California Postsecondary Education Commission

Public Higher Education Performance Accountability Framework Report:

Goal - Contributions to Economic, Civic, and Social Development

Measure: Per Capita Income by Educational Attainment

June 2007

This report evaluates the contribution of public higher education to raise per capita income in California. The report highlights how diversity in the State's population impacts the need for higher education and presents options for improving income earning using postsecondary education programs.

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The Commission advises the Governor and the Legislature on higher education policy and fiscal issues. Its primary focus is to ensure that the State's educational resources are used effectively to provide Californians with postsecondary education opportunities. More information about the Commission is available at www.cpec.ca.gov.

Commission Report 07-12

Summary

This report quantifies the contribution higher education makes to increasing per capita income in the State. The Commission's major findings are:

- College attendance, even without earning a degree, contributes to per capita income growth among Californians. On average, just having some college adds 25% to earnings.
- Earning a degree amplifies the income benefit of college. Compared to a high school level education, an associate degree increases income by 47%, a bachelor's degree by 108% and a graduate or professional degree by 189%.
- College reduces income inequities based on gender. The income gap between men and women with associate degrees is about half the gap between men and women without a high school diploma.
- Higher education also has significant benefits for Hispanics, African Americans and Asians. Census data show that bachelor degree earners in these groups more than double their income levels compared to those with a high school level education.
- Community college and extension programs can significantly increase even non-degree earner incomes by improving English proficiency. On average, individuals with a high school level education increased earnings by 136% by becoming English proficient.
- Compared to similar states such as New York, Washington, Massachusetts and Florida, California offers greater income rewards for earning a bachelor's degree.

Education and Its Effect on Income

Public higher education in California is a $15 billion annual investment. Lawmakers wisely recognized that creating opportunities for the State's residents to gain marketable skills and knowledge not only increase personal earnings, but it benefits the growth of the economy and ultimately generates the tax revenues needed to provide public services.

Indeed, lawmakers have enunciated in State law goals for ensuring public access to higher education. California Education Code states that "it is the intent of the legislature that each resident of California who has the capacity and motivation to benefit from higher education should have the opportunity to enroll in an institution of higher education." Further, education code specifies that "the legislature hereby reaffirms the commitment of the State of California to provide an appropriate place in California public higher education for every student who is willing and able to benefit from attendance."[1]

In this report, the Commission examines the way in which education influences income in California. The Commission measured differences in financial rewards for a college education by gender and ethnicity, as well as by degree-attainment level. The Commission also compared California's experience with key competitor states and offers suggestions for opportunities to improve the contribution that higher education makes toward increasing per capita income of California's residents.

Public Higher Education Accountability Framework

The public's investment in higher education should be measured by outcomes. As the California's independent higher education planning and coordinating body, the Commission is in a unique position to assess performance without bias or conflict of interest. Under State law, the Commission is the only public agency with the data needed to assess student success across the University of California, California State University and California Community College systems. The Commission uses this data, coupled with other relevant State and national higher education data, to compile the performance assessment present here. The Commission has put a priority on improving public confidence in the administration and delivery of public postsecondary education by increasing public knowledge of student outcomes, transparency of higher education decision making, and efficient achievement of the best educated and prepared workforce and population.

Measuring the Financial Reward to Education

The Commission's higher education accountability framework uses increases in per capita income to measure the contribution that higher education makes to California's economic, civic and social well-being.

