

Cost Benefit Analysis
Individual Student Earning Undergraduate Degree from CSU

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The purpose of this Cost-Benefit Analysis is to determine if earning an undergraduate degree from a CSU is worth it or not for an individual student. Many assumptions, aside from those detailed in the instructions, have been identified when conducting this analysis. I was unable to locate the median annual income data for high school & college graduates in California from the Census Bureau website, so I used the mean data that averaged the population of the United States [U.S. Census Bureau, PINC-04 Educational Attainment - People 18 Years Old and Over, by Total Money Earnings in 2005, Age, Race, Hispanic Origin, & Sex]. The monetary costs of attending a CSU include school fees, books, supplies, some transportation, and some personal expenses [see table detailing these assumptions]. These costs can be found on the CSU homepage. All general fees are the same for all CSU schools, but I chose San Francisco State University to identify the books, supplies, transportation, and personal expenses. The foregone earnings from not working straight from high school are included in the projected costs of the analysis.

The total present value of net earnings differential for Men is \$123,381 and for Women is \$91,639. The total present value of costs for Men is \$79,003 and for Women is \$59,877. The benefit/cost ratio for Men is $\$123,381 / \$79,003 = 1.56$ and for Women is $\$91,639 / \$59,877 = 1.53$. The net present value of a college degree for Men is $\$123,381 - \$79,003 = \$44,377$ and for Women is $\$91,639 - \$59,877 = \$31,762$.

The conclusion of this Cost-Benefit Analysis is that an individual student, both man and woman, should attend college at a CSU instead of working directly out of high school. In both cases of analyzing men and women, the benefit/cost ratio is above 1, and the net present value of the college degree is a positive number. This cost-benefit analysis does show that the net present value of the degree for men is greater than women, mainly due to the significant differences in earnings in each age bracket from age 22 (the assumed aged of CSU graduation) to age 65 (the assumed age of retirement). It is important to note that the monetary costs assumptions are based solely on achieving a bachelor's degree from a CSU. If an individual were to attend college at a U.C. or private school, the results would vary and become more unfavorable since the cost to attend those universities are significantly more.

Cost Benefit Analysis

Question: Individual student earning an undergraduate degree from a CSU

Men

Assumptions:

Ability Adjustment	30%
Discount Rate	8%

Time Pd	Indl Age	Foregone Earnings	Monetary Costs	Projected Cost	HS Grad Earnings	College Degree Earnings	Earnings Differential	Net Earnings Differential	Discount Factor	Present Value of Net Earnings Diff	Present Value of Costs
0	18	\$18,590	\$5,405	\$23,995	\$18,590	\$5,000	(\$13,590)	(\$9,513)	1.000	(\$9,513)	\$23,995
1	19	\$15,940	\$5,405	\$21,345	\$18,590	\$5,000	(\$13,590)	(\$9,513)	0.926	(\$8,808)	\$19,764
2	20	\$15,940	\$5,405	\$21,345	\$18,590	\$5,000	(\$13,590)	(\$9,513)	0.857	(\$8,156)	\$18,300
3	21	\$15,940	\$5,405	\$21,345	\$18,590	\$5,000	(\$13,590)	(\$9,513)	0.794	(\$7,552)	\$16,944
4	22			\$0	\$18,590	\$25,157	\$6,567	\$4,597	0.735	\$3,379	\$0
5	23			\$0	\$18,590	\$25,157	\$6,567	\$4,597	0.681	\$3,129	\$0
6	24			\$0	\$18,590	\$25,157	\$6,567	\$4,597	0.630	\$2,897	\$0
7	25			\$0	\$28,557	\$46,208	\$17,651	\$12,356	0.583	\$7,209	\$0
8	26			\$0	\$28,557	\$46,208	\$17,651	\$12,356	0.540	\$6,675	\$0
9	27			\$0	\$28,557	\$46,208	\$17,651	\$12,356	0.500	\$6,181	\$0
10	28			\$0	\$28,557	\$46,208	\$17,651	\$12,356	0.463	\$5,723	\$0
11	29			\$0	\$28,557	\$46,208	\$17,651	\$12,356	0.429	\$5,299	\$0
12	30			\$0	\$33,955	\$60,844	\$26,889	\$18,822	0.397	\$7,475	\$0
13	31			\$0	\$33,955	\$60,844	\$26,889	\$18,822	0.368	\$6,921	\$0
14	32			\$0	\$33,955	\$60,844	\$26,889	\$18,822	0.340	\$6,408	\$0
15	33			\$0	\$33,955	\$60,844	\$26,889	\$18,822	0.315	\$5,934	\$0
16	34			\$0	\$33,955	\$60,844	\$26,889	\$18,822	0.292	\$5,494	\$0
17	35			\$0	\$37,542	\$72,969	\$35,427	\$24,799	0.270	\$6,702	\$0
18	36			\$0	\$37,542	\$72,969	\$35,427	\$24,799	0.250	\$6,206	\$0
19	37			\$0	\$37,542	\$72,969	\$35,427	\$24,799	0.232	\$5,746	\$0
20	38			\$0	\$37,542	\$72,969	\$35,427	\$24,799	0.215	\$5,321	\$0
21	39			\$0	\$37,542	\$72,969	\$35,427	\$24,799	0.199	\$4,926	\$0
22	40			\$0	\$40,329	\$77,271	\$36,942	\$25,859	0.184	\$4,757	\$0
23	41			\$0	\$40,329	\$77,271	\$36,942	\$25,859	0.170	\$4,404	\$0
24	42			\$0	\$40,329	\$77,271	\$36,942	\$25,859	0.158	\$4,078	\$0
25	43			\$0	\$40,329	\$77,271	\$36,942	\$25,859	0.146	\$3,776	\$0
26	44			\$0	\$40,329	\$77,271	\$36,942	\$25,859	0.135	\$3,496	\$0
27	45			\$0	\$42,584	\$90,633	\$48,049	\$33,634	0.125	\$4,211	\$0
28	46			\$0	\$42,584	\$90,633	\$48,049	\$33,634	0.116	\$3,899	\$0
29	47			\$0	\$42,584	\$90,633	\$48,049	\$33,634	0.107	\$3,610	\$0
30	48			\$0	\$42,584	\$90,633	\$48,049	\$33,634	0.099	\$3,342	\$0
31	49			\$0	\$42,584	\$90,633	\$48,049	\$33,634	0.092	\$3,095	\$0
32	50			\$0	\$42,828	\$79,584	\$36,756	\$25,729	0.085	\$2,192	\$0
33	51			\$0	\$42,828	\$79,584	\$36,756	\$25,729	0.079	\$2,030	\$0
34	52			\$0	\$42,828	\$79,584	\$36,756	\$25,729	0.073	\$1,879	\$0
35	53			\$0	\$42,828	\$79,584	\$36,756	\$25,729	0.068	\$1,740	\$0
36	54			\$0	\$42,828	\$79,584	\$36,756	\$25,729	0.063	\$1,611	\$0
37	55			\$0	\$40,344	\$66,935	\$26,591	\$18,614	0.058	\$1,079	\$0
38	56			\$0	\$40,344	\$66,935	\$26,591	\$18,614	0.054	\$999	\$0
39	57			\$0	\$40,344	\$66,935	\$26,591	\$18,614	0.050	\$925	\$0
40	58			\$0	\$40,344	\$66,935	\$26,591	\$18,614	0.046	\$857	\$0
41	59			\$0	\$40,344	\$66,935	\$26,591	\$18,614	0.043	\$793	\$0
42	60			\$0	\$43,905	\$65,270	\$21,365	\$14,956	0.039	\$590	\$0
43	61			\$0	\$43,905	\$65,270	\$21,365	\$14,956	0.037	\$546	\$0
44	62			\$0	\$43,905	\$65,270	\$21,365	\$14,956	0.034	\$506	\$0
45	63			\$0	\$43,905	\$65,270	\$21,365	\$14,956	0.031	\$469	\$0
46	64			\$0	\$43,905	\$65,270	\$21,365	\$14,956	0.029	\$434	\$0
47	65			\$0	\$37,779	\$62,502	\$24,723	\$17,306	0.027	\$465	\$0
Total										\$123,381	\$79,003

