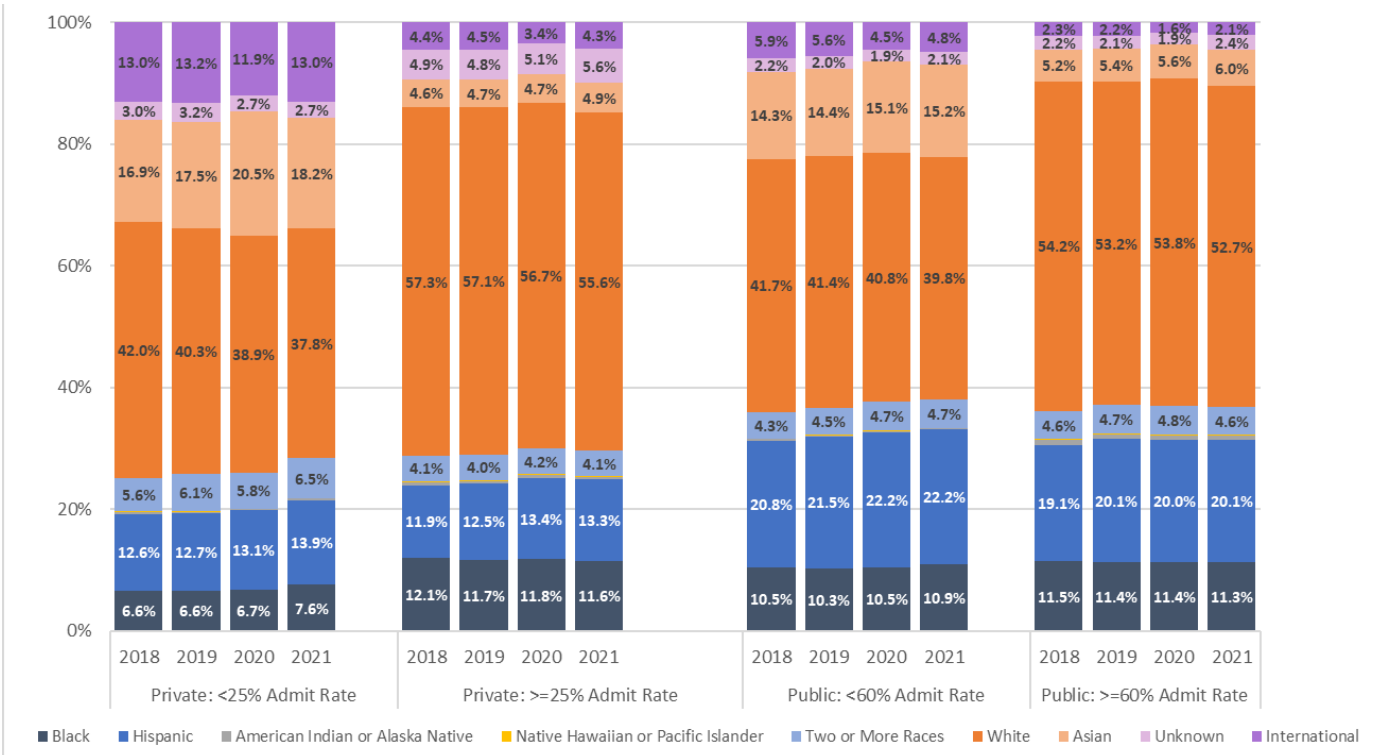
Appendix Table A1: Attributes of ARC Institutions and Institutional Segments

