



Price Sensitivity and Student Selection Behavior at Colorado Institutions of Higher Education

Executive Summary April, 2012

In late 2011, the Colorado Department of Higher Education contracted with Augenblick, Palaich and Associates (hereafter “APA”), an educational research firm based in Denver, Colorado, to complete a study on the effects changes in price have on college selection behaviors of students in Colorado. The researchers sought to understand the relationship between net college admission price and student choice of institution to attend and the factors that influenced this relationship. Using the Colorado Department of Higher Education’s Student Unit Record Data System (SURDS), APA analyzed the effect of a \$1,000 increase in net price--the cost of attendance minus financial aid—on the probability of selection by a student (i.e. the probability that a student will choose to attend a particular institution over another institution). APA’s research identified the followings findings:

1. that increases in tuition influence college selection, and,
2. that different groups of students are more sensitive to changes in price than others.

For the purposes of this study, APA utilized a sample of students who 1) graduated from a Colorado high school, 2) attended a Colorado public college or university, 3) were in their first year at a given institution between the years 2004 and 2010, and 4) were accepted to at least two Colorado public institutions. These sample parameters allowed the researchers to capture within student variation and minimize the influence of other factors. The sample includes 31,259 students and 72,852 acceptances (accepted applications). Most of the students were Caucasian (74%), female (55%), had adjusted gross incomes above \$30,000 (75%) and were admitted to only two institutions (74%). Additionally, the average composite ACT score was a 24, which is higher than the overall state average ACT score of 20 (2010 results, as reported on the Colorado Department of Education’s website).

Summary of Results

The results of this study were consistent with previous research regarding the effect of price on college enrollment rates—that lower income students and students from certain minority populations are more responsive to changes in college prices—though it added valuable insight into the factors that affect student college selection behaviors. Increases in net price *decreased* the probability that students would choose a given institution by 3.4%, in general. When disaggregated by students’ background characteristics (e.g., -race/ethnicity, gender, ACT score, year of attendance, and socio-economic background), this trend continued with one exception:

increases in college prices had the opposite effect on higher income students. That is, higher prices *increased* the probability of selection by 3.3% for higher income students. This is in contrast to their lower income counterparts whose probability of selecting an institution decreased by nearly 10% for every \$1,000 price increase. APA hypothesized that this is due to the perception among more affluent students that higher prices reflect better quality.

Additionally, APA’s research revealed that the magnitude of the coefficients concerning price sensitivities among students declined in recent years; this may be a reflection of more targeted uses of financial aid by Colorado colleges and universities or increased demand for education as a result of the recent recession. Importantly, the price elasticity of demand for African-American and Hispanic students was more than twice as large as that for Caucasian students.

Table 1: Price Elasticities of Demand, by Student Type

<i>Student Type</i>	<i>% Change*</i>
All	3.4% decrease
AGI below \$30K	9.6% decrease
AGI above \$30K	3.3% increase
ACT below 2400	3.2% decrease
ACT above 2400	3.5% decrease
White	2.7% decrease
Black & Hispanic	8.2% decrease
Male	3.0% decrease
Female	3.7% decrease
Years 2004-07	3.6% decrease
Years 2008-10	3.0% decrease

*Reflects the percent change in the likelihood that a student will enroll in a more expensive school.

Conclusion

The findings of this study reaffirm those identified in previous research on the topic (Leslie & Brinkman [1987]; Kane [1995]; Dynarski [2003], and Long [2004]): that price is an important influencer of postsecondary enrollment behaviors among students. Nonetheless, this study revealed that important disparities exist across different socioeconomic and ethnic groups. The results of the study should assist policymakers, educators, administrators and board members as they consider the ways in which increases in changes in college costs—as well as targeted policies designed to make college more affordable—may affect college participation among different student populations.

A complete copy of this report is available at the Colorado Department of Higher Education’s website:

http://higher.colorado.gov/Publications/Studies/2012/201201_PriceSensitivity_APA.pdf. For more information please contact Dr. Beth Bean at (303) 866-2661 or beth.bean@dhe.state.co.us.