

The Role of Community Colleges in Florida's Economy

-Executive Summary-

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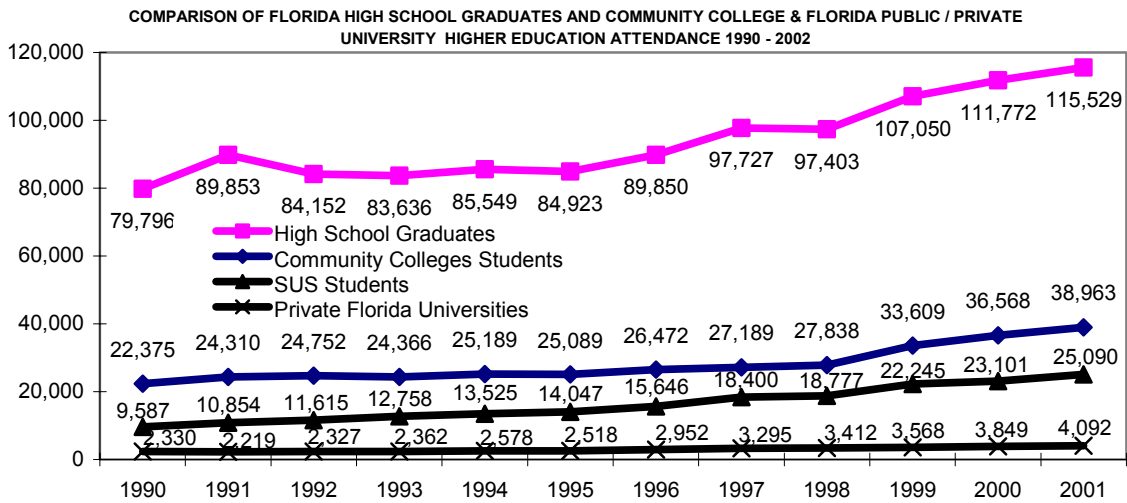
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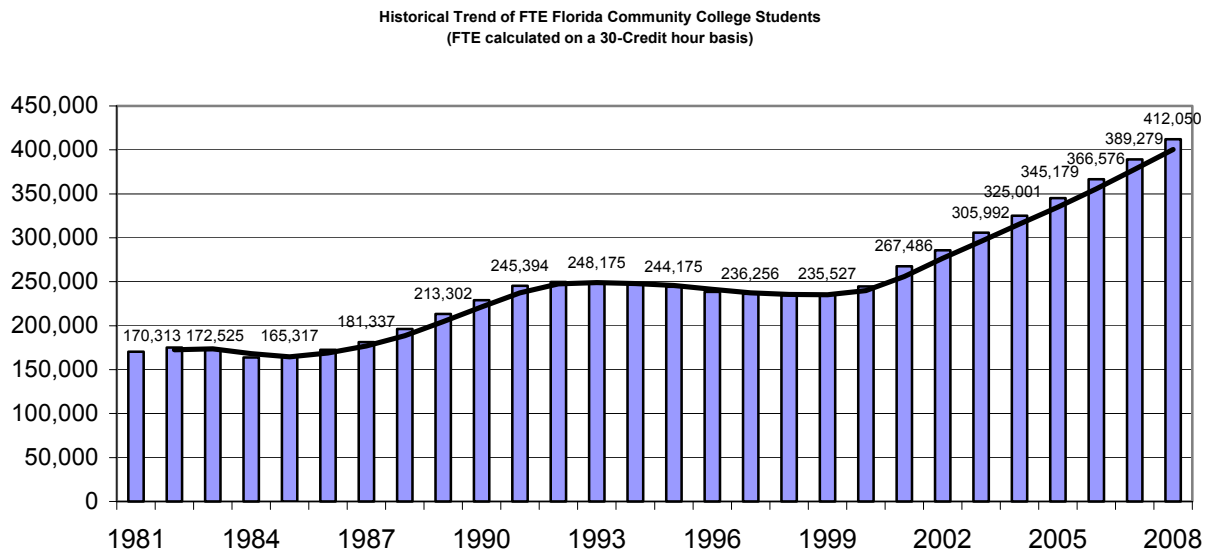
Executive Summary of the Economic Impact of Community Colleges in Florida

Florida Community colleges generate a large number of benefits to both students and society. This study measures the benefits to students through the changes in earnings as suggested by human capital theory, which views education as a major determinant of earnings. The study measures the economic benefits to society through economic impact and internal rate of return (IRR) analysis.

