



Budget Model

Who Attends Community College?

***Series on community colleges:** The Biden-Harris Administration has advocated for providing free community college. This series of briefs takes a deeper dive into the world of community colleges: who attends, who transfers, who graduates, who achieves high marks, and what factors seem to matter for each. In doing so, we hope to shed light on how some students may benefit from this policy, others may not, and what factors form this partition. More briefs can be found [here](#).*

Summary: About 30 percent of students who first attend two-year community college are from families with incomes above the median income for students attending four-year colleges. Moreover, upwards of one-fifth of top students from relatively small and large high schools first attend a two-year institution.

Background

The data for our analysis stem from the National Longitudinal Survey of Youth (NLSY97), a representative survey of U.S. residents born between 1980 and 1984 that follows subjects over time with subsequent surveys administered (bi-)annually. Focusing on enrollment decisions before age 30, we partition the sample of students into three groups: i) students who first enroll in a two-year college, ii) students who first enroll in a four-year college, and iii) students who have no post-secondary enrollment ("non-attendees"). We examine how these three groups differ by household income and three measures of student ability: Armed Services Qualification Test (AFQT) scores, high school grade point average (GPA), and high school class rank. The AFQT is administered to respondents to create an additional ability measure that is less influenced by local GPA norms.

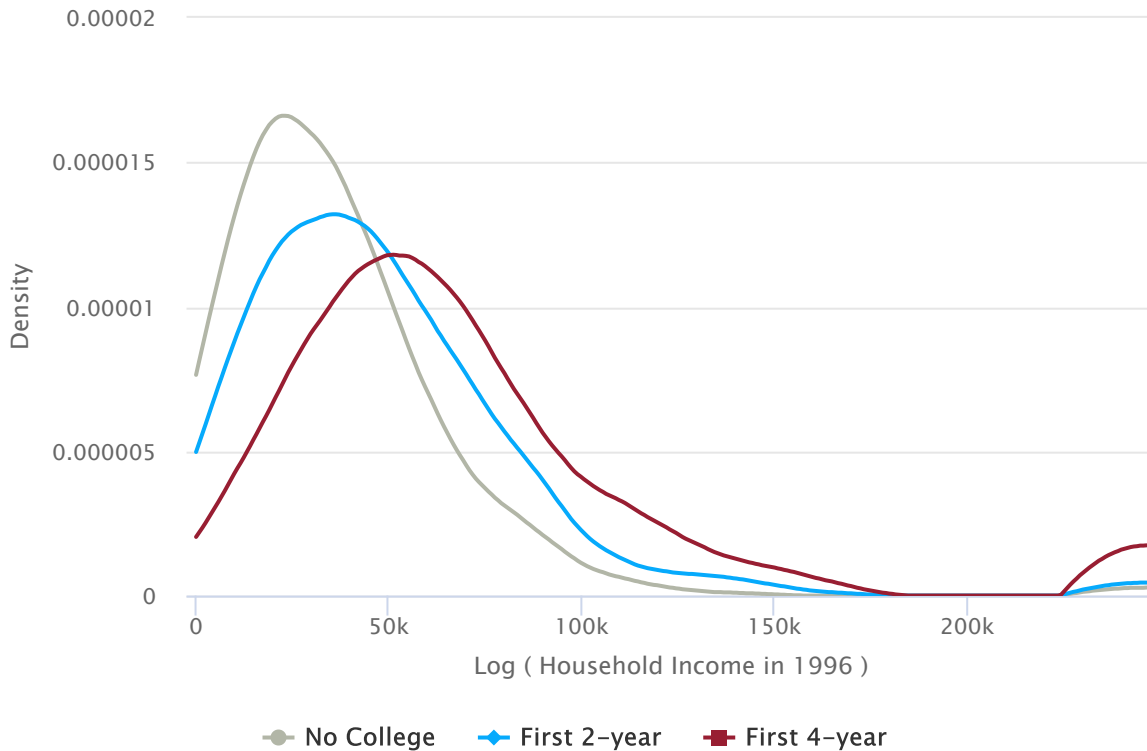
By Household Income

The distribution of students by family income (in 1996) for each of the three groups is displayed in Figure 1. Students who first attend four-year universities tend to come from higher-income backgrounds than their peers. The median family income among students who first attended four-year institutions in our sample is \$58,500, 39

percent above the \$42,000 median for two-year attendees and 89 percent above the \$31,000 median for non-attendees. Though the median family income is lower among community college students, 30 percent of students who first attend two-year college are from families with incomes above \$58,500.

