

The Common Application and Student Choice[†]

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In this paper, we investigate the role of the Common Application (CA) in increasing student choice in the college admissions process. The CA allows students to submit a single application to multiple colleges and has grown from 15 institutional members in 1975 to nearly 900 institutions today. By reducing frictions in the college admissions process, the CA facilitates applying to multiple colleges, potentially leading to more admissions offers for applicants, our definition of student choice. A greater degree of student choice thickens the market for higher education, contributing to a more integrated market and potentially enhancing competition among institutions for students. We investigate these issues using data from the Higher Education Research Institute (HERI) Freshman Survey over the period 1982–2014 and information regarding the timing of CA entry by colleges. This analysis complements that from our companion paper, Knight and Schiff (2020), which investigates similar issues using institution-level aggregate data, and contributes to a broader literature including Liu, Ehrenberg, and Mrdjenovic (2007); Smith (2013); and Smith, Hurwitz, and Howell (2015) on the role of the CA in college admissions.

I. Measures of Student Choice

To develop measures of the degree of student choice, we use the Freshman Survey from the HERI at the University of California, Los Angeles. These data are collected via surveys completed by students in the fall of their freshman year. While the number of participating institutions has varied over time, our analysis

is based upon roughly ten million freshman respondents attending over 1,300 institutions over the period 1982–2014. Using these data, we develop two proxies of student choice that are available over the entire sample period. We then attempt to validate these two proxies using a measure of the true size of student choice sets, the number of colleges to which the student was accepted; this measure is only available during the early years of our sample period (1983–1989 and again 1995–1998).

Our preferred proxy for student choice involves the number of applications submitted. While the categorical responses to this question have varied over time, we create a consistent measure of the number of applications, including the institution that they ultimately attend, with the upper limit capped at seven applications. The measure used in most of our statistical analyses involves whether students applied to at least six colleges.

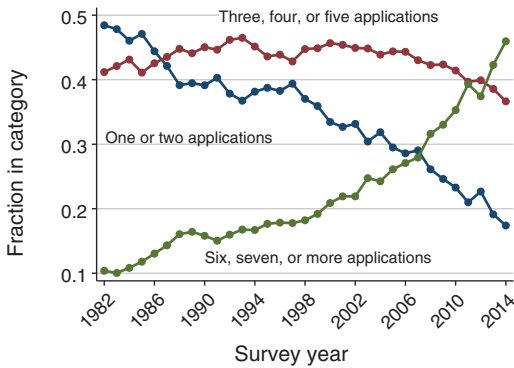
We next compare this proxy for student choice with our true measure of student choice, based upon whether or not students were accepted to at least five colleges. Among students with smaller true choice sets, those accepted to fewer than 5 institutions, only 8.98 applied to 6 or more institutions. By contrast, among students with larger true choice sets—those accepted to at least 5 institutions—72.35 applied to 6 or more institutions. While these results are not surprising, in the sense that applying to many schools is a necessary condition for being admitted to many schools, they do document a strong relationship between the true size of choice sets, which is only available during the early years of the sample period, and our proxy, which is available in all years of our sample period.

Figure 1, panel A, plots trends in this proxy for student choice over time. As shown, only around 10 percent of respondents submitted 6 or more applications in 1982, the start of our sample period, but this increased dramatically to nearly 50 percent by 2014, the end of our sample period. This increase was offset, most notably, by a significant decline in the number

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Panel A. Application counts



Panel B. Student ranking

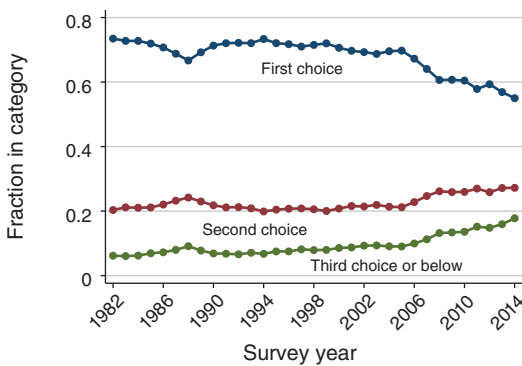


FIGURE 1. APPLICATION COUNTS AND STUDENT RANKING OF ATTENDING UNIVERSITY

Note: Uses CIRP/HERI survey student weights to approximate national population.

of students who submitted applications to only one or two institutions; this percentage declined from nearly 50 percent in 1982 to under 20 percent by 2014.