The number of high school graduates that have advanced to higher education institutions including community colleges (CC), State University Systems (SUS), and private universities, has increased from 34,292 (43%) in 1990 to 68,145 (59%) in 2001. As seen in the graph below, in 2001 almost 39,000 (33.7%) of graduating Florida high school seniors entered community colleges, while 25,090 (21.7%) entered SUS, and 4,092 (3.5%) entered private universities.



CC enrollment jumped by 38% from 235,527 in 1999 to 305,992 by 2003. According to the Department of Education forecast as seen in the graph below, the number of CC students is expected to increase an additional 35% to 412,050 by 2008.



Literature Review of the Economic Value of a Community College Education

Previous CC studies measured the benefits to students and society through the present values of future annual graduate earnings and the impact these earnings had on the regional economy. The socioeconomic benefits from eleven different CCs impact studies are presented in Table 1.

As shown in the last column of the table below, the average values of eleven studies for each variable are as follows: The average annual higher earnings per credit is \$112 and per year FTE student is \$3,926; the average rate of return is 25%; the average cost/benefit ratio is 7; the average payback is 7 years; the social saving per credit is \$35; and the social savings per year FTE student is \$1,353.

The Socioeconomic Benefits Generated by Community Colleges (CC)

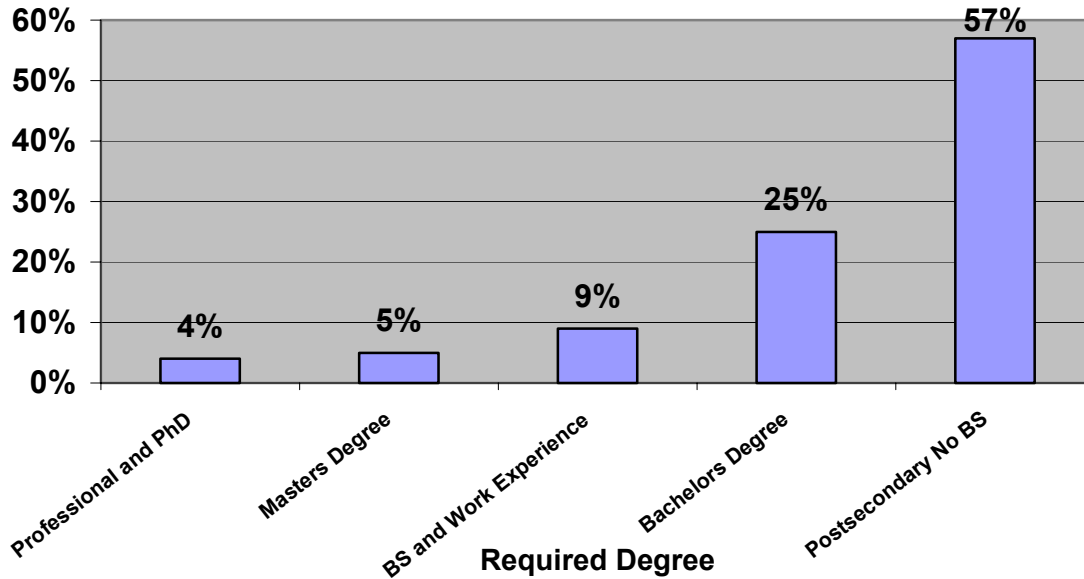
	Oregon CC	Hillsborough CC	Del- Mar CC	Douglas CC	30 CC in WA	CC of Spokane	39 CC in IL	50 CC in TX	Madison T.C.	16 CC in MD	Clack- amas CC	Average
1) Higher Earnings												
Per Credit	\$87	\$143	\$119	\$67	\$100	\$100	\$120	\$117	\$127	\$152	\$102	\$112
Per year FTE student	\$4,018	\$4,238	\$3,984	\$2,099	\$4,409	\$4,439	\$3,767	\$3,826	\$3,806	\$4,499	\$4,105	\$3,926
2) Investment Analysis												
Rate of Return (%)	30	26	32	9	21	24	26	26	17	24	39	25
Benefit / Cost Ratio	5.9	10.2	11.4	2.2	5.5	6.6	7.3	9.1	2.4	5.6	5.8	7
Payback (years)	4.8	5.9	4.8	15.1	6.9	6	5.6	5.8	7.1	5.9	3.7	7
3) Social Savings												
Per Credit	\$51	\$52	\$52	\$14	\$36	\$36	\$24	\$27	\$37	\$21	\$33	\$35
Per year FTE student	\$2,129	\$1,553	\$1,569	\$455	\$1,583	\$1,605	\$1,493	\$1,397	\$1,109	\$607	\$1,385	\$1,353

