

# THE ECONOMIC CONTRIBUTION OF THE COMMUNITY COLLEGES OF OREGON

*An Analysis of Investment Effectiveness  
And Economic Growth*

## Volume 2: Detailed Results

*by*

*Entry Level of Education,  
Gender and Ethnicity*

**State of Oregon**

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## INTRODUCTION

The purpose of this volume is to present the results of the economic impact analysis in detail by gender, ethnicity, and entry level of education. It is kept as a separate volume intended for limited distribution only, however, because this effort is not about gender and ethnicity differences per se. The study is about the overall economic impacts generated by community and technical colleges. As such, the Main Report and the short Executive Summary both present the results without reference to gender and ethnicity differences.

We feel, nevertheless, that it is important to present all of the results for the sake of completeness, not just the consolidated ones, so long as the users of the detailed information remain prudent in its use and distribution. The results should not be used, for example, to further any political agendas. Other studies about gender and ethnicity differences address such questions better and in greater detail. Our intent is simply to provide college presidents with pertinent information should specific questions arise.

On the data entry side, gender and ethnicity are important variables that help characterize the student body profile. We collect the profile data and link it to national and state statistical databases which are already broken out by gender and ethnic differences. The student body profile, to a large extent, drives the magnitudes of the results which are presented in detail in this volume and in a consolidated fashion in the Main Report and the Executive Summary.

### HOW TO INTERPRET THE TABLES

Note that the tabular results presented in this volume reflect the sum totals for *all* of the students in each education category. The more students in each category, the higher the aggregate results for that category will be. For example, if you have 100 students that enter college with a HS diploma, by the end of the analysis year those students will have moved up at least one level, into the “one year post HS or less” category or higher. The aggregate results for these students appear in the category that corresponds with their education level by the end of the study year (broken down by gender and ethnicity). The literature references for the databases and parameters used to determine the results are listed in the Main Volume, and the major sources are also presented in conjunction with the summary tables in this volume.

## DETAILED TABLES

### TABLE 1: HIGHER EARNINGS

Statistics indicate that earnings are highly correlated with education. As education milestones are achieved, students move into higher levels of average earnings. The higher earnings (also known as *private benefits*) of the students are summarized in **Table 1** below. Note that these are aggregate figures, reflecting the cumulative achievements of the students, their level of education at the end of the analysis year, and the age, gender and ethnicity profile of the student body. The total in the last column of **Table 1** also appears in **Table 3.1** of Volume 1: Main Report.

Table 1. Higher Annual Earnings Based on Achievements During Analysis Year, Aggregate

	Male		Female		Total
	White	Minority	White	Minority	
< HS/GED	\$23,758,988	\$7,746,214	\$15,997,734	\$5,166,592	\$52,669,528
HS/GED equivalent	\$7,700,767	\$2,509,342	\$5,189,453	\$1,675,163	\$17,074,723
One year post HS or less	\$66,430,297	\$10,658,814	\$70,103,615	\$12,802,907	\$159,995,634
Two years post HS or less	\$57,571,501	\$8,784,321	\$68,778,716	\$11,728,550	\$146,863,088
> Associate Degree	\$2,117,367	\$289,318	\$2,701,112	\$419,288	\$5,527,085
<b>Total</b>	<b>\$157,578,920</b>	<b>\$29,988,009</b>	<b>\$162,770,630</b>	<b>\$31,792,499</b>	<b>\$382,130,059</b>

Note: This table reflects the higher annual earnings of the students themselves - it does not account for migration out of state. Students who leave the state immediately upon leaving college are accounted for in Table 20.

Sources: U.S. Census Bureau, Housing and Household Economic Statistics Division; U.S. Census Bureau, Income Surveys Branch/HHES Division, "Median for 4-Person Families, by State" (October 2003); U.S. Census Bureau, "Table P-3. Race and Hispanic Origin of People by Mean Income and Sex: 1947 to 2000" (September 2002); U.S. Census Bureau, "Table P-18. Educational Attainment—People 25 Years Old and Over by Mean Income and Sex: 1991 to 2000" (September 2002).

### TABLES 2 – 7: REDUCED MEDICAL COSTS

In general, statistics show a positive correlation between higher education and improved health habits. The following tables show the calculated reductions in medical costs as a function of adding higher education, linked to the gender and ethnicity profile of the student body. Again, note that these are aggregate figures reflecting the entire student body as a whole (not per individual).

The improved health of students generates savings in three measurable ways: 1) lower absenteeism from work (**Tables 2 and 3**); 2) reduced smoking (**Tables 4 and 5**), and; 3) reduced alcohol abuse (**Tables 6 and 7**). The aggregated data shown in these tables reappear in **Table 3.1** of the Main Report.

Table 2. Number of Days Reduced Absenteeism per Year

	Male		Female		Reduced Absenteeism
	White	Minority	White	Minority	
< HS/GED	3,172	1,706	7,310	2,663	14,852
HS/GED equivalent	254	137	589	215	1,195
One year post HS or less	4,815	1,281	16,874	3,492	26,462
Two years post HS or less	3,165	796	11,445	2,198	17,604
> Associate Degree	100	23	368	64	555
<b>Total</b>	<b>11,507</b>	<b>3,942</b>	<b>36,587</b>	<b>8,632</b>	<b>60,667</b>

Note: Results adjusted for out-migration, but not attrition over time. Out-of-state attrition is applied in Table 19.