Figure 1: Distribution of Students' Family Incomes by College Enrollment

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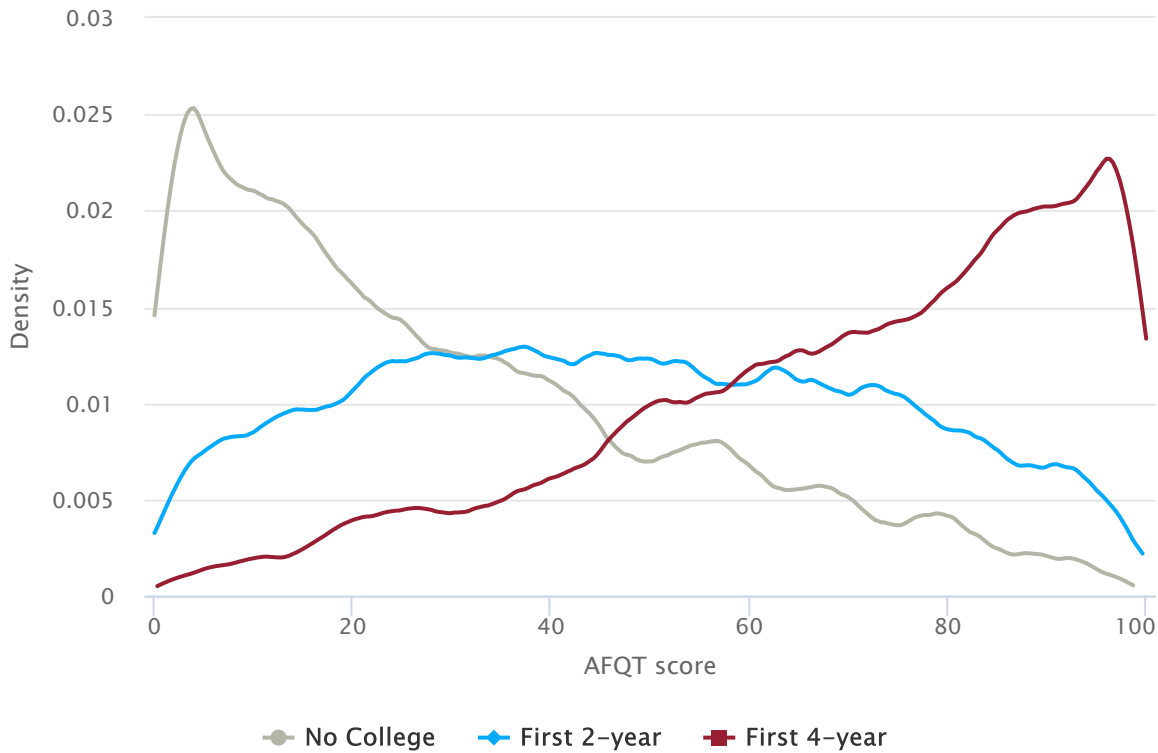


By Student Ability: AFQT

Looking by measures of student ability, we see more disparate differences in attendance choice than for household income. Figure 2 shows that the distribution of AFQT scores is dissimilar for the three groups. Scores for non-attendees are bunched towards the lower-third of the score range, those for two-year students more diffuse but concentrated toward the middle, and those for four-year students bunched toward the upper-third. The median scores for the no college, first two-year, and first four-year students are 24.0, 46.7, and 74.2, respectively. Among students who first attend a four-year university, 82 percent have AFQT scores above the median for two-year attendees.