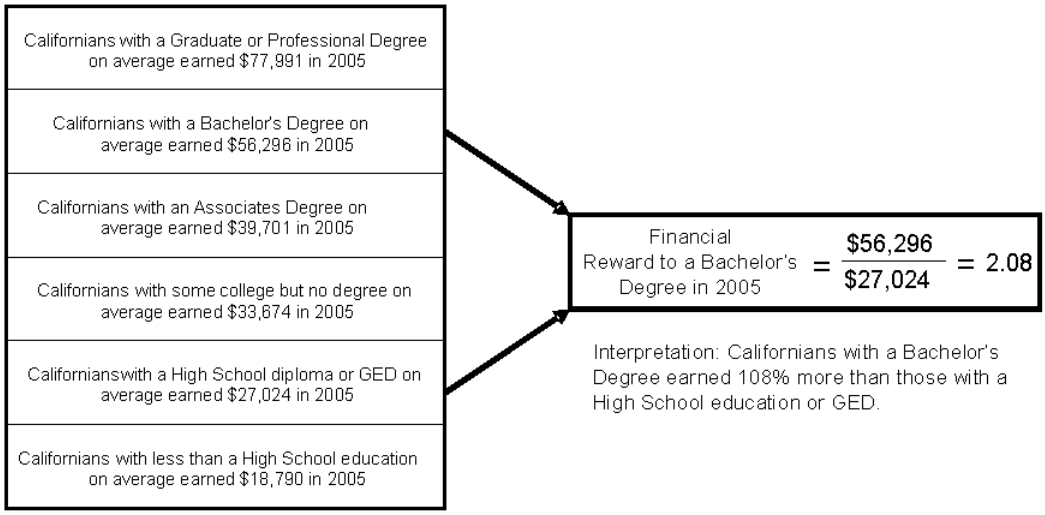
Using census data, the Commission examined per capita income based on educational attainment. By comparing the income levels of Californians with at least a high school diploma or a GED level with those with some college or a degree, the impacts of postsecondary education were measured at four levels—some college, associate degree, bachelor's degree, and graduate degree. For example, by calculating average income[2] in each group, the Commission obtained a measure of the financial reward for educational attainment. In 2005, the average income of a person with a high school diploma or GED was $27,000. The average income for people with a bachelor's degree was $56,000. The Commission used the ratio of mean income with a BA to mean income with a high school education or GED to measure the financial reward for obtaining the degree. In this case, the

[1] CEC section 66201.

[2] The Commission examined wage and salary income for those in the civilian labor force age 18 and older.

reward for obtaining a bachelor's degree is 2.08 implying that a bachelor's degree more than doubled a high school graduate's income (see Display 1).[3]

Display 1: Calculating the financial reward to a Bachelor 's Degree



Increases in worker productivity from education can cause the financial reward of education to increase because employers are willing to pay more for more productive workers. The financial reward for education also induces individuals to obtain an education. When incomes from degree-earning rises, interest in college rises.[4]

In 1990, the financial reward for earning a bachelor's degree was 77% higher earnings than the average earnings at the high school educated level. This number rose to 110% by 2000, and fell slightly to 108% by 2005. (See Display 3 on page 5 which illustrates the rewards of degree attainment in California between 1990 and 2005.)

The percent of people in the population between the ages of 25-34 with a bachelor's degree in 1990 was 17.16%. The percentage rose to 20.9% in 2005, partially because employers offered increased salary rewards for workers with bachelor's degrees.

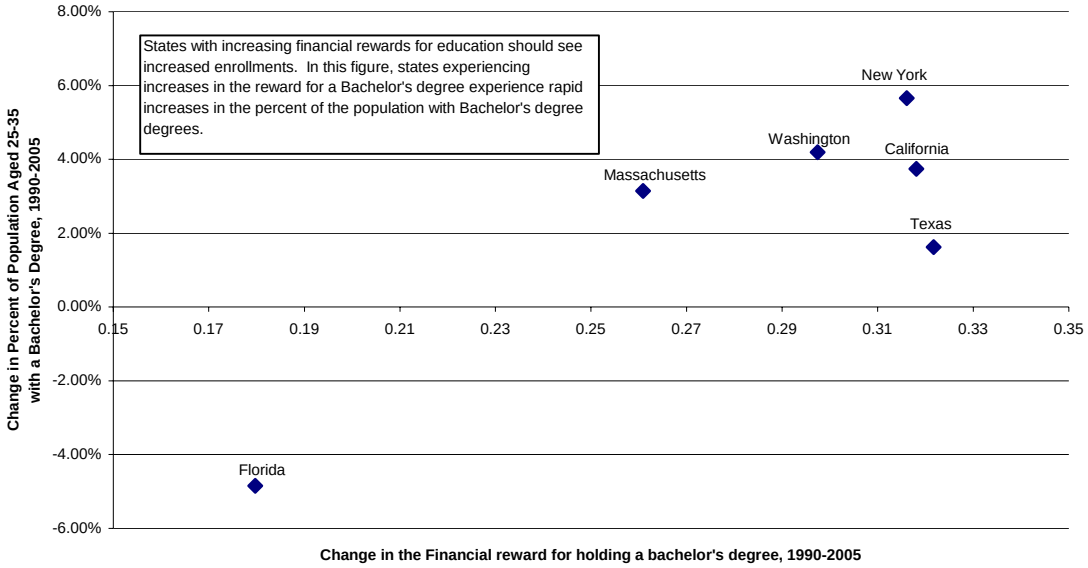
Proper interpretation of data concerning rewards for education attainment is often complex. But these data provide important insights into the value of higher education and the health of California's economy. For example, in an economy with a large number of jobs demanding science, math and advanced knowledge skills, rewards for higher education rise. In this type of economy, if schools do a poor job of educating enough students with the right skills, employers will offer incentives and inducements to attract degree-holders from other states or countries. Of course, if this continues and an industry decides that the cost of recruiting talent from elsewhere is too great, employers may leave or outsource jobs. For this reason, California's public colleges and universities are in competition with other states and countries to supply the best and brightest talent to the State's workforce.

