

“undermatching”: students enrolling in colleges that are less demanding than they are qualified to attend. Using a conservative standard—grades and test scores that would qualify students in the top 10% of admits at highly selective public institutions—the authors find that a substantial proportion of well-qualified students enroll instead at two-year or less-selective four-year institutions. The pattern is most pronounced among low-income and minority students. Counterintuitively, however, undermatching has a negative effect on graduation rates. College completion varies sharply with institutional selectivity, even after controlling for student characteristics. As a result, well-qualified students who attend less-selective colleges graduate at lower rates than those with comparable qualifications at highly selective institutions. As the authors conclude, “The scale of the undermatch phenomenon among students from modest backgrounds suggests that addressing this problem offers a real opportunity to increase social mobility and simultaneously to increase overall levels of educational attainment.”

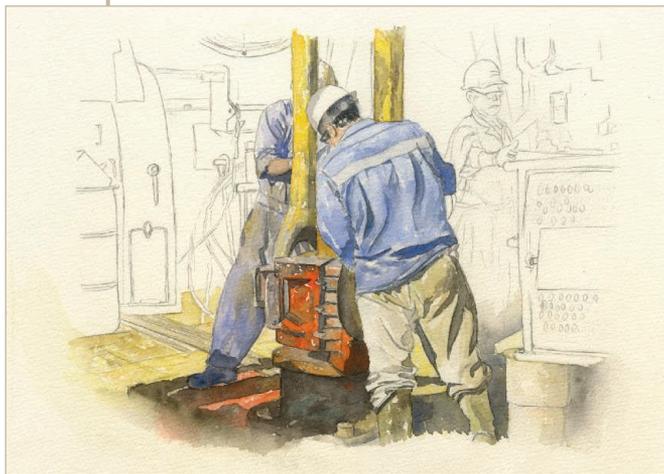
Recently there has been a revival of interest in expanding transfer from two-year to four-year institutions as a means of raising college completion rates, and Bowen, Chingos, and McPherson bring their massive database to bear on that issue as well. On one hand, they find that at many four-year institutions, students who transfer from a community college are more likely to earn a bachelor's degree than students who begin as freshmen, suggesting that those institutions might improve completion rates by admitting more transfers. On the other hand, given the considerable attrition within two-year institutions, enrolling there can negatively affect a student's chances of earning a four-year degree. The authors find that high-school seniors who enter two-year colleges seeking a bachelor's degree are much less likely to complete their degrees than comparably qualified students who move directly from high school into a four-year program. One of the book's strengths is the authors' willingness to follow wherever the evidence leads, even where, as in this instance, the findings may seem to conflict.

The book provides new and often surprising insights on other major determinants of college completion. The chapters on financial aid, in particular, are masterful. The authors argue that, for public universities, offering

BROWSINGS

Drill Me a Painting: A Scientist's Impressions Aboard an Ocean-Drilling Research Vessel. Christine Laverne. Atlantica, Biarritz, France, 2008. Paper, 120 pp. €25. ISBN 9782758801696.

Between 1979 and 2005, petrologist Laverne participated in seven deep-sea drilling cruises in the eastern Pacific Ocean. This logbook of words and watercolors records adventures and routines from her 14 months at sea. The narrative describes many tasks carried out by the international



teams of researchers and crew—as well as their occasional diversions (left, workers on the rig floor of *Joides Resolution*). Sidebars introduce technical and scientific topics, especially the composition and evolution of ocean crust. The author's very personal account reveals the considerable changes in working conditions and technologies over the quarter century. It also conveys the frustrations and triumphs of the drilling itself, which culminate in the successful recovery of a 1400-m section through lavas and sheeted dikes into gabbros formed by a fast-spreading ridge.

more need-based student aid “is demonstrably less expensive than keeping the net price low by reducing tuition across the board—a policy that provides further subsidies to well-off families without improving their graduation rates.”

Crossing the Finish Line also breaks new ground in its manner of presentation. The thread of the analysis can be read directly from the figures interspersed liberally throughout the text. Complex regression analyses are reduced to a graphic language that helps propel the reader through the argument. And in another innovation one hopes others will emulate, the book features an online appendix, maintained by Princeton University Press, where readers can explore a vast array of supporting data for each chapter to judge for themselves whether its conclusions are warranted.

Why have college completion rates in the United States stagnated since the 1970s? Databases of the kind Bowen and his colleagues have built do not necessarily lend themselves to historical analysis, and the authors do not attempt a complete answer to this question. Yet a clue may be found in an essay by another Mellon associate, Eugene M. Tobin, presented as an appendix to the book. Tobin traces the modern history of state public university systems after World War II. Many state systems, he finds, were influenced by the California model and its tri-

partite structure of highly selective research universities, comprehensive four-year institutions, and open-access community colleges. But as that model evolved during the latter part of the 20th century, most of the growth in student enrollment has been absorbed by the community colleges and four-year comprehensives. Undergraduate enrollments at the flagship campuses generally have not kept pace. Given the strong association between institutional selectivity and college completion, the changing structure of state higher education systems may be an important piece of the puzzle.

Crossing the Finish Line exemplifies the best that social science research has to offer: rigorous empirical analysis brought to bear on a major public policy issue. Bowen, Chingos, and McPherson have provided an essential resource that both researchers and policymakers will consult for years to come.

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