Figure 2: Distribution of Students' AFQT Scores by College Enrollment

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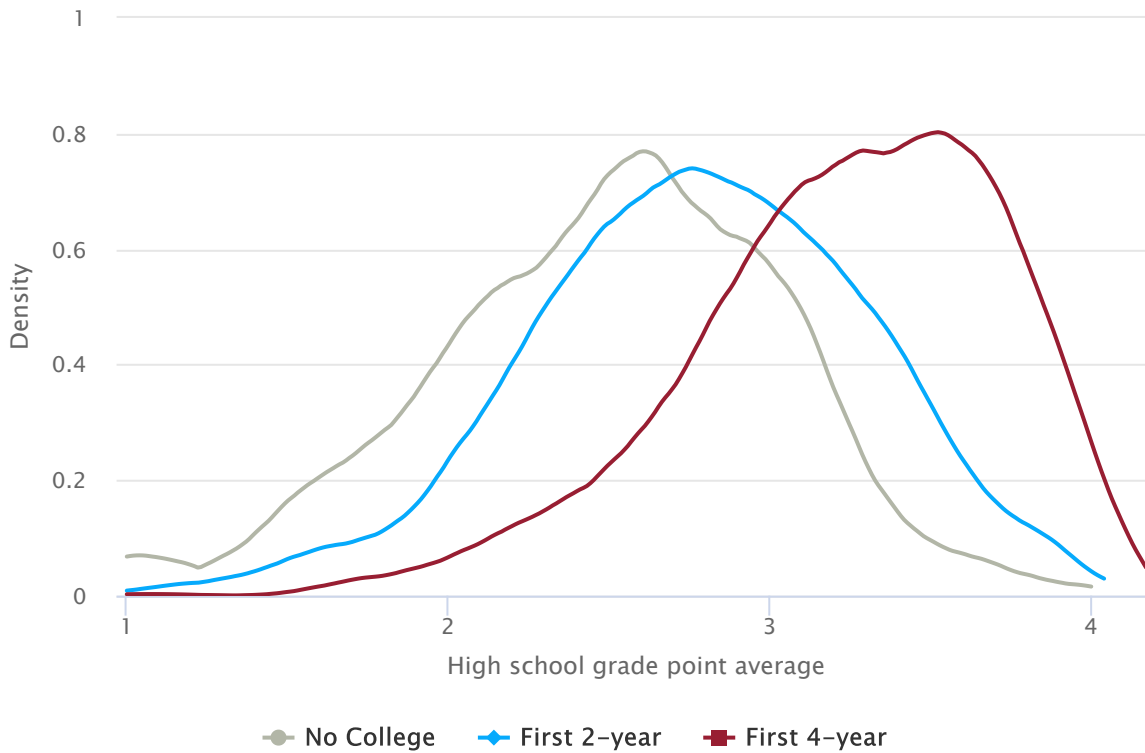


By Student Ability: GPA

The summary is similar if we focused on high school GPA instead of AFQT. As Figure 3 shows, the distributions of GPA for high school students who do not attend or attend two-year institution first are noticeably lower than those of four-year attendees. The median high school GPA among four-year entrants is 3.28, compared with 2.79 for two-year entrants and 2.54 for non-attendees. Roughly 82 percent of students who first attend a four-year university have a high school GPA above the median among students who first attend two-year institutions.