[3] There are limits to this interpretation, of course. The people who have a bachelor's degree may have chosen to obtain the degree because they are more able. This may exaggerate the reward that a person in the high school educated group would get by obtaining a bachelor's degree.

[4] Many other things affect interest in education as well, including the cost of education to the individual, their talents, and their willingness to postpone current income for the promise of future income.

The financial reward for obtaining a bachelor's degree in California is large relative to the other states examined for comparison.[5] Only Texas offered a greater reward for having a bachelor's degree. Since California has a relatively high amount of in-migration of advanced degree holders, this may mean that too few graduates are produced locally to satisfy the needs of California's businesses. Of course, it also means that there will be interest in inexpensive opportunities that offer local students the ability to earn degrees with high rewards. (See Display 2.)

Display 2 - Change in Financial Reward for a Bachelor's Degree vs Change in Percent of those aged 25-35 with a Bachelor's degree: 1990-2005



Patterns in the Financial Reward for Education

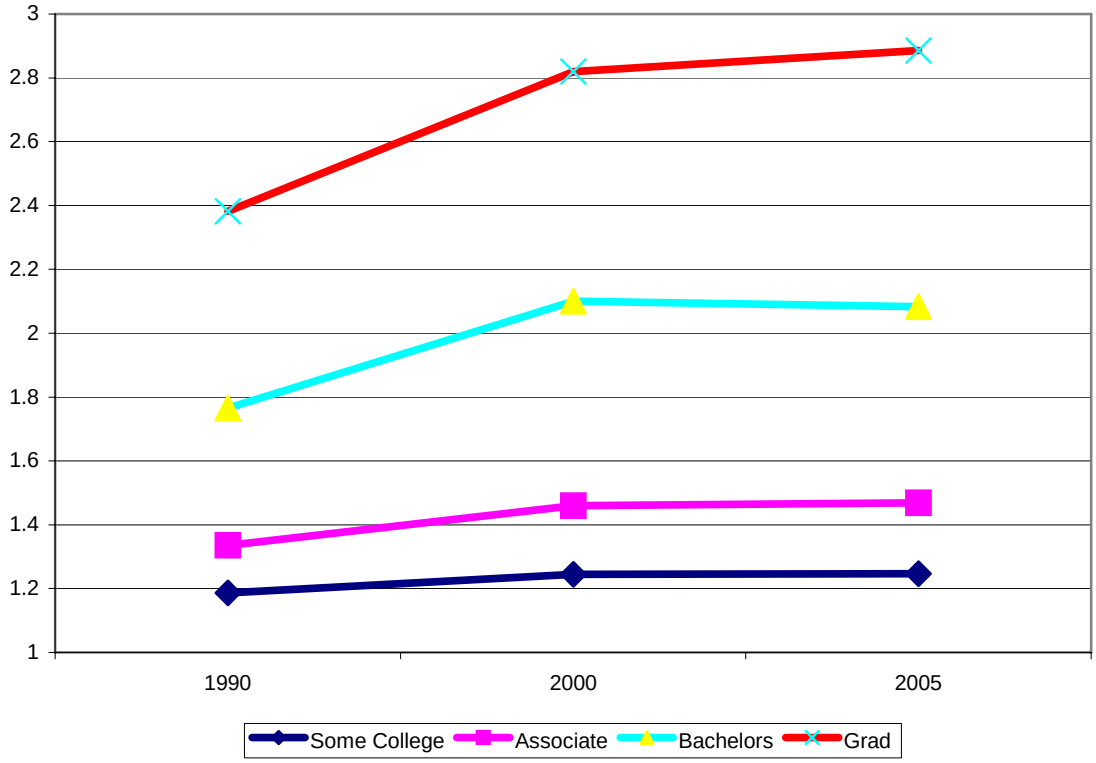
The financial reward for obtaining a degree are large relative to the reward for spending some time in college without obtaining a degree. An associate degree on average increases income by 47% compared to a high school level education, while attending college but not earning an associate degree only increases income by 25%. This may be a serious problem in California since many people do not graduate. A recent Commission study of the success of community college students over a five-year period shows only 29% of the students earned a degree or certificate or transferred to a public university.[6]

