



TEXAS HIGHER EDUCATION POLICY INSTITUTE

A Project of the Texas Higher Education Coordinating Board

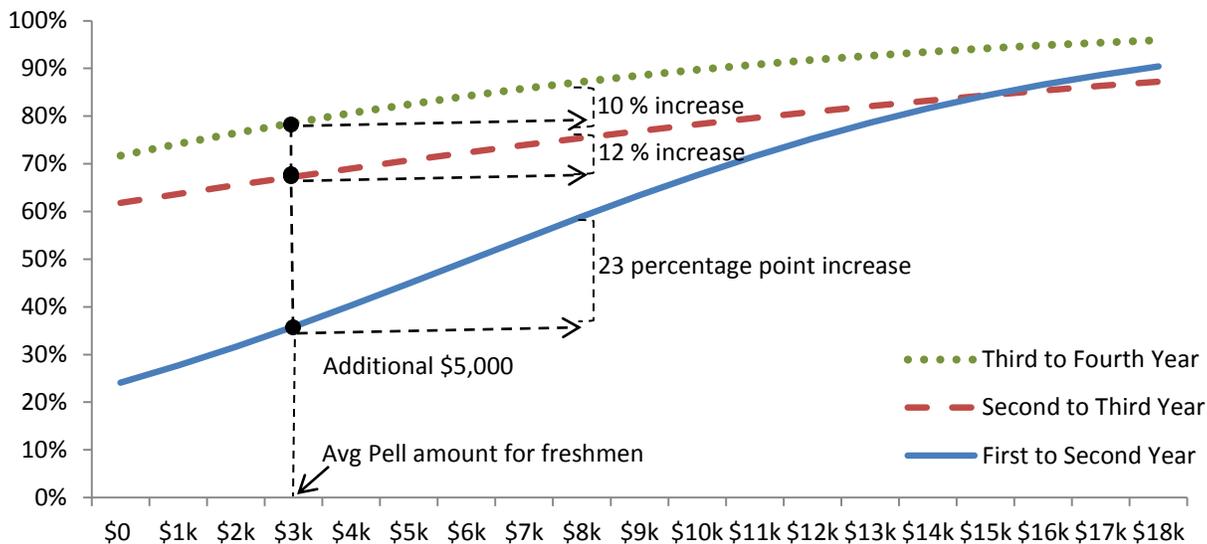
Allocating Grant Aid to Increase Persistence: Focus on Freshmen

In the current budgetary environment in which state appropriations for financial aid are under pressure, policymakers are seeking to maximize the impact of grant dollars on persistence for college students. This brief contributes to the ongoing discussion regarding the potential impact of reallocating grant aid from upper to lower classmen on persistence. It outlines results from an analysis of Texas data conducted by the Higher Education Policy Institute, and places those results in the context of the broader extant research literature. The analysis was conducted using a sample of 73,401 first-time, Pell-eligible, Texas resident students entering public four-year institutions in fall 2004, fall 2005, fall 2008, and fall 2009, after controlling for students' demographic characteristics, socioeconomic status, and academic preparation.ⁱ Among the entering first-year students, 95 percent received a Pell grant, and 51 percent received grants in the \$3,000-\$10,000 range.

Findings

Grant aid received in a given year has a positive and statistically significant relationship with full-time persistence to the subsequent year, but the extent of its impact varies by class year. The figure below shows the predicted probabilities of full-time persistence, defined as enrolling in at least 24 credits over an academic year, for the prototypical studentⁱⁱ transitioning from the first to second year, second to third year, and third to fourth year.ⁱⁱⁱ Up to approximately \$15,000, first-year students are less likely to persist full-time than are second- and third-year students at any given level of grant aid. For example, among those who receive \$3,500, which is the average Pell award for first-year students, the probability of transition for the prototypical first-year student is 36 percent, while it is 68 percent and 77 percent respectively for the prototypical second- and third-year student.

Predicted probabilities of full-time persistence to subsequent year for a given amount of grant aid for the prototypical student (female Hispanic student with all other covariates at mean values, cohorts entering in fall 2004, fall 2005, fall 2008 and fall 2009)



Source: Texas Higher Education Coordinating Board, Texas Education Agency

Let us assume that students received \$5,000 in grant aid in addition to the average Pell award for first-year students. For the prototypical first-year student who received \$8,500 instead of \$3,500, her likelihood of persistence increases 23 percentage points from 36 percent to 59 percent. If the prototypical second- and third-year students received the same amount of grant aid, their likelihood of persistence increases approximately 8 percentage points. **The return on investment of grant aid on full-time persistence is greater for first-year students than for second- and third-year students.**

Context from research literature

The bulk of the extant literature examines the impact of grant aid on persistence for four-year college students and finds a positive relationship.^{iv} Limited research specifically examines the impact of redistributing grant aid from upper to lower classmen and the results are mixed. A 2002 study using University of Minnesota data found that such a strategy results in higher persistence in the early years without a demonstrable decrease in later years.^v However, a 2012 study showed that upperclassmen in public institutions in Wisconsin who lost a \$3,500 means-tested state grant were less likely to persist than those who did not lose the grant.^{vi} The Wisconsin design is such that students received all or nothing. As a result, its students faced a sudden and dramatic increase in cost of attendance. In addition, students were dropped from the program, which may in and of itself exert an effect on persistence.

Key policy implications

The analytical results of Texas data and the literature suggest that policymakers are able to leverage investments of limited grant aid to maximize persistence among college students by prioritizing first-year students. However, the grant aid strategy should be graduated so first-year students receive the largest average grant amount while the average grant amount for second- and third-year students moderately decreases.

ⁱ The analysis of persistence to the second and third years utilized data from cohorts matriculating in fall 2004, 2005, 2008, and 2009, but the analysis of persistence to the fourth year utilized data from cohorts matriculating in fall 2004 and fall 2005 only.

ⁱⁱ The prototypical student was defined as one who is female and Hispanic, with average values for all other variables, such as cost of attendance, family income, expected family contribution, and high school academic preparation.

ⁱⁱⁱ We also conducted an analysis of grant aid on any level of persistence (i.e. enrolled in any number of credits) to the subsequent year, but this brief only reports on findings pertaining to full-time persistence due to its greater policy relevance for maximizing investments in grant aid. The impact of grant aid on any persistence to the second and third years is positive and significant, while its impact on persistence to the fourth year is positive but not significant.

^{iv} Singell, Jr., L.R. (2004). Come and stay a while: Does financial aid effect retention conditioned on enrollment at a large public university? *Economics of Education Review*, 23(5), 459-471.

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St. John, E.P. (2000). The impact of student aid on recruitment and retention: What the research indicates. *New Directions for Student Services*, 2000(89), 61-75. Available at: <http://onlinelibrary.wiley.com/doi/10.1002/ss.8905/abstract>

^v DesJardins, S. L., Ahlberg, D.A., McCall, B. P. (2002). Simulating the longitudinal effects of changes in financial aid on student departure from college. *The Journal of Human Resources*, 37 (3), 653-679. Available at: <http://www.jstor.org/stable/3069685>

vi Goldrick-Rab, S., et al. (2012). Conditional cash transfer and college persistence: Experimental effects of a randomized need-based grant program. Available at: <http://itp.wceruw.org/documents/QJE2012ForSubmission.pdf>.