

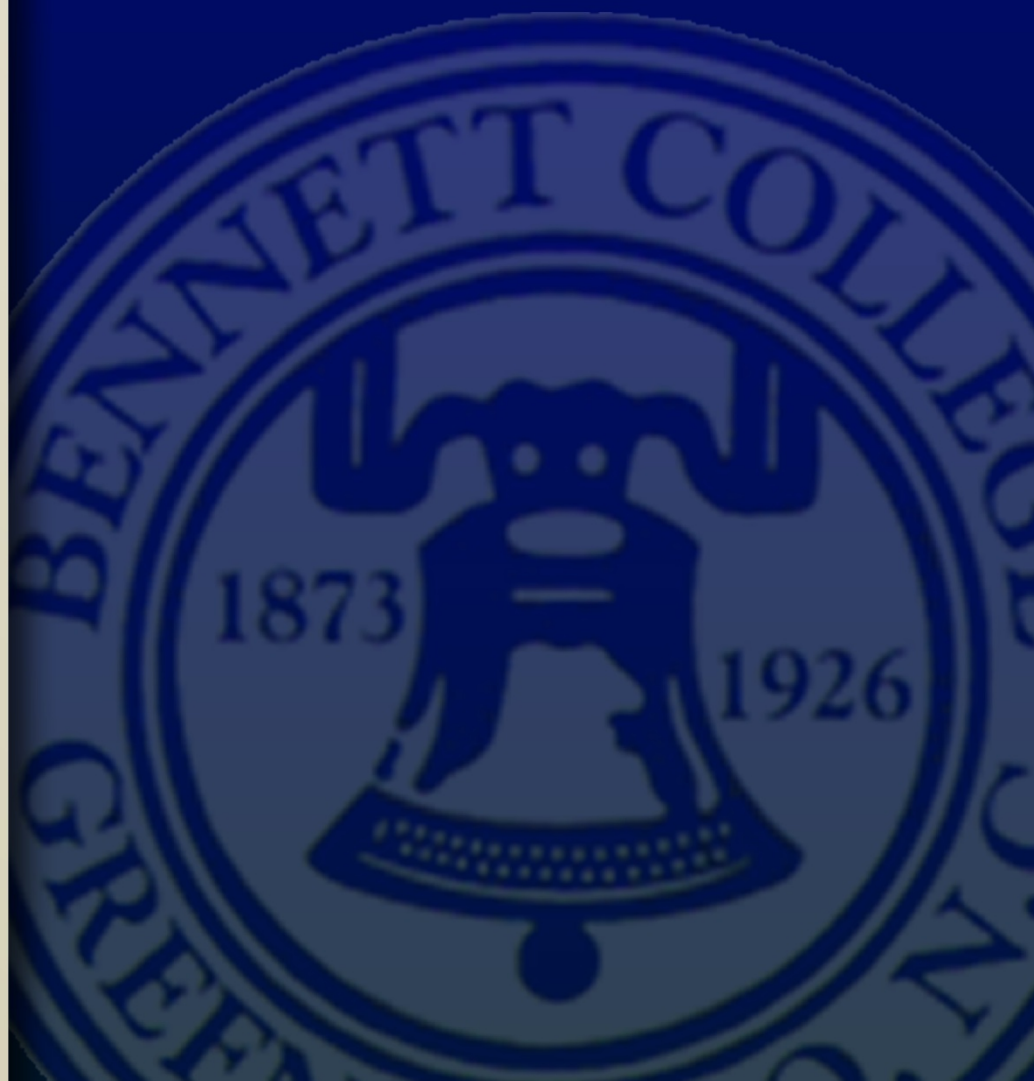


Historically Black Colleges and Universities
Economic Series

The Economic Impact of Bennett College

NORTH CAROLINA
INSTITUTE OF MINORITY
ECONOMIC DEVELOPMENT

October 2012



Historically Black Colleges and Universities Economic Series:

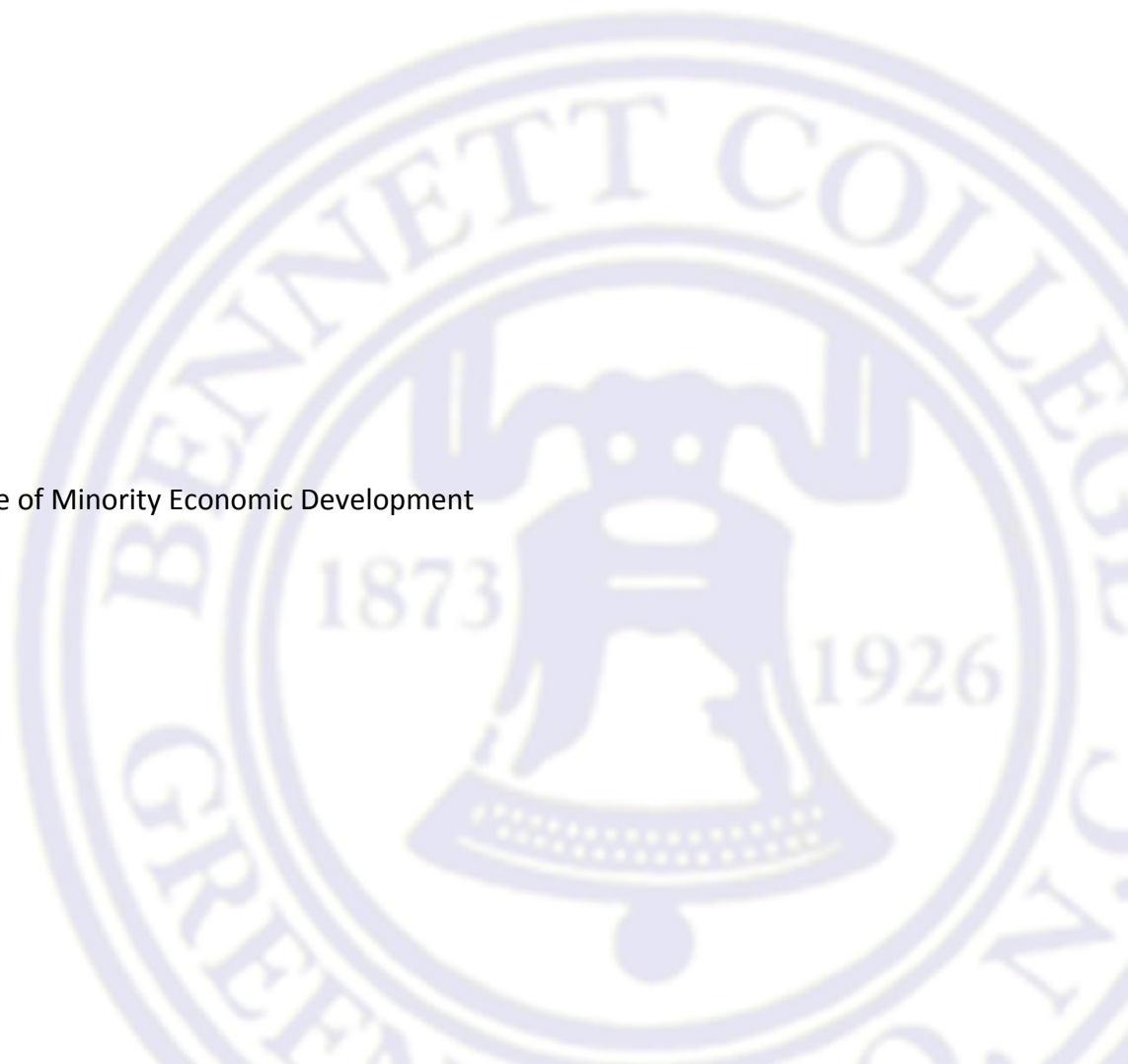
The Economic Impact of Bennett College



A Report by the

North Carolina Institute of Minority Economic Development

October 2012



North Carolina Institute Board of Directors

Andrea L. Harris, President

Executive Officers

James L. Mebane, Chairman

Retired Senior Vice President
First Citizens Bank
Raleigh, NC

Gwynn T. Swinson, Vice Chair

Attorney
Raleigh, NC

**Nathan Garrett Esq., CPA (not active),
Treasurer**

Retired, Cherry Bekaert & Holland, L.L.P.
Durham, NC

Dr. Tyrone R. Baines, Secretary

Supplier Diversity Consultant
American Honda Motor Company
Durham, NC

Board of Directors

Willie Deese

President, Global Manufacturing
Merck & Company, Inc.
Whitehouse Station, NJ

Lewis H. Myers

Director, Market Development
The Freelon Group
Research Triangle Park, NC

Martin Eakes

Chief Executive Officer
Self-Help
Durham, NC

Dr. Peggy A. Richmond

Private Consultant
Chapel Hill, NC

Dr. Edward Fort

Chancellor Emeritus & Professor
North Carolina A&T State University
Greensboro, NC

Thomas Stith

Program Director, Economic Development
Frank Hawkins Kenan Institute
of Private Enterprise
UNC Kenan Flagler Business School
Chapel Hill, NC

Will Mann

Regional Community Development Manager
East Region & Carolinas
Wells Fargo Social Responsibility Group
Winston-Salem, NC

Michael Suggs

Executive Director
Goler Community Development Center
Winston-Salem, NC

About this Study

What is the short-term economic impact of Bennett College on its host community? What are the college degrees granted by Bennett College worth? This study answers these perennial questions. The economic analysis documents the economic role that Bennett College plays in the Greensboro-High Point MSA.