Employment Projection of Community College Graduates

Florida Community Colleges will increasingly play a vital role in the local economy by providing the education necessary for sustainable employment. A recent CEPRI report reveals “over 60 percent of the projected job growth in Florida through 2010 will be in occupations requiring postsecondary education and training but not a bachelor’s degree.” Among those projected new jobs, 300,000 of them will require an associate’s degree and 500,000 of them will require a postsecondary certificate.

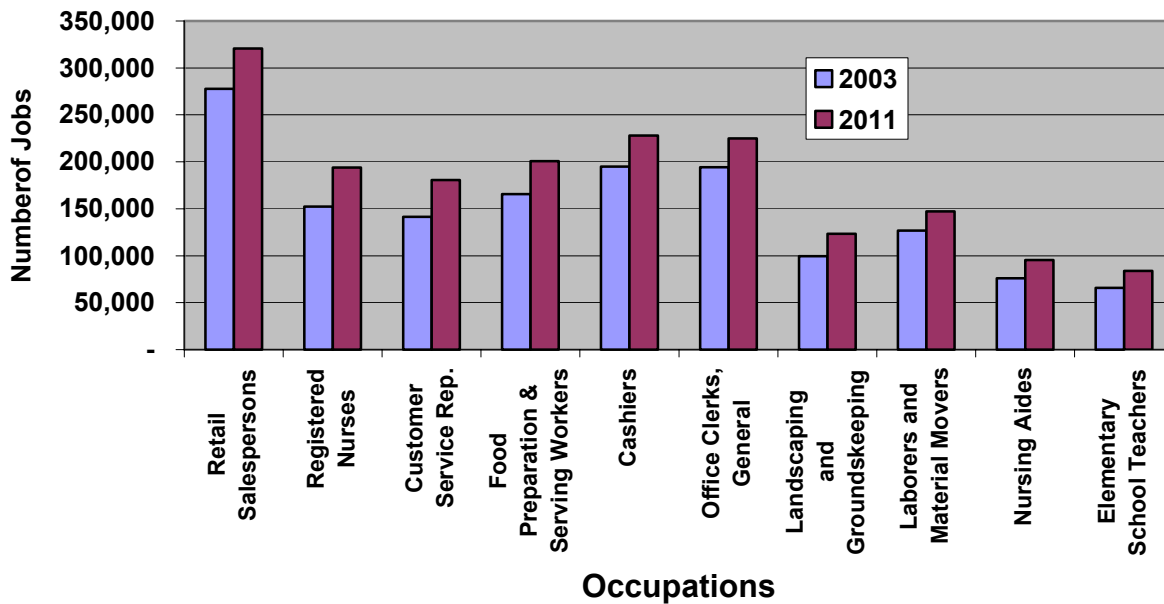
As depicted in the figure below, the Florida Labor Department of Labor 2003-2011 employment projections indicates that 57 percent of the fastest growing jobs in Florida will be occupations requiring postsecondary education with less than a bachelor’s degree. These are the future working Floridians educated across the state CC system. This forecast confirms the strong historic and future robust forecast of growth in CC student enrollment across the state in the foreseeable future described earlier.

Education and Degree Requirement for 100 Fastest Growing Florida Occupations (2003-2011)



The figure below illustrates the ten top highest projected numbers of jobs that will be created in Florida between 2003-2011. While only elementary school teacher positions require a bachelor’s degree, the remainder of these jobs requires postsecondary education and vocational training.

Occupations Gaining The Most New Florida Jobs (2003-2011)