Our second proxy involves whether or not the student considers the institution that they attend as their “first choice.” While the interpretation of this as a proxy for student choice is less obvious, we next consider two interpretations of “first choice” in the context of our two-college theoretical model in Knight and Schiff (2020), which distinguishes between the ex ante first choice, based upon pre-application information, and the ex post first choice, which incorporates both pre-application information and additional information received by students after applying to colleges but before accepting any admissions offers. Our first interpretation involves students

applying to and being accepted by both colleges but attending their ex ante second choice over their ex ante first choice due to post-application information.¹ Under this interpretation, attending a non-first-choice institution is consistent with increased student choice since students had the option to attend either college. A second interpretation involves students applying to both colleges but not being accepted to their ex ante first choice and thus attending their ex ante second-choice institution.² Under this interpretation, attending a non-first-choice institution is not consistent with increased student choice since students were not admitted to their first choice. Given that only the first interpretation is consistent with a link between students attending a non-first-choice institution and increased choice, we next attempt to validate this proxy with our true measure of student choice. In particular, among students with smaller true choice sets (fewer than 5 institutions), 32.44 percent report that they do not attend their first choice versus 39.52 percent among students with larger true choice sets (at least 5). While these differences are not as stark as those for our first proxy, they do represent a 22 percent increase in the likelihood of not attending the first-choice institution and are statistically significant at conventional levels.

Figure 1, panel B, plots trends in this second proxy for student choice over time. As shown, there is a roughly 20 percentage point decline in the fraction of students attending first-choice institutions, from roughly 75 percent to roughly 55 percent. This was offset by increases both in students attending second-choice institutions and in students attending institutions that they considered third choice or below, as both of these increased by roughly 10 percentage points over our sample period.

¹This information could include, for example, financial aid packages, and in this example, students might ultimately attend their ex ante second choice if their ex ante first choice is not affordable due to students receiving less aid than expected from their ex ante first choice.

²Based upon a separate question available from 2006 to 2014, 57.74 percent of students who reported that they did not attend their first-choice institution also reported that they were not accepted by their first choice.

TABLE 1—CA ENTRY, APPLICATIONS, AND STUDENT CHOICE

	Apps67+ (1)	App67+ (2)	2nd+below (3)	2nd+below (4)
CA member	0.0576 (0.0094)	0.0194 (0.0050)	0.0277 (0.0055)	0.0145 (0.0048)
Observations	9,966,432	4,645,006	10,000,770	4651043
Clusters	1,302	387	1302	387

Notes: Dependent variable in first two columns is an indicator for whether the student submitted six, seven, or more total applications. The dependent variable in columns three and four is an indicator for whether the attending university is the student’s second choice or below. We use the full sample in columns one and three and the future joiners sample in columns two and four. All specifications include institution and year fixed effects; the future joiners sample also includes an indicator for joiner versus comparison group. Standard errors clustered by institution in parentheses.

II. The Common Application and Student Choice

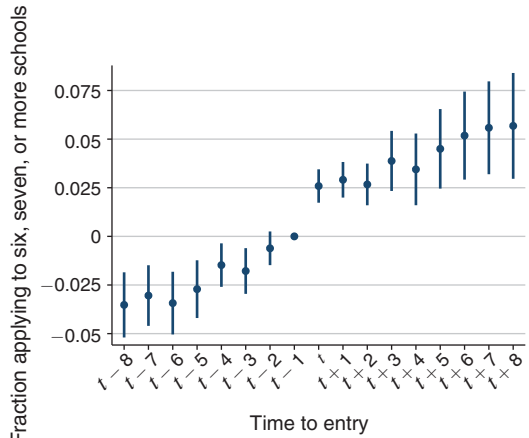
Using these two proxies, we next consider the role of the CA in terms of increasing the degree of student choice. To do so, we use information on the exact year of entry for each CA member and examine how the degree of student choice for enrolling students changes before and after CA entry.³ We consider four specifications: a two-way fixed effects analysis, an event study, and two specifications in which we compare joiners to a control group of future joiners, those joining the CA in the near future.

The first analysis is a simple two-way fixed effects analysis, in which we compare institutional outcomes before and after joining the CA, after controlling for year fixed effects and institution fixed effects. As shown in the first column of Table 1, which displays results from our preferred proxy, students attending CA institutions after joining relative to before joining are 5.76 percentage points more likely to apply to 6 or more institutions, and these results are statistically significant at conventional levels.⁴ Likewise, as shown in column 3, students attending CA institutions after joining relative to before joining are 2.77 percentage points more likely to attend non-first-choice institutions, and these results are also statistically significant

³These data on CA entry years were provided to us directly from the Common Application.

⁴This represents an increase of 22.6 percent, relative to the 25.48 percent of students who apply to 6 or more institutions in our sample.

Panel A. Full sample



Panel B. Future joiners

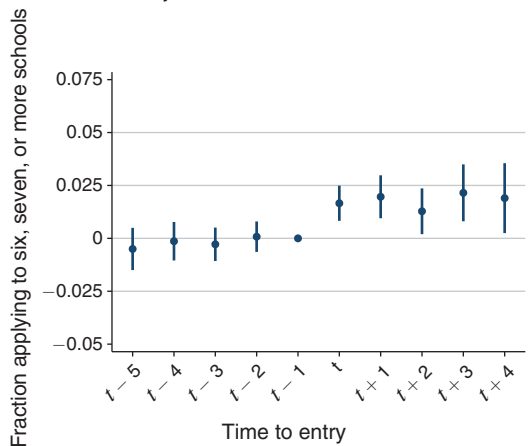


FIGURE 2. CA ENTRY AND FRACTION APPLYING TO SIX INSTITUTIONS OR MORE

at conventional levels.⁵ Taken together, these results document a strong link between joining the CA and our proxies of student choice.

