

The Socioeconomic Benefits Generated by 58 Community Colleges in North Carolina

State of North Carolina

Executive Summary

December 8, 2004

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HIGHLIGHTS

- The 58 Community Colleges in North Carolina pay \$763.4 million in direct faculty and staff wages, salaries, and benefits and explain an additional \$13.9 billion in earnings off campus.
- Taxpayers see a real money “book” return of 16.8% on their annual investments in the colleges and recover all investments in 7.7 years.
- Students enjoy an attractive 18.6% annual return on their investment of time and money – for every \$1 the student invests in a college education, he or she will receive a cumulative \$4.24 in higher discounted future earnings over the next 32 years.
- The State of North Carolina benefits from improved health and reduced welfare, unemployment, and crime, saving the public some \$184.1 million per year.

INTRODUCTION

How does the economy of the State of North Carolina benefit from the presence of the 58 Community Colleges in the state? An obvious question often asked, but rarely answered with more than anecdotes. The Community Colleges of North Carolina contracted with CCbenefits, Inc. to apply a comprehensive economic model they have developed to capture and quantify the economic and social benefits of community colleges. The model, which took over a year to develop with funding from the Association for Community College Trustees (ACCT), relies on data collected from individual colleges, and

translates these into common sense benefit-cost and investment terms. It has been subjected to peer review, field tested on over 350 different colleges throughout the United States and Canada, and now applied to the Community Colleges of North Carolina. Model results are based on solid economic theory, carefully drawn functional relationships, and a wealth of national and local education-related data. The model provides an analytical alternative from the all-too-common “advocacy analyses” that inflate benefits, understate costs, and thus discredit the process of higher education impact assessment.

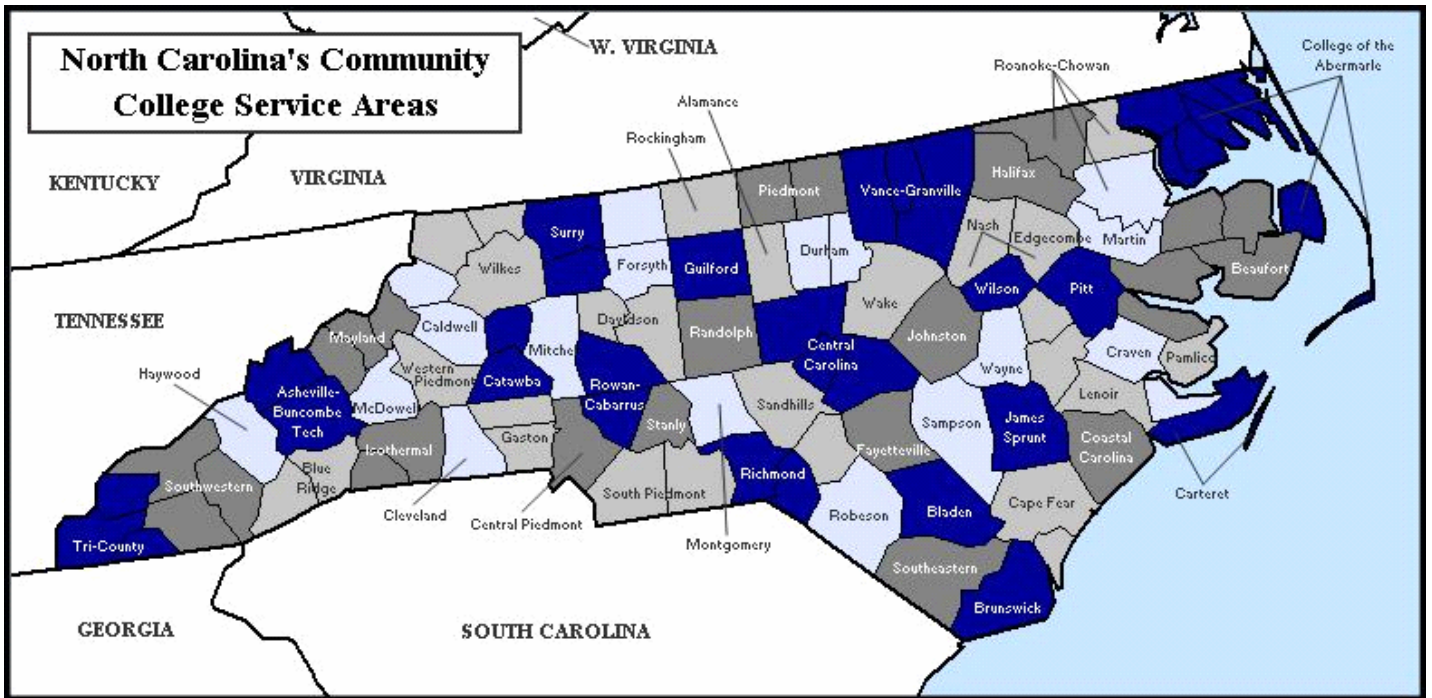
Four types of benefits are tracked: (1) regional economic benefits (contributions to local job and income formation); (2) higher earnings captured by exiting students; (3) a broad collection of social benefits (improved health, reduced crime, lower welfare, and unemployment); and (4) the return to taxpayers for their support of North Carolina’s Community Colleges.

