

## Cost Benefit Analysis of a CSU Undergraduate Degree

American society traditionally values a college education as an essential step towards a stable financial future, presuming a lack of higher education results in lower lifetime earning potential. Given that each individual has a unique set of life circumstances and lifestyle choices, an individual faced with a choice of obtaining a California State University (CSU) education must examine the fiscal advantages and disadvantages of seeking an undergraduate degree. In this summary report, I seek to determine whether earning an undergraduate degree from a CSU campus is worth it or not for the individual student.

### Assumptions

A cost-benefit analysis surveying national 2005 annual median income earnings was performed to determine net benefits of a possessing a college degree, ignoring externalities and public good aspects (a separate analysis was conducted for men and women) The following assumptions were made:

- National US median incomes for individuals in the year 2005 were used
- An individual's earning potential began at age 18 through age 65
- College students earned an undergraduate degree in an average of 4 years, while earning income of \$5,000 annually during those years in college.
- Ability factor adjusted for 30% of earnings differential.
- Foregone earnings for college students in...
  - year 1 = Median "HS Graduate" income
  - year 2, 3, 4 = Median "Some College" income
- Present values were computed using a lifetime nominal 8% interest rate (for both cost and net earnings differential) and excluded inflationary factors

The monetary cost of a CSU education varies amongst students, depending on individual school fees and tuition, type of housing, mode of transportation used to reach campus, and books and miscellaneous supplies. However, for this summary I will assume that an individual student pays average CSU tuition fees and for the purpose of calculation simplicity, I will also assume the worst-case financial scenario, in which a student has zero financial aid available. I assume that personal costs are not a factor, since these are individual choices and vary widely amongst individuals, and that room & board and transportation costs even out regardless of whether the students attend university or not. The education costs will also include opportunity costs, in this case forgone earnings of potential earned income while attending university. The following formula calculates incurred costs:

$$\text{Monetary Cost} = \text{Opportunity Cost} + \text{Tuition} + \text{Misc Fee} + \text{Books \& Supplies}$$

### Analysis

Total earnings differentials were compared between a high school graduate and a college graduate, assuming income remained at 2005 median levels over a 48-year work period and the earning potential period began when the individual turned 18 until

he/she retired at age 65. All projected costs of a CSU education are loaded upfront in the first 4 years of education, averaging a total present value of \$67,653 (regardless of sex).

Overall, the total present value of net earnings differential showed that people with an undergraduate degree (irrespective of specific degree or institution earned) had higher incomes than individuals possessing a high school degree do—in fact, both male and female college graduates earned more on the whole. Table 1 below highlights the specific benefit values. However, factoring in the present values of costs, the actual final benefit is starkly different for males and females. For men, the net present value of a college bachelor’s degree resulted in a \$47,887 benefit. Yet, for women, earning a degree resulted in marginal benefit of \$17,232. The benefit-cost ratio showed men had a much higher benefit ratio (~1.71) over women (~1.25).

**Table 1-Benefit of CSU Education-Female vs. Male**

	<b>Female</b>	<b>Male</b>
<b>Total Present Value of Net Earnings Differential</b>	\$84,885	\$115,540
<b>Total Present Value of Costs</b>	\$67,653	\$67,653
<b>Benefit / Cost Ratio</b>	1.254708189	1.707833372
<b>Net Present Value of a College Degree</b>	\$17,232	\$47,887

## Conclusion

The decision to pursue a college degree is not a superficial or simplistic one. Technically speaking, an average individual (regardless of sex) should enroll in college—males and females alike will gain some economic benefit in the end. Yet, this simplistic point of view ignores individual choices, living standards, circumstances, social standards and other externalities. Relatively, the difference for women’s benefit is not as great, so the choice is not as clear-cut. In spite of the stark differences between male and female earning potential, the benefits of an undergraduate degree often outweigh early costs. A college degree opens up many doors and affects future career advances, earning potential and social mobility for any individual.

## References

- (2003). Financing a College Education—Important Information for Students, Parents, and Counselors, *CSU Review*, 24(2), <http://www.calstate.edu/AR/csureview/FA.shtml>
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