Sources: Bureau of Labor Statistics, Current Population Survey, "Table 46. Absences from work of employed full-time wage and salary workers by age and sex" [database on-line] Available from <http://www.bls.gov/cps> (accessed June 20, 2005); U.S. Census Bureau, "Table P-3. Race and Hispanic Origin of People by Mean Income and Sex: 1947 to 2000."

Table 3. Employer Savings from Reduced Absenteeism, \$ per Year

	Male		Female		Total
	White	Minority	White	Minority	
< HS/GED	\$384,717	\$161,104	\$512,398	\$175,755	\$1,233,974
HS/GED equivalent	\$39,723	\$16,625	\$52,689	\$18,063	\$127,100
One year post HS or less	\$804,625	\$166,658	\$1,652,658	\$322,032	\$2,945,973
Two years post HS or less	\$602,801	\$118,025	\$1,334,839	\$241,362	\$2,297,027
> Associate Degree	\$21,815	\$3,828	\$51,323	\$8,461	\$85,427
<b>Total</b>	<b>\$1,853,682</b>	<b>\$466,240</b>	<b>\$3,603,906</b>	<b>\$765,673</b>	<b>\$6,689,501</b>

Sources: Bureau of Labor Statistics and the U.S. Census Bureau; see also Table 2.

Table 4. Fewer Smokers

	Male		Female		Total
	White	Minority	White	Minority	
< HS/GED	115	49	111	21	296
HS/GED equivalent	8	3	8	1	20
One year post HS or less	705	149	764	88	1,706
Two years post HS or less	387	77	460	53	977
> Associate Degree	348	63	439	50	899
<b>Total</b>	<b>1,563</b>	<b>341</b>	<b>1,782</b>	<b>213</b>	<b>3,899</b>

Note: Results adjusted for out-migration, but not attrition over time. Out-of-state attrition is applied in Table 19.

Sources: Centers for Disease Control and Prevention, National Center for Health Statistics, "Table 60. Current cigarette smoking by persons 18 years of age and over" in *Health, United States, 2004* (Hyattsville, MD, 2004); National Center for Health Statistics, "Table 61: Age-adjusted prevalence of current cigarette smoking," in *Health, United States, 2004* (Hyattsville, MD, 2004); Questionnaire supplements: hypertension (1974), smoking (1979), alcohol and health practices (1983), health promotion and disease prevention (1985, 1990-91), cancer control and cancer epidemiology (1992), and year 2000 objectives (1993-95). Data starting in 1997 obtained from the family core and sample adult questionnaires.

Table 5. Medical Savings from Reduced Smoking, \$ per Year

	Annual Costs, Male		Annual Costs, Female		Total
	White	Minority	White	Minority	
< HS/GED	\$344,734	\$146,288	\$333,971	\$63,611	\$888,604
HS/GED equivalent	\$23,735	\$10,074	\$23,065	\$4,463	\$61,337
One year post HS or less	\$2,114,118	\$446,926	\$2,292,024	\$263,548	\$5,116,616
Two years post HS or less	\$1,161,296	\$231,676	\$1,380,924	\$158,530	\$2,932,425
> Associate Degree	\$1,044,282	\$187,609	\$1,317,173	\$148,694	\$2,697,758
<b>Total</b>	<b>\$4,688,165</b>	<b>\$1,022,573</b>	<b>\$5,347,156</b>	<b>\$638,846</b>	<b>\$11,696,740</b>

Source: Centers for Disease Control and Prevention, "Table 2: Annual smoking-attributable economic costs for adults and infants - United States, 1995-1999," in "Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs - United States, 1995-1999" (*MMWR Weekly* 51(4), April 12, 2002): 300-3. See also Table 4.

Table 6. Fewer Alcohol Abusers

	Male		Female		Total
	White	Minority	White	Minority	
< HS/GED	32	14	27	7	80
HS/GED equivalent	2	1	2	1	6
One year post HS or less	220	46	182	30	477
Two years post HS or less	138	27	108	17	290
> Associate Degree	37	6	28	4	75
<b>Total</b>	<b>429</b>	<b>94</b>	<b>346</b>	<b>59</b>	<b>928</b>

Note: Results adjusted for out-migration, but not attrition over time. Out-of-state attrition is applied in Table 19.

Sources: National Institute of Alcohol Abuse and Alcoholism, "Percent reporting alcohol use in the past year by age group and demographic characteristics: NHSDA, 1994-97" (August 1999); National Institute on Drug Abuse and the National Institute of Alcohol and Alcoholism, *The Economic Costs of Alcohol and Drug Abuse in the United States - 1992* (Bethesda, MD: Department of Health and Human Services, National Institute of Health, May 1998); Thomas Nephew and others, eds., *Surveillance Report #55: Apparent Per Capita Alcohol Consumption: National, State and Regional Trends, 1977-98* (Rockville, MD: National Institute on Alcohol Abuse and Alcoholism, 2000).

Table 7. Medical Savings from Reduced Alcohol Abuse, \$ per Year

	Annual Costs, Male		Annual Costs, Female		Total
	White	Minority	White	Minority	
< HS/GED	\$225,364	\$95,467	\$187,802	\$51,267	\$559,901
HS/GED equivalent	\$15,977	\$6,752	\$12,927	\$3,579	\$39,235
One year post HS or less	\$1,536,730	\$320,543	\$1,273,633	\$208,540	\$3,339,446
Two years post HS or less	\$966,222	\$188,441	\$755,869	\$122,467	\$2,032,998
> Associate Degree	\$257,512	\$44,821	\$193,362	\$29,837	\$525,531
<b>Total</b>	<b>\$3,001,804</b>	<b>\$656,024</b>	<b>\$2,423,593</b>	<b>\$415,689</b>	<b>\$6,497,111</b>

Source: National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism, *The Economic Costs of Alcohol and Drug Abuse in the United States, 1992* (Bethesda, MD: Department of Health and Human Services, National Institute of Health, May 1998). See also Table 6.

