

## Waiving the admission fee helps increase the rate of enrollment

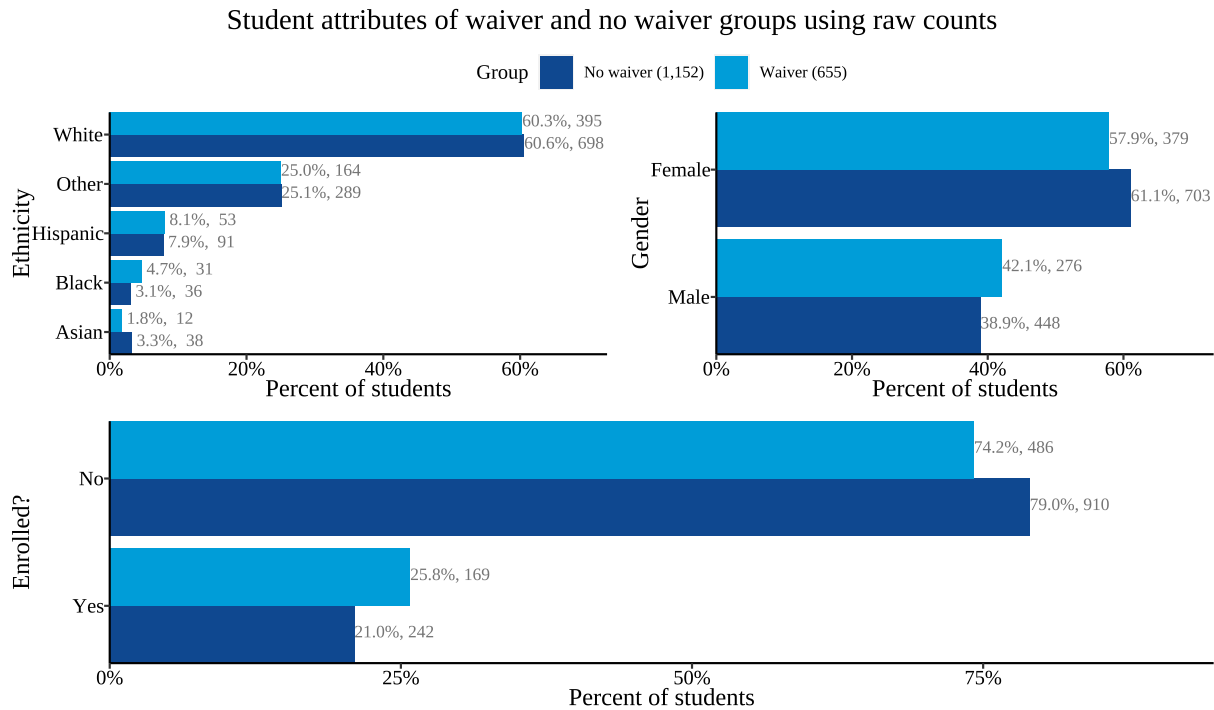
### BACKGROUND

In fall 2020, following the rapid transition to remote learning due to the COVID-19 pandemic (spring 2020), the admissions department decided to waive the \$40 admission fee for students applying to spring 2021. The fee was waived for students who had completed their entire application and were sitting in the payment pending stage, but had yet to pay the fee even after being nudged by email to pay. To understand the effectiveness of this decision, we examined the the number of students who enrolled in Spring 2021.

### METHODS

To answer the above question, we divided students into those who received the waiver and a comparison group from a previous term. The waiver group consisted of 655 students. The control group (1,152 students) was a population of students that applied for the spring 2020 term that sat in payment pending and received at least 1 nudge. This was the closest approximation of a comparison group available since this project did not leverage a randomized control design. (If they had, admissions would have had to randomly given some students a waiver while others would not receive one and this would not meet our equity standards.) We believe our control group may represent a selection of students that are *more* motivated than the waiver students for a few reasons. The students from spring 2020 (control group) were applying to SLCC prior to the COVID-19 outbreak. During this time, the overall enrollments for spring 2020 were much higher than for spring 2021. While there were many students of financial-need in spring 2020, the pandemic caused quite a financial downturn for *everyone*, meaning that education may be even more of a luxury for students applying during the pandemic (i.e. spring 2021).

However, we have solid evidence to suggest that this control group is quite similar to the waiver group. The first two figures in figure 1 shows these groups of students may be quite similar based on gender and ethnicity and therefore, there would be no added benefit of matching across students. The bottom figure shows that a slightly higher proportion of students who received the waiver enrolled, but without further analyses we have no understanding of whether receiving the waiver is responsible for this increase or if the difference between the two groups is important.