From 1990 to 2005, the financial reward for a bachelor's degree rose by 16% for those between the ages of 25 and 34, by 28% for those between 35-44, and by 22% for those between 45-64 (see Display 3).

[5] Our benchmark states are Florida, Massachusetts, New York, Texas, and Washington.

[6] California Higher Education Accountability: Goal-Student Success, Measure: Community College Students' Degrees and Certificates Awarded and Successful Transfers. California Postsecondary Education Commission Report 7-06, March 2007.

Display 3 - Financial reward for Education for California: 1990-2005
The income of those with a particular degree
divided by the income of those with a High School diploma or GED



Despite the beneficial impacts of higher levels of educational attainment, incomes earned by men are still higher than those of women in California. But income data show the ratio is declining over time. Males with a bachelor's degree earned 61% more than females on average in 1990, but by 2005 this dropped to 45%.

Educational attainment positively affects the ratio of male-to-female earnings. The ratio of male-to-female earnings in California is greatest for those without a high school diploma (1.69)—dropping as education increases for those with associate degrees (1.34), and then rising again for those with graduate or professional degrees (1.50). This raises on-going concerns about gender-based income inequities.

The Commission also examined the impacts of higher education on race-based income inequities. In 2005, Whites with a bachelor's degree in California earned 17% more than African Americans and 40% more than Hispanics. This is comparatively better than the national equity gap for African Americans, But for Hispanics, pay inequities appear to be growing. In 1990, Whites with a bachelor's degree earned only 30% more than Hispanics with a bachelor's degree.

Yet, college still provides a greater financial reward for Hispanics, African Americans, and Asians. The financial return for a bachelor's degree for Hispanics (2.46), African Americans (2.10), and Asians

(2.10) are all greater than the financial return for education for Whites (1.93).[7] This suggests that if low-cost, high-quality degree programs are available, there will be plenty of incentive for these groups to increase their education.

It is important to remember, that the most important skill for increasing personal income is not degree earning. English proficiency is more valuable for enhancing income. In 2005, a person with a high school education or GED who "did not speak English well at all" increased income by 90% by getting a bachelor's degree. The same person could increase income on average by 136% by learning to "speak English well" without getting a college degree.

Policy Considerations

Track graduates from California postsecondary public education

Properly measured, the financial reward for education can be a valuable tool for measuring the effectiveness of education.[8] Lawmakers should consider legislation providing the Commission with the authority and the resources to collect and compile data on the experience and outcomes of students from kindergarten to retirement. Given the $15 billion investment the State makes annually in higher education, it is only prudent that an independent entity such as the Commission systematically track the outcomes of graduates from the California education system.

Focus resources on persuading students to get a degree

Since the financial reward for obtaining a certificate or degree is far greater than the reward for merely attending some college, it seems natural to expend effort increasing the percentage of students who graduate. Lawmakers should use their powers to enact laws and to fund public programs to leverage higher education institutions to put greater emphasis on increasing capacity and efficiency. This effort would ensure that graduates of the State's K-12 system are prepared for success in college and are able to fill the high-paying jobs that employers now fill with those coming to California from other states or countries.

Target attention on eliminating gender and race income equity gaps

Data show that higher education can be a powerful tool to eliminate income inequities linked to race and gender. Yet the data also show that success has not been uniform across all segments of California's diverse population. The State's lawmakers should focus continued attention on income inequities and work with the Commission to research and identify higher-education strategies that will enhance college as a tool to remedy income disparities based on gender or race.

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[7] The financial return for a bachelor's degree is the mean income for people with a bachelor's degree divided by the mean income of people with a high school degree or GED.

[8] Since people with a degree have many different characteristics from those without a degree, it is also possible that the measure of the financial reward for education overstates the actual financial reward. For example, those with a bachelor's degree might be more talented than those without. If so, the financial reward for those with a high school degree compared to those with a college degree would be smaller.