## TABLES 8 – 11: REDUCED INCARCERATION COSTS

Tables 8 through 11 relate the probabilities of incarceration to education levels – incarceration drops on a sliding scale as education levels rise (linked to the gender and ethnicity profile of the student body). The implication is, as people achieve higher education levels, they are statistically less likely to commit crimes. As above, note that results in the tables are aggregated – they are not on an individual basis.

We identify three types of crime-related expenses: 1) the expense of incarceration, including prosecution, imprisonment, and reform (Tables 8 and 9); 2) victim costs (Table 10), and; 3) productivity gained as a result of time spent working rather than in jail or prison (Table 11). The aggregated data shown in these tables are also presented in Table 3.1 of the Main Report.

Table 8. Fewer Incarcerated, Aggregate for Student Body

	Male		Female		Total
	White	Minority	White	Minority	
< HS/GED	57	32	1	5	95
HS/GED equivalent	3	2	0	0	6
One year post HS or less	233	93	4	18	348
Two years post HS or less	76	45	1	8	131
> Associate Degree	13	9	0	2	25
<b>Total</b>	<b>383</b>	<b>182</b>	<b>6</b>	<b>34</b>	<b>605</b>

Note: Results adjusted for out-migration, but not attrition over time. Out-of-state attrition is applied in Table 19.

Sources: Allen J. Beck and Paige M. Harrison, *Prisoners in 2000* (Washington, D.C.: U.S. Department of Justice, August 2001); National Center for Education Statistics, *Literacy Behind Prison Walls* (Washington, D.C.: U.S. Department of Education, October 1994); National Institute for Literacy, *Correctional Educational Facts* [home page on-line] (accessed March 2001); Sandra Kerka, "Prison Literacy Programs. ERIC Digest No. 159" [database on-line] (1995); Stephen J. Steurer, Linda Smith, and Alice Tracy, "Three State Recidivism Study" (Lanham, MD: Correctional Education Association, September 2001); Thomas P. Bonczar and Alan J. Beck, *Lifetime Likelihood of Going to State or Federal Prison* (Washington, D.C.: U.S. Department of Justice, March 1997); U.S. Census Bureau, "Table 1. Educational Attainment of the Population 15 Years and Over, by Age, Sex, Race, and Hispanic Origin" in *Educational Attainment in the United States March 2000* (December 2000).

Table 9. Savings from Reduced Incarceration, \$ per Year

	Annual Costs, Male		Annual Costs, Female		Total
	White	Minority	White	Minority	
< HS/GED	\$444,163	\$249,834	\$6,052	\$41,783	\$741,832
HS/GED equivalent	\$27,077	\$16,948	\$369	\$2,757	\$47,151
One year post HS or less	\$1,815,021	\$724,758	\$27,328	\$139,792	\$2,706,898
Two years post HS or less	\$592,841	\$350,604	\$9,665	\$63,555	\$1,016,665
> Associate Degree	\$102,751	\$73,830	\$1,757	\$13,167	\$191,504
<b>Total</b>	<b>\$2,981,852</b>	<b>\$1,415,975</b>	<b>\$45,170</b>	<b>\$261,054</b>	<b>\$4,704,051</b>

Sources: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics Bulletin, Table 1 in "Justice Expenditures and Employment in the United States, 2001" (May 2004). Paige M. Harrison and Allan J. Beck, "Number of persons held in state or federal prison or in local jails, 1995-2004" [data base on-line] Available from: <http://www.ojp.usdoj.gov/bjs> (Bureau of Justice Statistics, National Prisoner Statistics, April 24, 2005); Timothy Hughes, et al, "State prison admissions 2001: Sentence length by offense and admission type" (Bureau of Justice Statistics, National Corrections Reporting Program 2001, May 7, 2004); Bureau of Justice Statistics, Survey of Inmates in Local Jails, 2002, "Length of sentence and time expected to be served of inmates sentenced to jail, by offense, 2002" (July 5, 2004).

Table 10. Crime Victim Savings, Aggregate for Student Body, \$ per Year

	Annual Costs, Male		Annual Costs, Female		Total
	White	Minority	White	Minority	
< HS/GED	\$142,467	\$80,136	\$1,941	\$13,402	\$237,946
HS/GED equivalent	\$8,685	\$5,436	\$118	\$884	\$15,124
One year post HS or less	\$582,176	\$232,470	\$8,766	\$44,839	\$868,250
Two years post HS or less	\$190,157	\$112,458	\$3,100	\$20,386	\$326,100
> Associate Degree	\$32,958	\$23,681	\$563	\$4,223	\$61,426
<b>Total</b>	<b>\$956,443</b>	<b>\$454,181</b>	<b>\$14,489</b>	<b>\$83,734</b>	<b>\$1,508,847</b>

Sources: D. A. Anderson, "The Aggregate Burden of Crime" (*Journal of Law and Economics* XLII 2, October 1999): 611-642; Ted R. Miller, Mark A. Cohen, and Brian Wiersema, *Victim Costs and Consequences: A New Look* (Washington, D.C.: U.S. Department of Justice, National Institute of Justice, January 1996); see also Table 8.