Source Data

Monetary Costs - California State University homepage

Earnings - U.S. Census Bureau, PINC-04 Educational Attainment - People 18 Years Old and Over, by Total Money Earnings in 2005, Age, Race, Hispanic Origin, & Sex

Benefit/Cost Ratio	1.56
Net Present Value of Degree	\$44,377

Cost Benefit Analysis

Question: Individual student earning an undergraduate degree from a CSU

Women

Assumptions:

Ability Adjustment	30%
Discount Rate	8%

Time Pd	Indl Age	Foregone Earnings	Monetary Costs	Projected Cost	HS Grad Earnings	College Degree Earnings	Earnings Differential	Net Earnings Differential	Discount Factor	Present Value of Net Earnings Diff	Present Value of Costs
0	18	\$12,269	\$5,405	\$17,674	\$12,269	\$5,000	(\$7,269)	(\$5,088)	1.000	(\$5,088)	\$17,674
1	19	\$10,971	\$5,405	\$16,376	\$12,269	\$5,000	(\$7,269)	(\$5,088)	0.926	(\$4,711)	\$15,163
2	20	\$10,971	\$5,405	\$16,376	\$12,269	\$5,000	(\$7,269)	(\$5,088)	0.857	(\$4,362)	\$14,040
3	21	\$10,971	\$5,405	\$16,376	\$12,269	\$5,000	(\$7,269)	(\$5,088)	0.794	(\$4,039)	\$13,000
4	22			\$0	\$12,269	\$22,279	\$10,010	\$7,007	0.735	\$5,150	\$0
5	23			\$0	\$12,269	\$22,279	\$10,010	\$7,007	0.681	\$4,769	\$0
6	24			\$0	\$12,269	\$22,279	\$10,010	\$7,007	0.630	\$4,416	\$0
7	25			\$0	\$19,382	\$34,300	\$14,918	\$10,443	0.583	\$6,093	\$0
8	26			\$0	\$19,382	\$34,300	\$14,918	\$10,443	0.540	\$5,642	\$0
9	27			\$0	\$19,382	\$34,300	\$14,918	\$10,443	0.500	\$5,224	\$0
10	28			\$0	\$19,382	\$34,300	\$14,918	\$10,443	0.463	\$4,837	\$0
11	29			\$0	\$19,382	\$34,300	\$14,918	\$10,443	0.429	\$4,479	\$0
12	30			\$0	\$20,898	\$39,447	\$18,549	\$12,984	0.397	\$5,156	\$0
13	31			\$0	\$20,898	\$39,447	\$18,549	\$12,984	0.368	\$4,774	\$0
14	32			\$0	\$20,898	\$39,447	\$18,549	\$12,984	0.340	\$4,421	\$0
15	33			\$0	\$20,898	\$39,447	\$18,549	\$12,984	0.315	\$4,093	\$0
16	34			\$0	\$20,898	\$39,447	\$18,549	\$12,984	0.292	\$3,790	\$0
17	35			\$0	\$22,969	\$45,574	\$22,605	\$15,824	0.270	\$4,277	\$0
18	36			\$0	\$22,969	\$45,574	\$22,605	\$15,824	0.250	\$3,960	\$0
19	37			\$0	\$22,969	\$45,574	\$22,605	\$15,824	0.232	\$3,666	\$0
20	38			\$0	\$22,969	\$45,574	\$22,605	\$15,824	0.215	\$3,395	\$0
21	39			\$0	\$22,969	\$45,574	\$22,605	\$15,824	0.199	\$3,143	\$0
22	40			\$0	\$25,151	\$44,447	\$19,296	\$13,507	0.184	\$2,485	\$0
23	41			\$0	\$25,151	\$44,447	\$19,296	\$13,507	0.170	\$2,300	\$0
24	42			\$0	\$25,151	\$44,447	\$19,296	\$13,507	0.158	\$2,130	\$0
25	43			\$0	\$25,151	\$44,447	\$19,296	\$13,507	0.146	\$1,972	\$0
26	44			\$0	\$25,151	\$44,447	\$19,296	\$13,507	0.135	\$1,826	\$0
27	45			\$0	\$26,184	\$47,927	\$21,743	\$15,220	0.125	\$1,905	\$0
28	46			\$0	\$26,184	\$47,927	\$21,743	\$15,220	0.116	\$1,764	\$0
29	47			\$0	\$26,184	\$47,927	\$21,743	\$15,220	0.107	\$1,634	\$0
30	48			\$0	\$26,184	\$47,927	\$21,743	\$15,220	0.099	\$1,513	\$0
31	49			\$0	\$26,184	\$47,927	\$21,743	\$15,220	0.092	\$1,400	\$0
32	50			\$0	\$27,387	\$45,314	\$17,927	\$12,549	0.085	\$1,069	\$0
33	51			\$0	\$27,387	\$45,314	\$17,927	\$12,549	0.079	\$990	\$0
34	52			\$0	\$27,387	\$45,314	\$17,927	\$12,549	0.073	\$917	\$0
35	53			\$0	\$27,387	\$45,314	\$17,927	\$12,549	0.068	\$849	\$0
36	54			\$0	\$27,387	\$45,314	\$17,927	\$12,549	0.063	\$786	\$0
37	55			\$0	\$27,156	\$44,526	\$17,370	\$12,159	0.058	\$705	\$0
38	56			\$0	\$27,156	\$44,526	\$17,370	\$12,159	0.054	\$653	\$0
39	57			\$0	\$27,156	\$44,526	\$17,370	\$12,159	0.050	\$604	\$0
40	58			\$0	\$27,156	\$44,526	\$17,370	\$12,159	0.046	\$560	\$0
41	59			\$0	\$27,156	\$44,526	\$17,370	\$12,159	0.043	\$518	\$0
42	60			\$0	\$22,340	\$37,121	\$14,781	\$10,347	0.039	\$408	\$0
43	61			\$0	\$22,340	\$37,121	\$14,781	\$10,347	0.037	\$378	\$0
44	62			\$0	\$22,340	\$37,121	\$14,781	\$10,347	0.034	\$350	\$0
45	63			\$0	\$22,340	\$37,121	\$14,781	\$10,347	0.031	\$324	\$0
46	64			\$0	\$22,340	\$37,121	\$14,781	\$10,347	0.029	\$300	\$0
47	65			\$0	\$17,335	\$28,738	\$11,403	\$7,982	0.027	\$214	\$0
Total										\$91,639	\$59,877