THE RESULTS

For a more in-depth exploration of the study, the reader is encouraged to consult the Main Report containing the detailed assumptions, their context, and the computation procedures.

➤ **Statewide Perspective**

The 58 Community Colleges in the State of North Carolina explain \$14.6 billion of all annual earnings in the state economy (see map). The earnings explained by the



colleges are equal to that of roughly 474,500 jobs. The earnings and job effects break down as follows:

- *Operations and Capital Spending*
The 58 Community Colleges in North Carolina pay wages, salaries, and benefits (i.e., earnings), which generate additional incomes as they are spent. Likewise, the aggregate college operating and capital expenditures generate still further earnings. Altogether, these earnings account for \$1.4 billion in the North Carolina economy (equal to that of around 52,100 jobs).

- *Higher Earnings due to Past Instruction*
Each year students leave the 58 colleges and join or rejoin the local workforce. Their added skills translate to higher earnings and a more robust economy. Based on current enrollment, turnover, and the growth of instruction over time, the workforce embodies an estimated 119.1 million credits of past instruction

(credit and non-credit hours). The accumulated contribution of past college instruction adds some \$13.3 billion in annual earnings to the economy of the State of North Carolina (equal to that of around 422,300 jobs).

➤ **Student Perspective**

The student's perspective on the benefits of higher education is the most obvious: he or she pays tuition and foregoes current earnings for a lifetime of higher earnings. For every credit completed, students will, on average, earn \$127 more per year each year they are in the workforce. Alternatively, for every full-time year they attend they will earn an additional \$3,741 per year. In the aggregate (all exiting students), the higher earnings amount to some \$762.8 million per year for each year they remain in the workforce.

From an investment standpoint, the college students will, on average, enjoy a 18.6% rate of return on their investments

of time and money, which compares favorably with the returns on other investments, e.g., the long-term return on U.S. stocks and bonds. The corresponding benefit/cost ratio (the sum of the discounted future benefits divided by the sum of the discounted costs) is 4.2, i.e., for every \$1 the student invests in education, he or she will receive a cumulative of \$4.24 in discounted higher future earnings over the next 32 years. The payback period (the time needed to recover all costs) is 7.3 years.

➤ **Taxpayer Perspectives**

State and local government spent \$807.4 million in support of the colleges during the analysis year. Is this a good use of taxpayer money? Our analysis indicates that the answer is a resounding yes: returns far outweigh the costs, particularly when a collection of social savings is included in the assessment. For example, persons with higher education are less likely to smoke or abuse alcohol, draw welfare or unemployment benefits, or commit crimes. This translates into associated dollar savings (avoided costs) amounting to some \$31 per credit per year, counted as an indirect benefit of college education. When aggregated across all exiting students, the State of North Carolina will benefit from \$184.1 million worth of avoided costs per year, broken down as follows:

- *Improved Health*

Employers in the State of North Carolina will see health-related absenteeism decline by approximately 296,990 days per year, with a corresponding annual dollar savings of \$26.0 million. The state will benefit from the health-related

savings of roughly 950 fewer smokers and 1,790 fewer alcohol abusers. The corresponding dollar savings are \$2.8 million and \$14.2 million per year, now and into the future (these savings include insurance premiums, co-payments and deductibles, and withholding for Medicare and Medicaid).

- *Reduced Crime*

Studies show that incarceration drops with each year of higher education. In the State of North Carolina, about 2,880 fewer individuals will be incarcerated per year, resulting in annual savings of \$27.3 million (combined savings from reduced arrest, prosecution, jail, and reform costs). Reductions in victim costs (e.g., property damage, legal expenses, lost workdays, etc.) result in savings of \$30.0 million per year. Finally, that people are employed rather than incarcerated adds \$9.9 million of earnings per year to the economy.

- *Reduced Welfare/Unemployment*

There will be around 8,910 fewer people on welfare, and 3,650 fewer drawing unemployment benefits per year, saving some \$39.9 million and \$34.0 million per year, respectively.

➤ **Taxpayer Return on Investment**

The return on a year's worth of state and local government investment in North Carolina's 58 Community Colleges is obtained by projecting the associated educational benefits into the future, discounting them back to the present, and weighing these against the \$807.4 million state and local taxpayers spent during the analysis year to support the 58 colleges in the system. The analysis is based on the portion of college operations that is wholly dependent on state and local

government support. Two investment perspectives are possible, one broad and one narrow.

- *Broad Perspective*

Taxpayers expect their annual investment in the colleges to result in higher lifetime earnings for students and social savings from lifestyle changes (reduced crime, welfare and unemployment, and improvements in health). From a broad investment perspective, the value of *all* future earnings and associated social savings is compared to the year's worth of state and local taxpayer support that made the benefits possible. Following this procedure, the benefit/cost ratio generated for the whole system is 17.0, i.e., every dollar of state or local tax money invested in North Carolina's Community Colleges today returns a cumulative of \$17.03 over the next 32 years.