**Figure 1: Student attributes of waiver and no waiver groups using raw counts.** This figure shows that the breakdown of gender, ethnicity, and enrollment behavior across both groups are all pretty similar. Raw counts and proportions of various student attributes by group are presented after each bar. The x-axis is the percent of students to ease comparisons across groups that are smaller vs. larger. Bars of the same color will add to 100 percent.

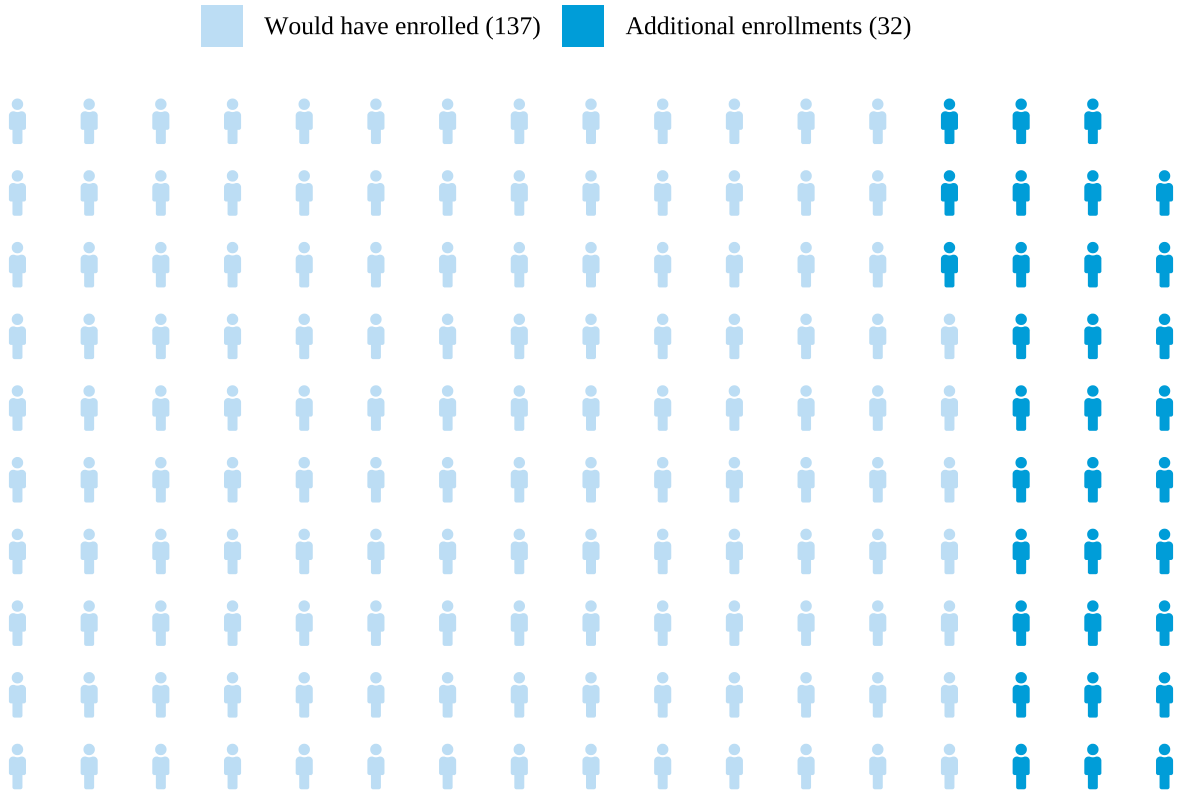
## RESULTS

Since the raw values only provide us with the proportion of students that enrolled (or did not) based on group, a logistic regression model was built to predict if a student enrolled (yes or no) in the term they applied for (spring 2021 for waiver students or spring 2020 for non-waiver students). We controlled for gender (male vs. female) and ethnicity (White, Hispanic, Asian, Black, or Other), and group (waiver vs. no waiver) was a predictor for this model. We were curious of determining the added benefit of the waiver, so we leveraged the above model to estimate how many students would have enrolled in spring 2021 had they *not* received an application waiver.