Figure 3: Distribution of Students' High School GPAs by College Enrollment

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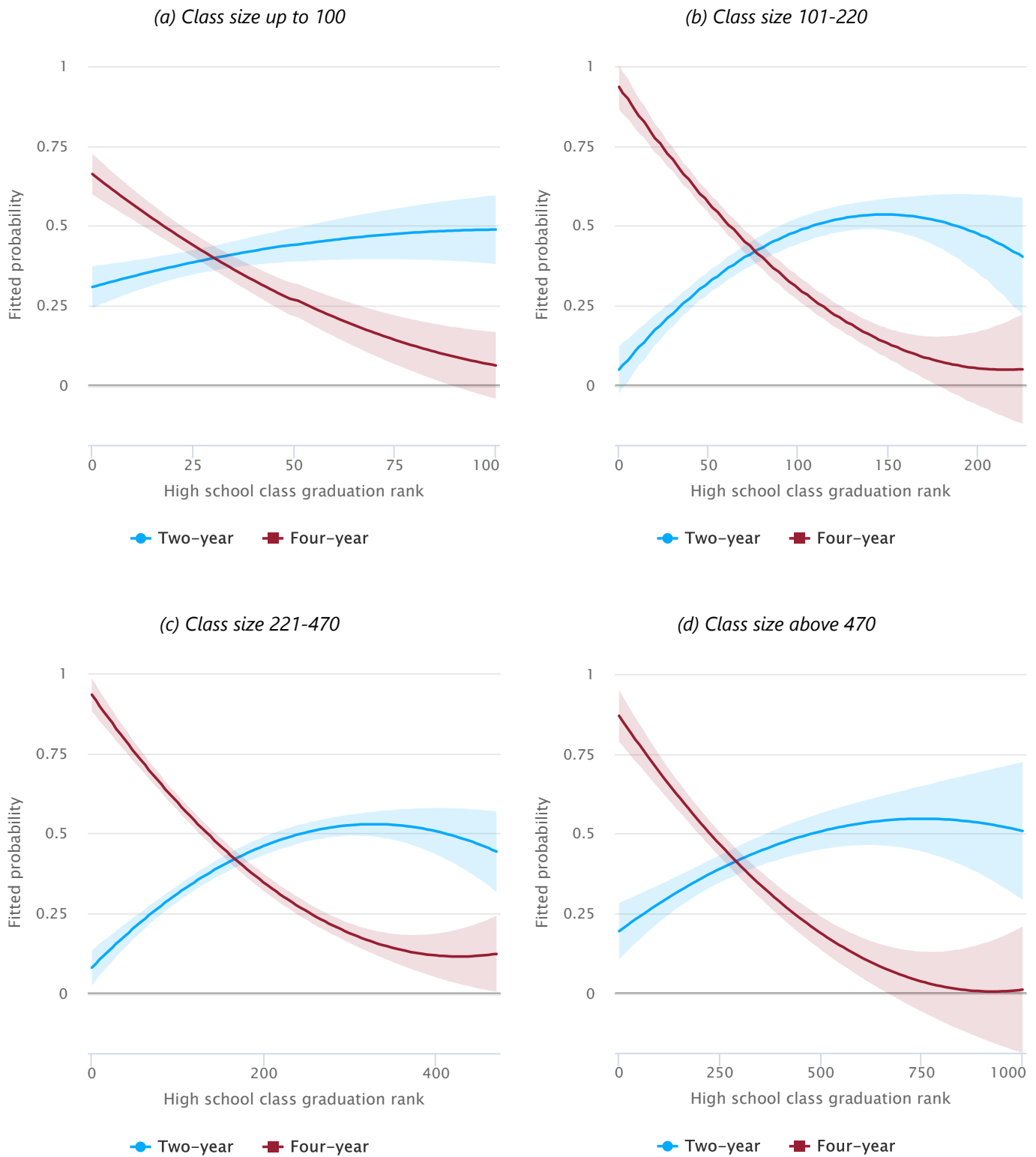
By Student Ability: Class Rank

Last, we analyze differences between students first attending two-year and four-year colleges by one final metric of student performance: class rank. In the NLSY97 data, students provide the size of their graduating high school cohort (up to 100 students; 101–220; 221–330 and 331–470, which we combine; and above 470) along with where they rank within the cohort. For each cohort size, we look at the rates of enrollment in two-year and four-year programs by students' graduating positions.

Two observations stand out. First, we observe the same pattern across all cohort sizes: top-ranked students are increasingly likely to first attend four-year, with middle- and lower-ranked students increasingly likely to first attend two-year institutions. (Notably, this pattern is weakest among the smallest graduating cohorts, possibly reflecting the increased imprecision of relative ability tied to class rank). Evidently, two- and four-year institutions are not competing for top students. The probabilities that a student attends either a two-year or four-year university first converge as we approach rankings around one-third to one-half of the class size, suggesting that the ability of the marginal student attending a two-year institution falls around this range. Second, the fraction of top-ranked students who first attend a two-year college is not zero. Especially for the smallest and largest class sizes, upwards of one-fifth of top students attend a two-year institution first.

Figure 4: Probability of First Enrollment by Student Rank and Class Size

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