Table 11. Productivity Gained (Fewer Incarcerated), \$ per Year

	Annual Costs, Male		Annual Costs, Female		Total
	White	Minority	White	Minority	
< HS/GED	\$211,406	\$92,587	\$1,665	\$10,822	\$316,480
HS/GED equivalent	\$16,591	\$8,086	\$129	\$911	\$25,717
One year post HS or less	\$1,190,381	\$370,099	\$10,504	\$50,594	\$1,621,578
Two years post HS or less	\$443,091	\$204,029	\$4,424	\$27,392	\$678,936
> Associate Degree	\$87,965	\$49,213	\$962	\$6,789	\$144,928
<b>Total</b>	<b>\$1,949,434</b>	<b>\$724,013</b>	<b>\$17,684</b>	<b>\$96,508</b>	<b>\$2,787,639</b>

Sources: Correctional Education Association, the National Center for Education Statistics, the U.S. Census Bureau, and the U.S. Department of Justice; see also Table 8.

## TABLES 12 – 15: REDUCED WELFARE AND UNEMPLOYMENT

Higher education is statistically associated with lower welfare and unemployment. The higher the education level, the less likely it is for an individual to apply for welfare and/or unemployment assistance (as above, these data are linked to the gender and ethnicity profile of the student body). Results reflect the student body as a whole and are dependent on the cumulative achievements of the students and their education level at the end of the analysis year.

Social savings received from reduced welfare are shown in **Tables 12** and **13**, and savings received from reduced unemployment are shown in **Tables 14** and **15**.

Aggregated numbers also appear in **Table 3.1** of the Main Report.

Table 12. Fewer People on Welfare

	Male		Female		Total
	White	Minority	White	Minority	
< HS/GED	80	76	145	112	413
HS/GED equivalent	5	5	9	7	26
One year post HS or less	359	170	716	317	1562
Two years post HS or less	132	58	284	116	589
> Associate Degree	25	10	56	21	111
<b>Total</b>	<b>601</b>	<b>318</b>	<b>1,211</b>	<b>572</b>	<b>2,701</b>

Note: Results adjusted for out-migration, but not attrition over time. Out-of-state attrition is applied in Table 19.

Sources: Committee on Ways and Means, *2000 Ways and Means Green Book*, 17th ed. (Washington D.C.: U.S. House of Representatives, October 2000); Health Care Financing Administration, *A Profile of Medicaid: Chartbook 2000* (Washington, D.C.: U.S. Department of Health and Human Services, September 2000); Robert Rector, *Means-Tested Welfare Spending: Past and Future Growth* [database on-line] (Heritage Foundation, March 2001); Social Security Bulletin, *Annual Statistical Supplement, 2000* [database on-line] (December 2002); Temporary Assistance for Needy Families (TANF) Program, "Table 12: Percent distribution of TANF adult recipients by race" and "Table 17: Percent distribution of TANF adult recipients by educational level" in *Characteristics and Financial Circumstances of TANF Recipients* (Washington D.C.: U.S. Department of Health and Human Services, May 1999); U.S. Census Bureau, Population Division, "Table ST-EST2002-01 - State Population Estimates" [database on-line] (December 2002).

Table 13. Community Welfare Savings, \$ per Year

	Annual Costs, Male		Annual Costs, Female		Total
	White	Minority	White	Minority	
< HS/GED	\$114,794	\$108,207	\$206,760	\$159,638	\$589,400
HS/GED equivalent	\$7,197	\$6,780	\$12,968	\$10,007	\$36,952
One year post HS or less	\$512,783	\$241,990	\$1,022,073	\$451,763	\$2,228,609
Two years post HS or less	\$187,780	\$82,612	\$405,715	\$164,812	\$840,918
> Associate Degree	\$35,170	\$13,892	\$79,723	\$29,582	\$158,367
<b>Total</b>	<b>\$857,724</b>	<b>\$453,481</b>	<b>\$1,727,239</b>	<b>\$815,802</b>	<b>\$3,854,246</b>

Sources: Social Security Online, Annual Statistical Supplement, 2004, Table 9.G2: "Average monthly number of families and recipients of Temporary Assistance for Needy Families and total amount of assistance, by state or other area, 2003" [data base on-line] Available from: <http://www.ssa.gov/policy/docs/statcomps/supplement/2004/> (accessed June 1, 2005); U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2003 Data Compendium [data base on-line] Available from: <http://www.cms.hhs.gov/researchers/pubs/datacompendium/current/> (accessed June 1, 2005); U.S. Department of Health and Human Services, Indicators of Welfare Dependence: Annual Report to Congress, 2003, Appendix A [data base on-line] Available from: <http://aspe.hhs.gov/hsp/indicators03/index.htm> (accessed June 1, 2005).

Table 14. Fewer People on Unemployment

	Male		Female		Total
	White	Minority	White	Minority	
< HS/GED	22	19	34	19	93
HS/GED equivalent	2	1	2	1	6
One year post HS or less	136	57	226	72	490
Two years post HS or less	73	22	117	31	243
> Associate Degree	66	17	110	26	220
<b>Total</b>	<b>299</b>	<b>116</b>	<b>489</b>	<b>149</b>	<b>1,053</b>

Note: Results adjusted for out-migration, but not attrition over time. Out-of-state attrition is applied in Table 19.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.