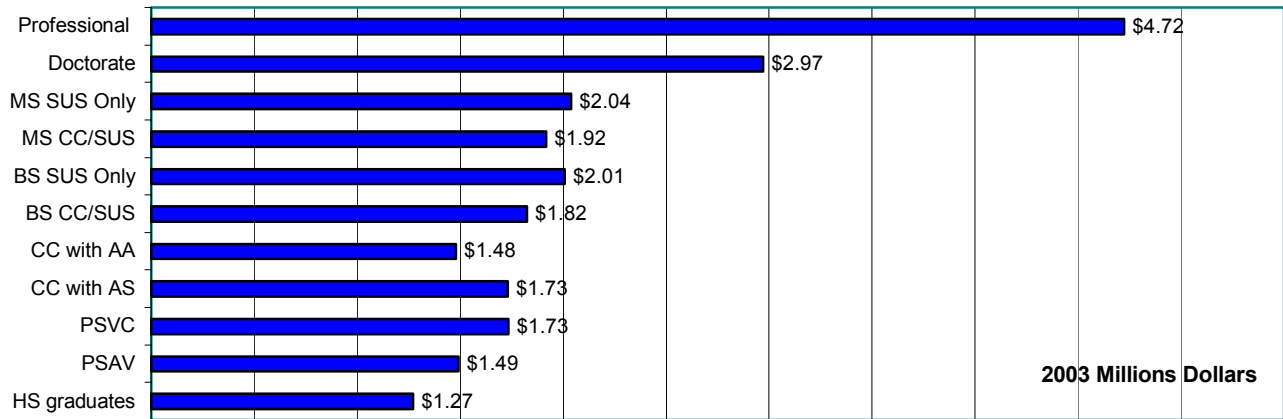


Education and Lifetime Earnings Comparison

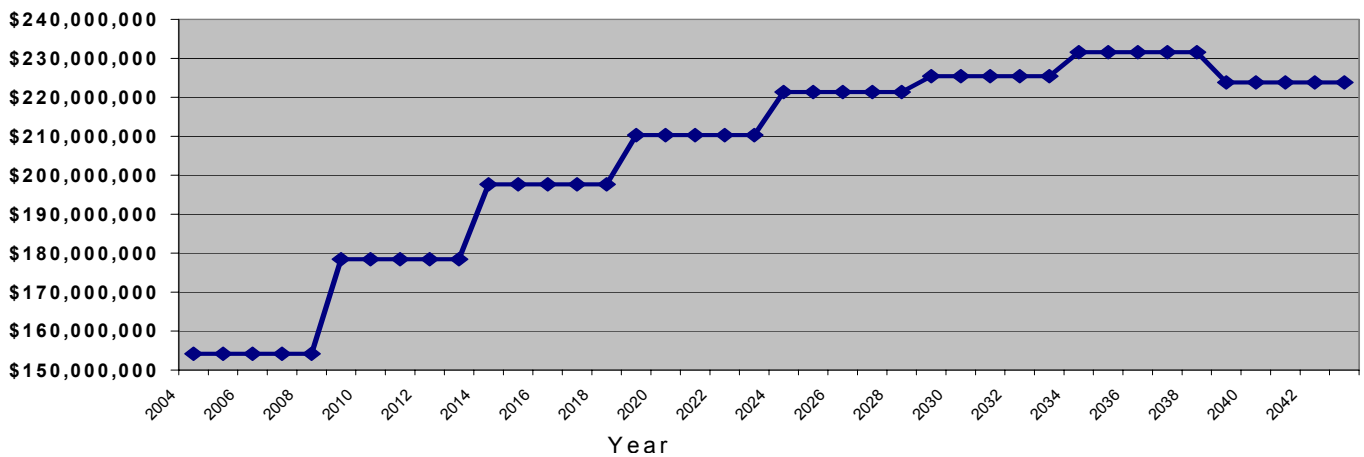
The lifetime earnings are estimated based on 2003 annual earnings data provided by Florida Educational Training and Placement Information Program (FETPIP) combined with US Bureau of the Census data. As expected, those graduates who go on to earn professional (medical, legal, engineering and so forth) degrees report considerably higher lifetime income with an estimated \$4.72 million dollars earned over their working lives. Those with a doctorate earned \$2.97 million, and the SUS-Only graduates followed with an MS and BS earning \$2.04 and \$2.01, respectively. Those graduates with a CC and SUS background and a Bachelor’s degree, earned \$1.82 million. As expected, CC graduates with an AS degree earned

\$250,000 more than CC graduates with an AA degree. PSVC's (Post Secondary Vocational Certificate) and PSAV's (Post Secondary Adult Vocational Certificate) earned \$1.73 and \$1.49 million, respectively. As mentioned earlier, high school graduates can expect to generate \$1.27 million in lifetime earnings. The Total Lifetime Earnings for the 2003 graduates is presented in the following figure. As expected, over the 2004 to 2008 time period when these graduates are the youngest (in their early or mid twenties) they earn the least overall in their working life with a total annual earnings of \$154 million during those years. The highest earnings this 2003 CC graduating classes earns is over the period 2034 to 2038 when they are in their mid to late fifties and they are in the peak of their earning capacity and are paid a total \$232 million for each of those working years.

