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Cost Benefit Analysis

Is an undergraduate degree worth it?

Introduction

The purpose of this analysis is to determine whether pursuing an undergraduate degree is worth the investment of time and money. During the four-year undergraduate career, a student not only spends money on tuition, he or she also forgoes earnings that could be had from working full-time rather than attending school.

Assumptions *(besides those stated on the assignment sheet)*

All income data used in this analysis is from the US Census Bureau's 2006 Current Population Survey for males and females, which, in part, uses mean total earnings data for all races in the U.S. in 2005. (The assignment asks for median earnings for California, but the only ones found were based on figures from the year 2000, which were old.)

Males - http://pubdb3.census.gov/macro/032006/perinc/new04_010.htm

Females - http://pubdb3.census.gov/macro/032006/perinc/new04_019.htm

Whether an individual is going to school or working full-time, he or she still must pay for housing, meals and transportation. Therefore, tuition is the only nominal cost that an undergraduate student incurs that a high school graduate who works full-time does not. Figures for tuition fees are from the SFSU Bursar's Office website. Because tuition fees increase every year, the analysis cannot be based on static figures. As such, fees from Fall 2003 through Spring 2007 were obtained from <http://www.sfsu.edu/~bursar/Feepayment/Spring2007/schedule.htm>.

The sources cited above follow the earnings of high school and college graduates who work from age 18 through 65. The discount factor was calculated with the formula $1/(1+r)^t$, where r is the 8% discount rate and t is the number of years (time period column).

The **total present value of the net earnings differential** for females is **\$91,428.57**. For males, it is **\$122,915.72**. These figures represent, in today's values, how much more a college graduate earns than a high school graduate over a lifetime.

The **total present value of costs**, both nominal and opportunity, for females is **\$47,375.83**. For males, it is **\$66,503.43**. These figures represent, in today's values, how much a college student forgoes by pursuing an undergraduate degree.

The **benefit/cost ratio** for females is $\$91,428.57 / \$47,375.83 = 1.93$

For males it is $\$122,915.72 / \$66,503.43 = 1.85$

The **net present value of a college degree** for females is $\$91,428.57 - \$47,375.83 =$

\$44,052.74. For males it is $\$122,915.72 - \$66,503.43 = \mathbf{\$56,412.29}$. These figures represent the net benefit, in today's values, of having a college degree. For a female, for example, it is the equivalent of receiving a lump-sum payment of \$44,052.74 today. She could save the \$44,052.74 in the bank, skip out on college and be just as well off by age 65 as a female who goes to college for four years.

Conclusion

Seldom does anyone receive a large lump-sum payment after graduating from high school. As such, as this analysis has shown, it is worth the time and money to pursue an undergraduate degree. It is important to note that this analysis has been based only on income differentials. There are many other benefits that a college education offers – dorm life experience, education abroad and higher education in general – that have not been considered. These benefits, if considered and quantified, would increase the net present value of a college degree.