**Of the 655 students that got the waiver, 169 enrolled, but without the waiver, we would have only expected 137 to enroll.** This 137 number was the focus of our analysis. We were able to calculate it by building a model as described above, then simulating what the enrollment behavior of the spring 2021 students (waiver group) would have been had they not received the waiver.<sup>1</sup>

<sup>1</sup>The model we used was fit based on observed data (did the student get the waiver and did they enroll?). We used that model to compute the (predicted) probability of each observed student enrolling. Next, we took all students who got the waiver and simulated their behavior if they had not gotten the waiver, re-computed each individual student's (predicted) probability of enrolling, summed them, and lastly took the median of (predicted) probability of enrolling.

The waiver was responsible for an additional 32 students of the 169 students that enrolled in Spring 2021



**Figure 2: The waiver was responsible for an additional 32 students enrolling in the spring 2021 term.** This figure depicts the 169 total students that enrolled following the waiver. The light blue shows the number of students that would have enrolled without the waiver and the darker blue shows the additional students secured due to the waiver, as predicted by the model.

### COST-BENEFIT ANALYSIS

After learning that students responded well to waiving the application fee, we wanted to estimate the cost to the college to better understand how we should use this information going forward. The net loss for the college would equate to the extra \$40 from the 655 students that got the waiver. The net gain to the college would be the amount of tuition revenue received by the 169 students that enrolled.

**Table 1:** Cost of waiver campaign

Net gained	Revenue secured during waivers	Estimated revenue secured without waivers	Additional potential forgone revenue
\$8,910.75	\$228,749.50	\$219,838.75	\$4,600.00

We estimated that a net gain of \$8,910.75 was acquired by the college for waiving the application fee (see table 1 column 1: Net gained above). This was calculated by finding the difference between the amount of observed tuition received from the 169 students that enrolled (\$228,749.50, see table 1 column 2: Revenue secured during waivers above) and the 40 application fee we would have received from the 655 spring 2021 applicants plus the estimated amount of tuition the 137 would have paid (\$219,838.75, see table 1 column 3: Estimated revenue secured without waivers above). Since the waiver was responsible for an additional 32 enrollments, these students' tuition was not counted towards the revenue that we would have received had we charged the application fee. However, we do not know who exactly belongs to each group since this is based on a simulation. Therefore, we went through the following procedure to estimate how much tuition the 137 students, who would have enrolled regardless of a waiver, would have paid. We confined analysis to resident costs in an effort to not overestimate revenue.

- Using the distribution of the observed credit load (by student) from the observed 169 enrollments, we simulated a group of 137 students with a matching credit load distribution.
- We joined those credit loads to the current SLCC tuition and fee structure to approximate how much tuition each student is paying based on credit load only.
- We summed the total tuition paid from this group.

One piece that's missing from our analysis is the amount paid in scholarships and tuition waivers to the students that enrolled following the waiver. None of the 169 spring 2021 students received any scholarship funds and only 4 of those students received a waiver which equated to \$4,600.00 (see table 1 column 4: Additional potential forgone revenue above). Of these waivers, \$800 was given from SLCC Promise and the rest of these funds were Need-Based Tuition Waivers. Even if we applied the \$4,600.00 to the net gain from doing the waiver campaign, we still would have secured an additional \$4,310.75.

We understand that this is not an all-encompassing analysis of the final dollar amount of attendance, but we intended to use this information to loosely gauge if waiving the fee is worth the cost.

## RECOMMENDATIONS AND CAVAETS

Based on this information, we were able to secure approximately 32 more students than we would have otherwise and approximately accounted for at least \$4,310.75 additional funds, but possibly more, in resident tuition alone. In many other research reports, we have identified financial struggles as the number one hardship faced by our students. It is likely that this hardship was exacerbated by the onset of the pandemic causing a \$40 application fee to suddenly become a barrier for more students. Any extra support to help students get their feet in the door are likely even more appreciated than pre-COVID. There were a few limitations to these results. Since this was not a

randomized controlled trial, we had to approximate a control group as previously described. This means that the comparison between these 2 groups is not perfect, but is our best approximation.

Our cost-benefit analysis allowed us to gauge revenue gained or lost by waiving the application fee, but has important caveats to consider. The cost of attending is more complicated than just tuition (residency, scholarships, Pell-eligibility, other financial aid, etc.) and most of these were not included because it was outside of the scope of this project. We assumed all students would be charged as residents in an effort to not overestimate our gains. The cost-benefit analysis was also conservative because we did not account for future terms, which would have increased revenue as well. Conversely, the model is liberal in that we built it based on the group that enrolled after receiving the waiver. It is possible that the group of students that would have enrolled in spring 2021 regardless of the waiver were more motivated and more likely to take a higher class load; however, the opposite could be true as well.

## **ACKNOWLEDGMENTS**

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