Expected Lifetime Earnings Among Full Time Employed Floridians by Highest Degree Earned



Total 1994-1995 Florida High School Graduate Lifetime Earnings of Florida CC Educated Students That Graduated in 2003 (Over High School Only Grads) Over Their Working Life of 2004 to 20044



Florida Community College Economic Impact Analysis

This section describes the impact of community colleges on Florida's economy. It measures the increase in employment and economic output generated by community college activities across the broader statewide economy. The net economic stimulus from community colleges is estimated by examining additional lifetime earnings of community college graduates resulting from a community college education.

The definition of community college economic impact is the difference between existing 2003 Florida economic activity and the *drop* in the level of economic activity that would otherwise exist if the earnings from community college educated graduates did not exist. The difference between Florida economic activity with the lifetime earnings from 2003

community college graduates (measured by the difference in earnings of these community college educated workers and comparable earnings from workers with only a high school education) and the economy *without* these earnings represents the direct measure of community college contributions to the Florida economy. By entering these higher earnings into the Florida region-specific IMPLAN (input-output) model researchers were able to *measure the direct and indirect* present value of these community college graduate earnings across the Florida economy over time. The measured economic impacts include community college related increases in:

- Florida Gross Domestic Product (or State Output)
- Personal Income (Including Wages)
- Number of Jobs Created

Florida Community College IMPLAN Direct and Indirect Economic Impact Analysis Results

The following table summarizes the total direct and indirect economic impacts of 2003 CC graduate lifetime earnings on the Florida economy over the period 2003 to 2043. The table shows the economic impacts on employment, gross domestic product (GDP, or State Output), and Personal Income (Wages from the additional lifetime earnings resulting from a community college education). State Output is the dollar value of final goods and services produced across the Florida economy over the FY 2001 - FY 2043 time period. State Output was estimated to increase by \$12.87 billion in 2003 dollars from these higher 2003 CC graduate lifetime earnings. This CC-generated rise in state output created considerable direct and indirect increases in employment across the state, as well. The table below indicates that 102,768 Florida jobs will be created over the 40 years of this analysis from these spending increases alone. In turn, this employment increase also generated higher wage and salary earnings. Direct and indirect personal (or disposable) incomes increased over this period will increase by \$5.193 billion.

Summary of Lifetime Earnings Results for Community Colleges in Florida (2001-2035)	
Net Present Value of GDP or State Output	\$12,867,929,021
Net Present Value of Wages	\$5,192,977,916
Number of Jobs	102,768

Internal Rate of Return (IRR) Analysis

Section 240.706 of the Florida Statutes (FS) discusses the need to address the “return on the state’s investment in research conducted by public postsecondary institutions”. A focus of this assessment is on community colleges. The IRR method involves the time value of money. It allows one to find the “profitability” of the investment in community colleges. If the internal rate of return is more than the cost of borrowing used to fund the project, the project will be a positive cash flow investment and the profit level of your investment exceeds the alternative investment of what could be earned in the bank. Staff used the IMPLAN model to estimate the return of public support funding (general revenue, lottery funds and local funding) for Florida CC for fiscal 2002-03. The lifetime earnings (discussed earlier) represented the cash flow stream of additional earnings (based on CC diplomas, and CC attendance and diplomas at the SUS) over time, for a 40-year interval. The ratio of output to lifetime earnings was calculated and used to generate output over time. The Internal Rate of Return (IRR) was equal to a substantive 33.9%.

Conclusions

The results of the economic analysis indicate that CC’s contribute significantly to the Florida economy. The economic benefits extend to job creation; generation of GDP and Output, and personal income, from the additional (beyond high school) lifetime earnings generated from a community college education. The following are the primary contributions that are attributable to CC’s lifetime earnings from public supported funding in Florida:

- For every dollar of public support a CC educated student generates an increase of \$13.37 (in 2003\$) in State output.;
- For every dollar of public support a CC educated student generates an increase of \$5.37 (in 2003\$) in State wages;
- The IRR for lifetime earnings generated by a CC educated students is 33.9%.
- The benefits of CC’s are substantially greater than the state of Florida and local government investment costs, with a final Benefit to Cost ratio of 7.4-to-1.

**For a copy of the full report, please call:
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