Table 15. Unemployment Savings, \$ per Year

	Annual Costs, Male		Annual Costs, Female		Total
	White	Minority	White	Minority	
< HS/GED	\$26,166	\$22,659	\$40,088	\$22,563	\$111,476
HS/GED equivalent	\$1,807	\$1,550	\$2,752	\$1,544	\$7,653
One year post HS or less	\$162,220	\$67,687	\$269,173	\$85,610	\$584,690
Two years post HS or less	\$86,884	\$25,862	\$139,764	\$37,195	\$289,705
> Associate Degree	\$79,166	\$20,620	\$131,299	\$31,313	\$262,398
<b>Total</b>	<b>\$356,244</b>	<b>\$138,377</b>	<b>\$583,075</b>	<b>\$178,226</b>	<b>\$1,255,922</b>

Source: U.S. Department of Labor, Employment and Training Administration, Unemployment Insurance Data Summary [data base on-line] Available from: <http://w orkforsecurity.doleta.gov/unemploy/content/data.asp> (accessed June 1, 2005).

## TABLES 16 – 18: SUMMARY TABLES

The summary tables simply show the sum totals of the values presented in **Tables 1** through **15** (see **Table 16**), as well as the annualized values per CHE (see **Table 17**) and per student (**Table 18**). The numbers in the last column of **Table 16** also appear in **Table 3.1** of the Main Report. The weighted averages in **Tables 17** are reproduced in **Table 3.2**.

Table 16. Summary of Annual Impacts, \$ per Year

	Male		Female		Total
	White	Minority	White	Minority	
Higher earnings	\$157,578,920	\$29,988,009	\$162,770,630	\$31,792,499	\$382,130,059
Absenteeism Savings	\$1,853,682	\$466,240	\$3,603,906	\$765,673	\$6,689,501
Medical Cost Savings	\$7,689,969	\$1,678,597	\$7,770,749	\$1,054,535	\$18,193,850
Incarceration Savings	\$2,981,852	\$1,415,975	\$45,170	\$261,054	\$4,704,051
Crime Victim Savings	\$956,443	\$454,181	\$14,489	\$83,734	\$1,508,847
Add Prod. (fewer incarceration.)	\$1,949,434	\$724,013	\$17,684	\$96,508	\$2,787,639
Welfare Savings	\$857,724	\$453,481	\$1,727,239	\$815,802	\$3,854,246
Unemployment Savings	\$356,244	\$138,377	\$583,075	\$178,226	\$1,255,922
<b>Total</b>	<b>\$174,224,268</b>	<b>\$35,318,873</b>	<b>\$176,532,943</b>	<b>\$35,048,031</b>	<b>\$421,124,115</b>

Source: Results for Table 16 computed internally by the model based on data obtained from Tables 1-15.

Table 17. Annual Impacts per Credit Hour Equivalent, \$ per Year

	Male		Female		Weighted Average
	White	Minority	White	Minority	
Higher earnings	\$ 100	\$ 87	\$ 75	\$ 74	\$ 85
Absenteeism Savings	\$ 1	\$ 1	\$ 2	\$ 2	\$ 1
Medical Cost Savings	\$ 5	\$ 5	\$ 4	\$ 2	\$ 4
Incarceration Savings	\$ 2	\$ 4	\$ 0	\$ 1	\$ 1
Crime Victim Savings	\$ 1	\$ 1	\$ 0	\$ 0	\$ 0
Add Prod. (fewer incarceration.)	\$ 1	\$ 2	\$ 0	\$ 0	\$ 1
Welfare Savings	\$ 1	\$ 1	\$ 1	\$ 2	\$ 1
Unemployment Savings	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
<b>Total</b>	<b>\$ 111</b>	<b>\$ 103</b>	<b>\$ 81</b>	<b>\$ 81</b>	<b>\$ 93</b>

Source: Results for Table 17 computed internally by the model based on data obtained from the colleges and from Table 16.

Table 18. Annual Impacts per Student, \$ per Year

	Male		Female		Weighted Average
	White	Minority	White	Minority	
Higher earnings	\$ 1,512	\$ 1,314	\$ 1,129	\$ 1,109	\$ 1,274
Absenteeism Savings	\$ 18	\$ 20	\$ 25	\$ 27	\$ 22
Medical Cost Savings	\$ 74	\$ 74	\$ 54	\$ 37	\$ 61
Incarceration Savings	\$ 29	\$ 62	\$ 0	\$ 9	\$ 16
Crime Victim Savings	\$ 9	\$ 20	\$ 0	\$ 3	\$ 5
Add Prod. (fewer incarceration.)	\$ 19	\$ 32	\$ 0	\$ 3	\$ 9
Welfare Savings	\$ 8	\$ 20	\$ 12	\$ 28	\$ 13
Unemployment Savings	\$ 3	\$ 6	\$ 4	\$ 6	\$ 4
<b>Total</b>	<b>\$ 1,671</b>	<b>\$ 1,547</b>	<b>\$ 1,225</b>	<b>\$ 1,222</b>	<b>\$ 1,404</b>

Source: Results for Table 18 computed internally by the model based on data obtained from the colleges and from Table 16.

## TABLES 19 – 20: TAXPAYER PERSPECTIVES

**Tables 19** and **20** in this report are particularly important. They provide the data needed for computing the investment analysis results in **Table 3.6** in the Main Report – the broad and narrow taxpayer perspectives. In **Table 19**, every other column (the higher taxes and the avoided cost columns) provides the data needed for the narrow taxpayer perspective. The remaining columns provide the data needed for the broad taxpayer perspective. **Table 20** provides the detailed calculations on the labor and non-labor income added to the regional economy as a result of higher student earnings. The total income growth figures feed into the first column of **Table 19**.