	More Selective Private Colleges		Selective Private Colleges		More Selective Public Colleges		Selective Public Colleges	
	ARC	Non-ARC	ARC	Non-ARC	ARC	Non-ARC	ARC	Non-ARC
Number of Institutions	20	43	17	1,004	10	65	7	434
First-Year Enrollment	1,787	981	1,296	403	7,694	2,722	6,841	1,806
Admit Rate	12%	12%	49%	75%	56%	43%	69%	84%
Yield Rate	50%	55%	21%	32%	29%	32%	23%	26%
First-Year Pell Share	18%	19%	18%	39%	23%	39%	20%	40%
Percent In-State	16%	20%	33%	59%	76%	71%	51%	81%
Tuition and Fees	\$59,747	\$53,293	\$51,511	\$31,511	\$12,940	\$10,024	\$14,383	\$9,984
Graduation Rate	92%	87%	83%	56%	81%	66%	79%	53%
First-Year Racial/Ethnic Composition								
Native American	0%	0%	0%	1%	0%	1%	0%	1%
Asian American	18%	14%	8%	3%	15%	12%	13%	5%
Black/African American	7%	10%	9%	13%	9%	17%	5%	15%
Hispanic	13%	13%	11%	12%	15%	20%	12%	15%
Native Hawaiian	0%	0%	0%	0%	0%	0%	0%	0%
White	40%	42%	58%	58%	52%	40%	59%	54%
Two Or More Races	6%	7%	5%	4%	4%	5%	4%	5%
Unknown	3%	2%	1%	5%	2%	2%	2%	2%
International	12%	12%	7%	4%	3%	4%	5%	2%

Appendix Figure A1: Distribution of First-Time Domestic Undergraduate Degree-Seeking Students by Race/Ethnicity (National Student Clearinghouse Dataset)



Appendix Figure A2: Distribution of First-Time Undergraduate Degree-Seeking Students by Race/Ethnicity (IPEDS Dataset)



Appendix: Test Score Disclosure Regression Details

In order to understand the determinants of a student's probability of test score disclosure ($p_{Disclose}$), we fit the ARC data with the logistic regression model expressed through Equation (1). In equation (1), we include main effects for a host of academic and sociodemographic factors. These interactions allow for different relationships between the student's SAT score and score disclosure probability for different subgroups of students.

To construct the fitted score disclosure curves depicted in Figures 14-17, we hold all variables constant at their sample means and use parameters β , γ , τ , etc. to demonstrate how score disclosure probabilities change with test scores for different subgroups of students.

- *SATScore* is a student's actual SAT score inclusive of disclosed and withheld scores. Disclosed scores are sourced from ARC colleges, while withheld scores are the highest combination of SAT section scores across all of a student's SAT scores in College Board administrative data.
- *Race* is a vector of indicator variables expressing the student race/ethnicity provided by the college.
- *ParentalEd* is a vector of indicator variables expressing the student's parental education from the College Board's Student Data Questionnaire (SDQ).
- *InState* is an indicator for whether the student resides in the same state as the college to which they applied.
- *HSGPA* is the student's self-reported high school GPA from the College Board's Student Data Questionnaire (SDQ) on a 0-4.33 scale.
- *HChallenge* and *NHChallenge* express the student's high school and neighborhood challenge on a 1–100 scale, where higher challenge levels indicate more disadvantaged neighborhoods and high schools.
- *Feeder* is an indicator variable identifying students who sent 30 or more applications to the college between 2018 and 2020.
- *College* is a vector of college fixed effects to capture differences across ARC institutions that are constant for all students.

Equation (1):

$$\ln\left(\frac{p_{Disclose}}{1 - p_{Disclose}}\right) = \beta_0 + \beta SATScore_i + \gamma_1 Race_i + \gamma_2 (SATScore_i * Race_i) + \delta_1 ParentalEd_i + \delta_2 (SATScore_i * ParentalEd_i) + \zeta_1 InState_i + \zeta_2 (SATScore_i * InState_i) + \phi_1 HSGPA_i + \phi_2 (SATScore_i * HSGPA_i) + \pi_1 HChallenge_i + \pi_2 (SATScore_i * HChallenge_i) + \theta_1 NHChallenge_i + \theta_2 (SATScore_i * NHChallenge_i) + \partial_1 Feeder_i + \partial_2 (Feeder_i * NHChallenge_i) + College_i + \epsilon_i$$

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