

College-student Under-match: the Smith, et al, Study

Smith, et al (2013) completed a recent analysis of the match (or academic fit) between students and the colleges where they eventually enroll (or the outcome of no immediate postsecondary participation). They make the following points, among others, in their analysis:

1. "First, academic undermatch is pervasive; over 40 percent of students undermatch. Second, undermatch manifests itself in many ways. Sometimes students go to colleges just below what their academic credentials would predict, but quite often students enroll in colleges that are substantially below their measured academic achievements. Even among the most academically credentialed students, academic undermatch exists. However, almost mechanically, less credentialed students are much more likely to undermatch into two-year colleges or no college at all. Third, academic undermatch is more common among students from rural areas and low-SES families with relatively less educated parents. Finally, we find that undermatch has decreased between 1992 and 2004, in part because of changing student decisions, especially the decision to enroll in nonselective and two-year colleges, and in part because of changing college selectivity over this time period..." [p. 260]
2. "...what are the consequences of this substantial amount of undermatching? That is, how does undermatch affect student outcomes, such as college graduation, time-to degree, and labor market earnings? Evidence on the answers to these questions should shape how much time and resources researchers and policy makers are willing to dedicate to ameliorating the undermatch phenomenon..." [p. 260] [Note: This point is critical for policy makers and administrators to consider because it can determine the need for some particular policy, if any. That is, undermatch by itself may not incur a net loss in public good.]
3. "It is important to stress that, in many instances, the behavior labeled 'academic undermatch' in this paper may be a good decision for the student. A good academic match between student and institution may result in a poor 'fit' for the student for a variety of reasons that are not purely academic (e.g. financial factors, geography, field of study, extracurricular activities, student support systems, etc.). Attending a less selective college that very likely carries a smaller net price may offer many students an inexpensive way to determine if college is the right choice for them, thereby allowing non-completers to leave without excessive student loan debt for having explored postsecondary education..." [p. 261] [Note: This point helps to put the behavior of undermatching through community college enrollment into context.]
4. [Regarding the shift in undermatch over time, 1992 to 2004] "...there is an 11.7 percentage point increase in undermatch for students with access to the most selective category and 7.1 percentage point increase in substantial undermatch. This is the only academically credentialed group of students that have a large increase in undermatch over time, which is partially because of the increase in access. Among students who have access to selective colleges, 53.8 percent undermatch and 19.8 percent have substantial undermatch. These statistics decrease by 2004. There is relatively little change in the number of students who have access to somewhat selective colleges between 1992 and 2004. On the other hand, there is a large decrease in the number of undermatched students for those with access to both nonselective and two-year colleges. In fact, 56 percent of students who could have enrolled in two-year colleges in 1992 chose not to do so. In comparison, this statistic is 41.2 percent for the 2004 cohort (a 14.8 percentage point change). This may represent a change in student actions, with more students choosing to attend two-year schools in 2004 compared to 1992, or signify an expansion of outreach by the two-year colleges..." [p. 257]
5. "The undermatch statistics vary substantially by the colleges to which students have access to and colleges they ultimately enroll...Nearly 20 percent of students are estimated to have access to selective colleges. Overall, relative to the most academically qualified students, these students have a greater undermatch rate of 47.3 percent and a similar substantial undermatch rate of 16 percent. In fact, 20.8 percent of students overmatch at the most selective colleges. However, 31.3 percent enroll in somewhat selective colleges. Also, 16 percent of students who have access to selective colleges enroll in nonselective colleges, two-year colleges, or no college at all..." [p. 253]
6. "Lower-SES students undermatch 49.6 percent of the time whereas higher-SES students undermatch 34 percent of the time. Similarly, lower-SES students have substantial undermatch 22.7 percent of the time compared to 13.6 percent of the time for higher-SES students. Almost 50 percent of lower-SES students who have the option to enroll in two-year colleges do not enroll compared to 29 percent of higher-SES students. This is one of the biggest contributors to the aggregate differences in undermatch across SES levels. Also, lower-SES students have higher undermatch rates at each level of access..." [p. 254] [Note: This point emphasizes the role that community colleges play in the undermatch phenomenon.]

7. "...black and Asian students are less likely to undermatch than white students. But these are for very different reasons. Asian students are less likely to undermatch because they have access to relatively selective colleges and are very likely to enroll in one of those selective colleges. Black students are estimated to have little access to selective colleges and so mechanically, they have less of an opportunity to under-match...But why are Hispanic students less likely to undermatch than black students when excluding students with access to only two-year colleges? This remains an open question..." [p. 257]
8. "...students whose parents have a college education are much less likely to undermatch ...Similarly, students who live in rural areas have fewer colleges nearby than students who live in urban or suburban areas. The lack of a nearby college may influence a student's desire to attend college and qualified non-enrollees increase the extent of undermatch... Most of these stories are consistent with information playing an important role in undermatch..." [p. 256]

Below are some technical points regarding this study (for readers with interests in methodology).

- a. "This study uses data from two nationally representative samples of students: the National Education Longitudinal Study of 1988 (NELS) and the Education Longitudinal Study of 2002 (ELS). Both datasets contain information on students' high school careers and their transitions into college. In NELS, students are high school seniors in 1992. Similarly, in ELS, they are high school seniors in 2004. The most recent follow up with these students was in 2006, when students who enrolled in college directly after high school would be sophomores in college. Due to the differences in NELS and ELS, we will use ELS to describe the most current state of undermatching but use NELS in our discussions on comparisons over time. In our analyses, we only use "traditional" students. That is, we analyze students who did not drop out of high school and did not graduate early or enroll in college early...we have approximately 6480 students in NELS and 9130 students in ELS..." [p. 249]
- b. "...we perform two tests on the extent of selection. First, we find that students who apply to at least one more selective college are predicted to have greater access to less selective colleges than students who applied to only less selective colleges. This helps rule out selection on non-academic unobservables such as legacy status, athletics, or motivation..." [p. 252]
- c. "There are a variety of ways to measure academic undermatch. Our approach is similar to Bowen et al. (2009) and Roderick et al. (2008), which is a conservative approach, so that we are likely to underestimate rather than overestimate the full extent of undermatch..." [p. 251]

This analysis should interest policy makers, and administrators in higher education, as well as high school counselors, because it may help them in decisions regarding enrollment planning, student access, student success, upward mobility, and outreach efforts. It also helps add context to other studies of college undermatch that readers may find.

Jonathan Smith, Matea Pender, and Jessica Howell (all with the Advocacy & Policy Center, The College Board, Washington, DC) detail their analysis in an article ("The Full Extent of Student-college Academic Undermatch") published in the peer-reviewed journal *Economics of Education Review* (32 (2013), pp. 247-261). This article should be accessible to readers with some background in education policy and data analysis.

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