Evaluation of UC Merced's 2008-09 Financial Aid Strategy

Introduction

This study seeks to determine the effectiveness of three different approaches to distributing financial aid funds provided to UC Merced by the University of California Office of the President. Pioneer Grants (Award Type XXX) are need-based awards that targeted California residents admitted as freshmen who declared a major at the time of application for admission and submitted a FAFSA on time, but were offered no other gift aid, for whom parental income is less than $160,000 and the difference between their calculated budget and estimated parental contribution is less than $8,000. Discover Grants (Award Type XX2) are need-based awards that targeted California residents admitted as freshmen who submitted a FAFSA on time and were determined to be eligible for a Cal Grant A. Trustee Awards (Award Type XX3) are merit-based awards that targeted applicants admitted as freshmen who have an eligibility score greater than or equal to 5215, where the eligibility score is computed as the lesser of 4.3 or the applicant's high school grade point average times 1000 plus the UC score used to determine eligibility for admission times five (i.e., MIN(gpa, 4.3)*1000 + uc_score*5). Details about how the UC score is computed can be found at ://www.universityofcalifornia.edu/admissions/undergrad_adm/paths_to_adm/freshman/scholarship_reqs.html.

Method

Comparison groups were constructed from the pool of 2006 applicants for admission (or for Trustee Awards only, 2007 applicants for admission) using the population targeting characteristics specified above. Applicants from the 2006 pool are the preferred comparison group, because UCOP provided no special funding for financial aid in 2006, but in 2007 UCOP provided funding that was used to entice applicants to enroll. Hence, a comparison between 2006 and 2008 applicants with similar characteristics is a comparison between applicants who received no aid made available by UCOP and applicants offered such aid, whereas a comparison between 2007 and 2008 applicants is confounded by the fact that UCOP provided special funds to UC Merced for financial aid in 2007. However, because the UC scores that are part of the formula used to determine eligibility for Trustee Awards were not available for 2006 applicants, it was necessary to use the pool of 2007 applicants to construct a comparison group for the Trustee Award analysis. In all three comparisons, the dependent variable used to determine the effectiveness of each financial aid approach is enrollment status (enrolled/did not enroll) and the variable used to predict enrollment is award status (offered award/not offered award). Because the resulting tables are two by two tables, Fisher's Exact Test was used to determine the statistical significance of observed differences.

Results

The target population characteristics used to define comparison groups did not work perfectly. For example, Pioneer Grant and Trustee Award decisions were made at a specific point in time but the population characteristics may have changed after the award decisions were made (e.g., due to a review of information provided on the FAFSA or because missing information that prevented making an award was subsequently provided). The evaluator did not have the information that was available to financial aid officers at the time they made the award decisions, but rather only had the

"final" information about applicants that was a result of an ongoing process involving the admissions and financial aid departments. The population characteristics that were used by the evaluator to define the intervention (or treatment) group for Pioneer Grants indicated that 331 applicants met the eligibility criteria, but only 276 Pioneer Grants were awarded. (Presumably those who met the eligibility criteria but did not receive an award offer did not provide all the information needed to establish their eligibility by the time the award offer was made, but did provide that information subsequently.) In addition, only 246 of the 276 recipients of Pioneer Grant offers had all the characteristics used to determine eligibility for a Pioneer Grant by the end of the admissions/financial aid process. Hence, only 74% of those meeting the established eligibility criteria for an award offer when the fall semester began actually received a Pioneer Grant offer, and only 89% of those who actually received an offer met the eligibility criteria for an award four months after the award offer was made. Because the evaluator knew who received an award offer, it was possible to adjust membership in the intervention group accordingly, so people who met the eligibility criteria but did not receive an award were excluded from the intervention group. However, no such adjustments could be made to the comparison group. As a result, error exists in the comparison group that could bias the results. This error is even greater for Discover Grants and Trustee Awards than it is for Pioneer Grants. For Discover Grants, only 48% of those meeting the eligibility criteria at the beginning of the fall semester received an award offer, although 370 (93%) of the 400 award offer recipients continued to meet all the eligibility criteria by the time the fall semester began. For Trustee Awards, only 53% of those meeting the eligibility criteria at the beginning of the fall semester received an award offer, although 1890 (99%) of the 1901 award offer recipients continued to meet all the eligibility criteria by the time the fall semester began.

The Pioneer Grant strategy appears to be effective. While only 5.7% of the 523 students in the comparison group drawn from the 2006 pool of applicants enrolled at UC Merced, 11.4% of the 246 applicants meeting all the criteria used to establish the comparison group enrolled in 2008. This 5.7 percentage point increase in enrollment is statistically significant ($p=.008$).

The Discover Grant strategy also appears to be effective. While only 19.3% of the 244 students in the comparison group drawn from the 2006 pool of applicants enrolled at UC Merced, 25.7% of the 370 applicants meeting all the criteria used to establish the comparison group enrolled in 2008. This 6.4 percentage point increase in enrollment is not statistically significant ($p=.078$) when a two-tailed test is conducted, but is statistically significant ($p=.040$) for a one-tailed test. Given the noise in the data due to the problems constructing a comparison group, and given that a two-tailed test of the 8.3 percentage point difference between 2008 and 2007 was significant at the .003 level, it seems appropriate to conclude that this strategy is effective.

The Trustee Award strategy, however, does not appear to be effective. Of the 3613 members of the comparison group drawn from the 2007 pool of applicants, 216 (6.0%) enrolled, but only 4.1% of the 1890 applicants meeting all the criteria used to establish the comparison group enrolled in 2008. This 1.9 percentage point difference (in the wrong direction) is statistically significant ($p=.004$).

Conclusion

Assuming *ceteris paribus* conditions, it appears the biggest bang for the buck would be obtained by continuing the Discover Grant strategy, with the Pioneer Grant strategy being a close second. The Trustee Award strategy, which involves providing merit-based rather than need-based aid, does not appear to be effective.