- *Narrow Perspective*

The narrow perspective limits the benefit stream to state and local government budgets, namely increased tax collections and expenditure savings. For example, in place of total increased student earnings, the narrow perspective includes only the increased state and local tax receipts from those higher earnings. Similarly, in place of overall crime, welfare, unemployment and health savings, the narrow perspective includes only those portions that translate to actual reductions in state and local government expenditures.

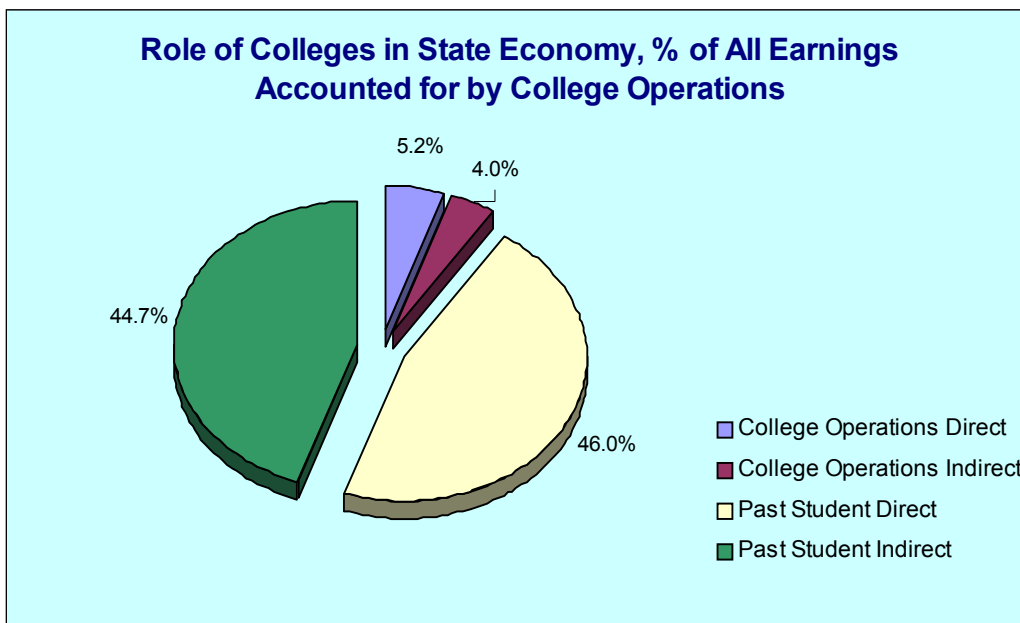
Note here that it is normal for the state government to undertake activities wanted by the public, but which are unprofitable in the marketplace. This means that positive economic returns are generally not expected from government investments. From the narrow taxpayer perspective, therefore, even a small positive return (a benefit/cost ratio equal to or just greater than 1, and/or a rate of return equal to or just greater than the 4.0% discount rate used in this analysis) would be a most favorable outcome, certainly one that justifies continued taxpayer support of the colleges. For North Carolina, the narrow perspective results greatly exceed the minimum expectations. The results indicate strong and positive returns: a rate of return of 16.8%, a benefit/cost ratio of 2.7 (every dollar of state or local tax money invested today returns a cumulative \$2.74 over the next 30 years), and a short payback period of only 7.7 years.

CONCLUSION

The results of this study demonstrate that the investment in the Community Colleges of North Carolina is sound from multiple perspectives. The colleges increase the lifetime incomes of students and enrich their lives. They benefit taxpayers by generating increased tax revenues from an enlarged economy and reducing the demand for taxpayer-supported social services. Finally, they contribute to the vitality of the state economy.

Benefits at a Glance

Statewide Analysis		State Impact	
Statewide Economic Development			
Increment from college operations		\$1,351,730,000	
Increment from past student productivity		\$13,274,391,000	
Total		\$14,626,121,000	
Job equivalent		474,489	
Annual Benefits			
<i>Higher earnings</i>			
Aggregate (all students)		\$762,797,767	
Per Credit		\$127	
Per full-year equivalent student		\$3,741	
<i>Social savings</i>			
Aggregate (all students)		\$184,072,434	
Per Credit		\$31	
Per full-year equivalent student		\$903	
Investment Analysis	RR	B/C Ratio	Payback (Years)
Students	18.6%	4.2	7.3
Taxpayers: Broad Perspective	NA	17.0	NA
Taxpayers: Narrow Perspective	16.8%	2.7	7.7



In sum, the colleges account for a total of \$14.6 billion of all earnings generated in the state. The chart on the left shows the distribution of the colleges' role in the state economy by college operations and past student productivity effects.

This short summary report is one of six products generated for this impact study. In addition, one long report intended for economists and college institutional researchers (99 pp) lays out the detailed assumptions and analysis. Another report (10 pp) provides detailed tabular results by gender, ethnicity, and entry levels of education, and a one-page fact sheet contains highlights of the study results at a glance. The study also includes a one-page write-up in layman's terms about the differences between the broad and narrow taxpayer perspectives. Lastly, a PowerPoint presentation is developed showing the main results for college presidents to adapt and use in speeches before state legislators and other education stakeholders.