Table 19. Cumulative Impact Over Time (\$ Thousands), Details for Both Taxpayer Perspectives

Year	INCOME			HEALTH				CRIME				WELFARE/UNEMPLOYMENT				
	Increase in Income	Added Taxes	Reduced Absent.	Avoided Cost	Medical Saving	Avoided Cost	Incarceration	Avoided Cost	Avoided Victims	Product. Gained	Avoided Cost	Reduced Welfare	Avoided Cost	Reduced Unempl.	Avoided Cost	
0	\$171,028	\$24,700	\$6,690	\$1,014	\$18,194	\$1,092	\$4,704	\$3,763	\$1,509	\$0	\$2,788	\$403	\$3,854	\$617	\$1,256	\$0
1	\$195,311	\$28,207	\$6,675	\$1,012	\$18,099	\$1,086	\$4,680	\$3,744	\$1,501	\$0	\$2,781	\$402	\$3,834	\$613	\$1,247	\$0
2	\$387,975	\$56,032	\$6,660	\$1,010	\$18,005	\$1,080	\$4,655	\$3,724	\$1,493	\$0	\$2,775	\$401	\$3,814	\$610	\$1,238	\$0
3	\$422,414	\$61,006	\$6,645	\$1,008	\$17,912	\$1,075	\$4,631	\$3,705	\$1,485	\$0	\$2,769	\$400	\$3,795	\$607	\$1,229	\$0
4	\$458,112	\$66,162	\$6,631	\$1,005	\$17,819	\$1,069	\$4,607	\$3,686	\$1,478	\$0	\$2,763	\$399	\$3,775	\$604	\$1,220	\$0
5	\$494,939	\$71,480	\$6,616	\$1,003	\$17,727	\$1,064	\$4,583	\$3,667	\$1,470	\$0	\$2,757	\$398	\$3,755	\$601	\$1,212	\$0
6	\$532,748	\$76,941	\$6,601	\$1,001	\$17,635	\$1,058	\$4,559	\$3,648	\$1,462	\$0	\$2,751	\$397	\$3,736	\$598	\$1,203	\$0
7	\$571,376	\$82,519	\$6,587	\$999	\$17,543	\$1,053	\$4,536	\$3,629	\$1,455	\$0	\$2,745	\$396	\$3,716	\$595	\$1,194	\$0
8	\$610,642	\$88,190	\$6,572	\$996	\$17,452	\$1,047	\$4,512	\$3,610	\$1,447	\$0	\$2,739	\$396	\$3,697	\$592	\$1,186	\$0
9	\$650,352	\$93,925	\$6,558	\$994	\$17,361	\$1,042	\$4,489	\$3,591	\$1,440	\$0	\$2,733	\$395	\$3,678	\$588	\$1,177	\$0
10	\$690,296	\$99,694	\$6,543	\$992	\$17,271	\$1,036	\$4,466	\$3,572	\$1,432	\$0	\$2,727	\$394	\$3,659	\$585	\$1,169	\$0
11	\$730,255	\$105,465	\$6,529	\$990	\$17,182	\$1,031	\$4,442	\$3,554	\$1,425	\$0	\$2,721	\$393	\$3,640	\$582	\$1,160	\$0
12	\$769,999	\$111,205	\$6,515	\$988	\$17,092	\$1,026	\$4,419	\$3,535	\$1,418	\$0	\$2,715	\$392	\$3,621	\$579	\$1,152	\$0
13	\$809,288	\$116,879	\$6,500	\$986	\$17,004	\$1,020	\$4,396	\$3,517	\$1,410	\$0	\$2,709	\$391	\$3,602	\$576	\$1,144	\$0
14	\$847,879	\$122,452	\$6,486	\$983	\$16,916	\$1,015	\$4,374	\$3,499	\$1,403	\$0	\$2,703	\$390	\$3,583	\$573	\$1,136	\$0
15	\$885,525	\$127,889	\$6,472	\$981	\$16,828	\$1,010	\$4,351	\$3,481	\$1,396	\$0	\$2,697	\$389	\$3,565	\$570	\$1,127	\$0
16	\$921,980	\$133,154	\$6,457	\$979	\$16,740	\$1,004	\$4,328	\$3,463	\$1,388	\$0	\$2,691	\$389	\$3,546	\$567	\$1,119	\$0
17	\$956,998	\$138,212	\$6,443	\$977	\$16,654	\$999	\$4,306	\$3,445	\$1,381	\$0	\$2,685	\$388	\$3,528	\$564	\$1,111	\$0
18	\$990,341	\$143,027	\$6,429	\$975	\$16,567	\$994	\$4,283	\$3,427	\$1,374	\$0	\$2,679	\$387	\$3,510	\$562	\$1,103	\$0
19	\$1,021,774	\$147,567	\$6,415	\$973	\$16,481	\$989	\$4,261	\$3,409	\$1,367	\$0	\$2,673	\$386	\$3,491	\$559	\$1,095	\$0
20	\$1,051,078	\$151,799	\$6,401	\$970	\$16,396	\$984	\$4,239	\$3,391	\$1,360	\$0	\$2,667	\$385	\$3,473	\$556	\$1,088	\$0
21	\$1,078,043	\$155,693	\$6,387	\$968	\$16,310	\$979	\$4,217	\$3,374	\$1,353	\$0	\$2,661	\$384	\$3,455	\$553	\$1,080	\$0
22	\$1,102,477	\$159,222	\$6,372	\$966	\$16,226	\$974	\$4,195	\$3,356	\$1,346	\$0	\$2,656	\$384	\$3,437	\$550	\$1,072	\$0