Source Data

Monetary Costs - California State University homepage

Earnings - U.S. Census Bureau, PINC-04 Educational Attainment - People 18 Years Old and Over, by Total Money Earnings in 2005, Age, Race, Hispanic Origin, & Sex

Benefit/Cost Ratio	1.53
Net Present Value of Degree	\$31,762

Monetary Cost Assumptions

Source: California State University System website: www.calstate.edu

California State University 2006-2007 Standard Student Expense Budget
San Francisco State University
Living Off Campus

Costs	Amount	Monetary Costs Used in Assumption	Notes
State University Fee	\$2,520	\$2,520	Cost from going to CSU only
Health Facilities Fee	\$6	\$6	Cost from going to CSU only
IRA Fee	\$186	\$186	Cost from going to CSU only
Student Body Association Fee	\$84	\$84	Cost from going to CSU only
Student Body Center Fee	\$124	\$124	Cost from going to CSU only
Student Health Services Fee	\$204	\$204	Cost from going to CSU only
Materials, Services & Facilities	\$0	\$0	Cost from going to CSU only
ID Card Fee	\$4	\$4	Cost from going to CSU only
Total Fees	\$3,128	\$3,128	
Books & Supplies	\$1,314	\$1,314	Cost from going to CSU only
Food & Housing	\$11,500		Will pay Food & Housing regardless of attending CSU or not
Transportation	\$1,206	\$302	Assume 25% of costs are from going to CSU
Personal	\$2,646	\$662	Assume 25% of costs are from going to CSU
Total Other Costs	\$16,666	\$2,277	
Total	\$19,794	\$5,405	