Our second analysis is an event study, using the same sample in the preceding analysis but allowing for consideration of pre-trends and explicit documentation of a discontinuity in the degree of student choice in the join year. As shown in Figure 2, panel A, there is strong evidence of a discontinuity in the fraction of students applying to at least six institutions in the

⁵This represents an increase of 9.1 percent, relative to the 30.58 percent of students who attend non-first-choice institutions in our sample.

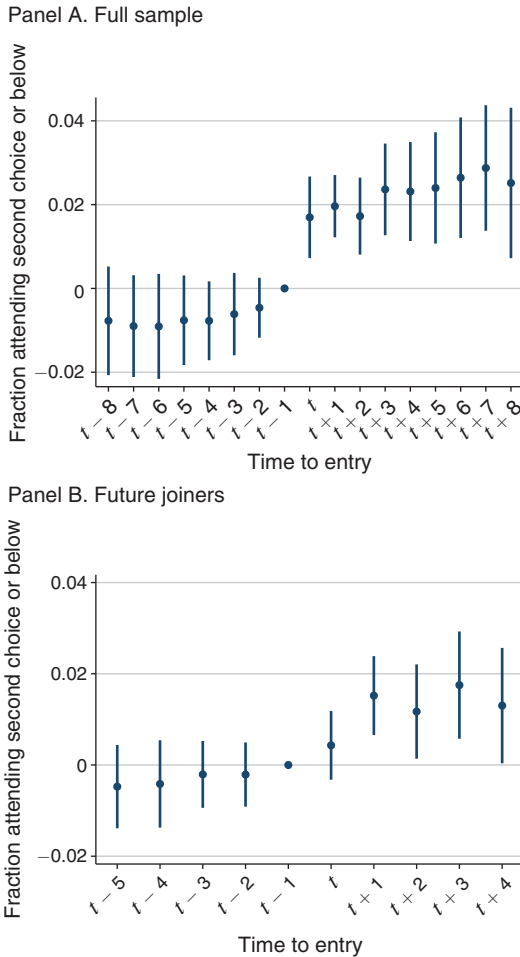


FIGURE 3. CA ENTRY AND FRACTION ATTENDING SECOND-CHOICE INSTITUTIONS OR BELOW

join year, with a statistically significant increase of roughly 3 percentage points relative to the 1 year before joining, with the coefficient normalized to 0 in this year (i.e., $t - 1$). Likewise, as shown in Figure 3, panel A, there is also strong evidence of a discontinuity in the fraction of students not attending their first choice in the join year, with a statistically significant increase of roughly 2 percentage points relative to the year before joining, with the coefficient again normalized to 0 in this year. At the same time, in both of these event study analyses of student choice, there is evidence of upward pre-trends in these proxies of student choice prior to the join year, an issue that we will address in more detail in the next set of specifications.

Our next two specifications compare CA joiners to joiners in the near future.⁶ By contrasting joiners and joiners in the near future, the control group is more comparable given that the types of schools joining the CA have varied considerably over time.⁷ As shown in column 2 of Table 1, we find a statistically significant 1.94 percentage point increase in the fraction of students applying to 6 or more institutions. Likewise, as shown in column 4 of Table 1, the fraction of students attending non-first-choice institutions increases by 1.45 percentage points, and this result is statistically significant at conventional levels.

Finally, in event study versions of our future joiners specification, we document increases of roughly 2 percentage points in the fraction applying to 6 or more institutions (Figure 2, panel B) and increases of roughly 1 percentage point in the fraction of respondents attending non-first-choice institutions (Figure 3, panel B). There is less evidence of pre-trends in both cases, reflecting the fact that future joiners comprise a more comparable control group.

III. Conclusion

Using individual-level survey data, we develop two proxies for student choice. Our preferred proxy is based upon application activity, and our second proxy is based upon whether or not students attend their first-choice college. Using these proxies, we document a link between institutions joining the CA and student choice. By reducing frictions in the college admissions process, the CA has increased the thickness of the market for higher education, potentially leading to a greater degree of market integration and enhanced competition for students.

⁶For each school that joins, we construct a comparison group that includes colleges that will join five to seven years into the future. We then analyze outcomes over a ten-year window, including the five years before joining, the join year, and the four years after joining. As an example, for a school joining in 2000, the comparison group includes colleges that join in 2005, 2006, and 2007, and we analyze outcomes over the 1995–2004 period. For more details on this specification, see Knight and Schiff (2020).

⁷For example, public institutions were not allowed to join until 2002. The appendix of Knight and Schiff (2020) provides evidence that the pre-join characteristics of schools joining the Common Application are more similar to those of schools joining in a later period than to those of schools that never join.

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