

Investment in State Postsecondary Education

What Do Students Pay? What Do States Pay?
And What Should Each Expect In Return?

Methodology, Caveats, and Data Sources

Graph 1: Net Undergraduate Tuition and Fees for 2002-03

Net undergraduate tuition and fees includes tuition, fees, and other expenses for a full-time first-time resident freshman minus the total of all federal, state and institutional grant aid for the academic year. Room and board costs are not included even though some portion of the total grant aid could be used to defray room and board expenses. The analysis is limited to first-time freshmen because institutional grant aid is not available for all other undergraduates. The tuition and fees data are weighted for enrollments by institution within each sector – institutions with larger enrollments have a greater impact on how much the average students pays for tuition and fess (and vise-versa). In some states, a sector is represented by one institution.

Sources: NCES, IPEDS Institutional Characteristics Survey and Student Financial Aid Survey, 2002

Graph 2: Median Annual Earnings by Degree-Level and Age

These medians are calculated by state for residents who attained just a high school diploma, an associate degree, and a bachelor's degree for each age from 25 to 64. Data for determining differences in earnings for graduates from public vs. private colleges are not available. The median earnings by age for states that are the least populated (e.g. Alaska, Wyoming, Montana, etc.) fluctuate more because of smaller sample sizes.

Source: U.S. Census Bureau, 2000 Census 5% Public Use Microdata Samples

Graph 3: Difference in Median Annual Earnings between College Graduates and High School Graduates

This graph displays the difference in median annual earnings between an associates degree and a high school diploma and a bachelor's degree and a high school diploma (ages 18 to 64). In general, it reflects the monetary reward (within each state) college graduates experience after obtaining a college degree. The “top ten states” are different for each degree level.

Source: U.S. Census Bureau, 2000 Census 5% Public Use Microdata Samples

Graph 4: Median Annual Earnings for Long-Term Residents (Prior to 1995) Compared to Median Annual Earnings for Residents Who Recently Moved In from Out-of-State (from 1995 to 2000)

From the migration question on the 2000 Census form, we were able to compare the median earnings by education level of state residents who resided in the same state prior to 1995 to those residents who moved into each state between 1995 and 2000. This graph (and calculation) was included specifically to get a general sense of whether the “better” jobs are obtained by residents who recently moved in from out-of-state. In the case that they are, at least certain sectors of state economies are attracting talent from out-of-state.

Source: U.S. Census Bureau, 2000 Census 5% Public Use Microdata Samples

Graph 5: State Investment in Higher Education Relative to the Eligible Population 18 to 44 Years Old

This is a measure of state support for postsecondary education relative to the population in need – the population 18 to 44 years old with a high school diploma or some college (but no college degree). The most common measure of state support for higher education is “appropriations per full-time equivalent (FTE) student” – which is an accepted measure of support for the higher education system but does not gauge state support relative to the needs of state populations (or demand). State appropriations include all state funds appropriated for state grant financial aid and exclude state funds targeted for research, agriculture, and medicine.

Sources: State Higher Education Executive Officers (SHEEO) – *State Higher Education Finance Survey*, US Census Bureau - 2000 Census

Graph 6: Credentials Awarded Relative to the Eligible Population 18 to 44 Years Old

This graph displays the undergraduate credentials awarded relative to the population in need (the same denominator that was used in the graph 5) – by sector of postsecondary education. This breakout shows the relative strength of each of the sectors in a state’s ability to produce credentials. It also shows the relative strength by degree-level. The top ten states are different for each degree level. States that are large net-importers of students can produce larger numbers of degrees relative to the eligible populations. For example, the top state (on this metric) for bachelor’s degrees awarded is Rhode Island – which imports roughly two-thirds of its first-time freshmen from out-of-state. While there may be other benefits for attracting out-of-state students, they are less likely to stay after graduation – a phenomenon that is usually detected in graphs 7 and 8. For more

information regarding the migration of first-time freshmen, see <http://www.higheredinfo.org>.

Sources: NCES, IPEDS Completions Survey (2002-03), U.S. Census Bureau 2000 Census

Graph 7: Recent Annual Degree-Production and Migration Patterns

This figure gauges a state's average annual degree production (for the three most recent years) relative to an average annual net-migration of residents with college degrees (from 1995 to 2000). Net migration is calculated as the in-migration minus the out-migration. It provides a general sense of a state's ability to produce college degrees and its ability to retain and attract residents with college degrees. There are two ways to increase the educational attainment of the population: produce more degrees and attract more residents with degree from other states and countries. Thus, in- and out-migration plays an important role in the development of educational capital. For ease of interpretation, the degree production and migration numbers are scaled to 100. For example, if a state produces 1,000 associate degrees per year on average, 2,000 residents with an associate degree leave the state annually, and 2,500 enter the state with associate degrees annually – the interpretation in Figure 7 would be:

For every 100 associate degrees produced annually, 200 associate degree-holders leave the state and 250 associate degree-holders enter the state – a net gain of 50 associate degrees per 100 produced.

Sources: NCES, IPEDS Completions Survey (3-year average degree production from 2001 to 2003), US Census Bureau (2000 5% Public Use Microdata Samples)

Graph 8: Net Gain or Loss by Degree-Level and Age-Group (1995 to 2000)

This figure summarizes – by degree level – the net-gain and/or loss for 22-29 and 30 to 64 year olds from 1995 to 2000. The younger age-group was selected to get a better sense of the migration patterns of young residents with college degrees. States that benefit greatly from the in-migration of young college graduates tend to have economies that attract them (and vice-versa). The older age-group represents the remainder of the working-age population. The retirement age population was excluded because they tend to migrate for reasons that are not related to employment opportunities (e.g. climate, lower taxes, etc.). All combined, these migration patterns reflect the strength of state economies which is an important consideration for the development of educational capital. Some states produce college graduates relatively well but lose them to other states that have more vibrant economies – and vice-versa. Net migration is calculated as the in-migration minus the out-migration.

Source: U.S. Census Bureau, 2000 Census 5% Public Use Microdata Samples