23	\$1,124,204	\$162,360	\$6,358	\$964	\$16,142	\$968	\$4,173	\$3,339	\$1,339	\$0	\$2,650	\$383	\$3,419	\$547	\$1,064	\$0
24	\$1,143,069	\$165,084	\$6,344	\$962	\$16,058	\$963	\$4,152	\$3,321	\$1,332	\$0	\$2,644	\$382	\$3,402	\$544	\$1,057	\$0
25	\$1,158,937	\$167,376	\$6,330	\$960	\$15,974	\$958	\$4,130	\$3,304	\$1,325	\$0	\$2,638	\$381	\$3,384	\$541	\$1,049	\$0
26	\$1,171,700	\$169,219	\$6,316	\$958	\$15,892	\$953	\$4,109	\$3,287	\$1,318	\$0	\$2,632	\$380	\$3,367	\$539	\$1,042	\$0
27	\$1,181,272	\$170,602	\$6,302	\$956	\$15,809	\$949	\$4,087	\$3,270	\$1,311	\$0	\$2,626	\$379	\$3,349	\$536	\$1,034	\$0
28	\$1,187,591	\$171,514	\$6,289	\$953	\$15,727	\$944	\$4,066	\$3,253	\$1,304	\$0	\$2,621	\$378	\$3,332	\$533	\$1,027	\$0
29	\$1,187,891	\$171,558	\$6,275	\$951	\$15,645	\$939	\$4,045	\$3,236	\$1,297	\$0	\$2,615	\$378	\$3,314	\$530	\$1,019	\$0
30	\$1,187,667	\$171,525	\$6,261	\$949	\$15,564	\$934	\$4,024	\$3,219	\$1,291	\$0	\$2,609	\$377	\$3,297	\$528	\$1,012	\$0
31	\$1,146,067	\$165,517	\$6,247	\$947	\$15,483	\$929	\$4,003	\$3,203	\$1,284	\$0	\$2,603	\$376	\$3,280	\$525	\$1,005	\$0
32	\$962,198	\$138,963	\$6,233	\$945	\$15,403	\$924	\$3,982	\$3,186	\$1,277	\$0	\$2,598	\$375	\$3,263	\$522	\$998	\$0
33	\$876,314	\$126,559	\$6,220	\$943	\$15,323	\$919	\$3,962	\$3,169	\$1,271	\$0	\$2,592	\$374	\$3,246	\$519	\$990	\$0
34	\$182,259	\$26,322	\$6,206	\$941	\$15,244	\$915	\$3,941	\$3,153	\$1,264	\$0	\$2,586	\$373	\$3,229	\$517	\$983	\$0
35	\$15,211	\$2,197	\$6,192	\$939	\$15,164	\$910	\$3,921	\$3,137	\$1,258	\$0	\$2,580	\$373	\$3,212	\$514	\$976	\$0
36	\$0	\$0	\$6,179	\$937	\$15,086	\$905	\$3,900	\$3,120	\$1,251	\$0	\$2,575	\$372	\$3,196	\$511	\$969	\$0
37	\$0	\$0	\$6,165	\$935	\$15,007	\$900	\$3,880	\$3,104	\$1,245	\$0	\$2,569	\$371	\$3,179	\$509	\$962	\$0
38	\$0	\$0	\$6,151	\$933	\$14,930	\$896	\$3,860	\$3,088	\$1,238	\$0	\$2,563	\$370	\$3,163	\$506	\$955	\$0
<b>PV</b>	<b>\$14,132,519</b>	<b>\$2,041,048</b>	<b>\$132,078</b>	<b>\$20,025</b>	<b>\$344,669</b>	<b>\$20,680</b>	<b>\$89,115</b>	<b>\$71,292</b>	<b>\$28,584</b>	<b>\$0</b>	<b>\$55,040</b>	<b>\$7,949</b>	<b>\$73,016</b>	<b>\$11,683</b>	<b>\$23,160</b>	<b>\$0</b>
<b>Net Alt Ed*</b>	<b>(\$3,126,713)</b>	<b>(\$451,566)</b>	<b>(\$29,221)</b>	<b>(\$4,430)</b>	<b>(\$76,255)</b>	<b>(\$4,575)</b>	<b>(\$19,716)</b>	<b>(\$15,773)</b>	<b>(\$6,324)</b>	<b>\$0</b>	<b>(\$12,177)</b>	<b>(\$1,759)</b>	<b>(\$16,154)</b>	<b>(\$2,585)</b>	<b>(\$5,124)</b>	<b>\$0</b>
<b>Net Shutdown*</b>	<b>(\$8,770)</b>	<b>(\$1,267)</b>	<b>(\$82)</b>	<b>(\$12)</b>	<b>(\$214)</b>	<b>(\$13)</b>	<b>(\$55)</b>	<b>(\$44)</b>	<b>(\$18)</b>	<b>\$0</b>	<b>(\$34)</b>	<b>(\$5)</b>	<b>(\$45)</b>	<b>(\$7)</b>	<b>(\$14)</b>	<b>\$0</b>
<b>PV Net Bens</b>	<b>\$10,997,036</b>	<b>\$1,588,215</b>	<b>\$102,775</b>	<b>\$15,582</b>	<b>\$268,200</b>	<b>\$16,092</b>	<b>\$69,343</b>	<b>\$55,475</b>	<b>\$22,242</b>	<b>\$0</b>	<b>\$42,828</b>	<b>\$6,185</b>	<b>\$56,816</b>	<b>\$9,091</b>	<b>\$18,022</b>	<b>\$0</b>

\*Note: These reduction factors refer to the alternative education variable ("Net Alt. Ed.") and the shutdown point ("Shutdown"). See Appendices 2 and 3 in Volume 1: Main Report for more details.

Sources: Computed from data supplied by the US Department of Commerce, Regional Economic Information System (CA and SA series), and by the colleges.

Table 20. Income Calculations, Taxpayer Perspectives (\$ Thousands)

Year	Labor Income Growth*	Net of Attrition	Indirect Labor Income	Non-Labor Income Growth	TOTAL Income Growth	% Reduction (see note)	NET Income Growth
0	\$100,759	\$92,839	\$21,748	\$56,442	\$171,028	22%	\$133,084
1	\$115,290	\$106,020	\$24,836	\$64,455	\$195,311	22%	\$151,979
2	\$228,299	\$210,603	\$49,334	\$128,037	\$387,975	22%	\$301,897
3	\$249,005	\$229,298	\$53,714	\$139,403	\$422,414	22%	\$328,696
4	\$270,527	\$248,676	\$58,253	\$151,183	\$458,112	22%	\$356,474
5	\$292,792	\$268,666	\$62,936	\$163,337	\$494,939	22%	\$385,130
6	\$315,717	\$289,190	\$67,744	\$175,814	\$532,748	22%	\$414,551
7	\$339,207	\$310,158	\$72,655	\$188,562	\$571,376	22%	\$444,609
8	\$363,159	\$331,473	\$77,649	\$201,520	\$610,642	22%	\$475,163
9	\$387,459	\$353,029	\$82,698	\$214,625	\$650,352	22%	\$506,063
10	\$411,983	\$374,712	\$87,777	\$227,807	\$690,296	22%	\$537,145
11	\$436,601	\$396,403	\$92,858	\$240,994	\$730,255	22%	\$568,239
12	\$461,175	\$417,976	\$97,912	\$254,110	\$769,999	22%	\$599,164
13	\$485,562	\$439,303	\$102,908	\$267,076	\$809,288	22%	\$629,737
14	\$509,613	\$460,252	\$107,815	\$279,812	\$847,879	22%	\$659,766
15	\$533,179	\$480,687	\$112,602	\$292,236	\$885,525	22%	\$689,060
16	\$556,108	\$500,476	\$117,238	\$304,266	\$921,980	22%	\$717,427
17	\$578,248	\$519,485	\$121,691	\$315,823	\$956,998	22%	\$744,676
18	\$599,449	\$537,584	\$125,931	\$326,826	\$990,341	22%	\$770,621
19	\$619,566	\$554,647	\$129,928	\$337,200	\$1,021,774	22%	\$795,080
20	\$638,458	\$570,554	\$133,654	\$346,870	\$1,051,078	22%	\$817,883
21	\$655,992	\$585,191	\$137,083	\$355,769	\$1,078,043	22%	\$838,865
22	\$672,042	\$598,455	\$140,190	\$363,833	\$1,102,477	22%	\$857,878
23	\$686,494	\$610,249	\$142,952	\$371,003	\$1,124,204	22%	\$874,785
24	\$699,244	\$620,489	\$145,351	\$377,228	\$1,143,069	22%	\$889,464
25	\$710,200	\$629,103	\$147,369	\$382,465	\$1,158,937	22%	\$901,812
26	\$719,286	\$636,031	\$148,992	\$386,677	\$1,171,700	22%	\$911,743
27	\$726,440	\$641,227	\$150,209	\$389,836	\$1,181,272	22%	\$919,191
28	\$731,613	\$644,657	\$151,013	\$391,921	\$1,187,591	22%	\$924,109
29	\$733,183	\$644,820	\$151,051	\$392,020	\$1,187,891	22%	\$924,342
30	\$734,335	\$644,698	\$151,022	\$391,947	\$1,187,667	22%	\$924,168
31	\$709,495	\$622,117	\$145,733	\$378,218	\$1,146,067	22%	\$891,797
32	\$596,776	\$522,308	\$122,352	\$317,539	\$962,198	22%	\$748,722
33	\$542,703	\$475,687	\$111,431	\$289,196	\$876,314	22%	\$681,892
34	\$129,233	\$98,935	\$23,176	\$60,148	\$182,259	22%	\$141,823
35	\$9,228	\$8,257	\$1,934	\$5,020	\$15,211	22%	\$11,836
36	\$0	\$0	\$0	\$0	\$0	0%	\$0
37	\$0	\$0	\$0	\$0	\$0	0%	\$0
38	\$0	\$0	\$0	\$0	\$0	0%	\$0

\* Note: This column shows the annual higher earnings achieved by the student body as a result of their college education.

\*\* Note: Reduction factors include the alternative education variable and the shutdown variable used to estimate the level of education possible absent state and local government support. See Appendices 2 and 3 in Volume 1: Main Report for more information.

Sources: Computed from data supplied by the US Department of Commerce, Regional Economic Information System (CA and SA series), and by the colleges.