Based on data for the 2010 fiscal year, short-term economic impacts are estimated for three important categories of annual (recurring) college-related expenditures: (1) Spending by Bennett College for wages & salaries and fringe benefits; (2) spending by Bennett College for other budget categories (e.g., outlays for items other than wages & salaries and fringe benefits); and (3) spending by undergraduate students who attended Bennett College. In addition to these recurring (annual) economic impacts, nonrecurring (one-time) economic impacts arising from expenditures for construction projects are also estimated for 2010. Expenditures for construction projects vary considerably from year to year and therefore may not be indicative of the typical annual economic impacts that Bennett College has on the Greensboro-High Point MSA. The economic impacts of construction expenditures therefore are reported separately from the annual (recurring) impacts described above. Also, one type of long-term economic impact is estimated – the additional work-life earnings attributable to the college degrees conferred by Bennett College’s 2011 graduates.

About the Authors

The North Carolina Institute of Minority Economic Development commissioned this study to assess the economic impact of Bennett College. This report is part of the Institute's Historically Black Colleges and Universities Economic Series designed to measure and quantify the economic impact of HBCUs on their local communities, the state and beyond.

ABOUT THE INSTITUTE



The North Carolina Institute of Minority Economic Development ("The Institute") is a statewide nonprofit organization. The Institute's mission is to build the asset base among limited resource populations through research and information, education and training, and business development. Since inception in 1986, the Institute has published more than 15 economic studies/reports. Over the past eight years (2004-2012), its business development clients have realized more than \$459 million in contracts and financial transactions.

ABOUT THE AUTHOR OF THE ECONOMIC ANALYSIS

Dr. Jeffrey M. Humphreys

DIRECTOR, SELIG CENTER FOR ECONOMIC GROWTH, TERRY COLLEGE OF BUSINESS, THE UNIVERSITY OF GEORGIA

Dr. Jeffrey M. Humphreys is the Director of the Selig Center for Economic Growth in the University of Georgia's Terry College of Business. A nationally recognized scholar, Dr. Humphreys is best known for his detailed studies, analysis and publication of more than 300 articles about economic forecasting, racial and ethnic buying power, economic impact and economic development. Dr. Humphreys conducts studies for the Institute of Educational Statistics of the US Department of Education, and has been commissioned by the Institute to conduct research for its NC Minority Buying Power series.

Table of Contents

About this Study.....	iii
About the Authors.....	iv
Profile of Bennett College.....	1
Economic Impact Highlights.....	9
Part I: The Short-Term Economic Impact of Bennett College	12
Part II: The Economic Impact of Construction Projects.....	19
Part III: Increases in Work-Life Earnings	21
Conclusions	26
Limitations	27
Methodology	28

List of Figures

Figure 1: Bennett College Student Enrollment (2001-2010)	3
Figure 2: NC Historically Black Colleges & Universities Total Student Enrollment (2010-2011)	4
Figure 3: United Negro College Fund Schools Student Enrollment (2010-2011)	5
Figure 4: Bennett College Student Enrollment Racial and Ethnic Distribution (2010)	6
Figure 5: NC Historically Black Colleges & Universities Tuition Costs (2010-2011).....	7
Figure 6: United Negro College Fund Schools Tuition Costs (2010-2011).....	8
Figure 7: Schematic representation of economic impact relationships	12
Figure 8: Initial and Re-Spending Economic Impact (Multiplier Effect) Illustration	15
Figure 9: Undergraduate Degrees Conferred (2001 - 2011).....	21

List of Tables

Table 3: Total Economic Impact of Bennett College in 2010.....	17
Table 4: Economic Impact of Construction Expenditures by Bennett College	20
Table 5: Synthetic Estimates of Work-Life Earnings	23

Profile of Bennett College¹



Bennett College is a small, private, historically Black liberal arts college for women. The College offers women an education conducive to excellence in scholarly pursuits; preparation for leadership roles in the workplace, society, and the world; and life-long learning in a technologically advanced, complex global society. As a United Methodist Church-related institution, Bennett College promotes morally grounded maturation, intellectual honesty, purposeful public service, and responsible civic action. Bennett College's undergirding philosophy is that a high quality college experience should provide its women students with strong academic and co-curricular programs that encourage their personal development, endorse life-long learning, and prepare them to meet the needs of an ever-changing society.

In 1873, Bennett College had its beginning in the unplastered basement of the Warnersville Methodist Episcopal Church (now known as St. Matthew's Methodist Church). Seventy young men and women started elementary and secondary level studies. In 1874 the Freedmen's Aid Society took over the school which remained under its auspices for 50 years.

Within five years of 1873, a group of emancipated slaves purchased the present site for the school. College level courses and permanent facilities were added. In 1926, The Women's Home

¹ SOURCE: BENNETT COLLEGE WEBSITE

Missionary Society joined with the Board of Education of the church to make Bennett College in Greensboro, N.C., formerly co-educational, a college for women. The challenges that were overcome to establish Bennett demand that today's challenges be met and overcome to ensure her survival.

For more than 128 years women have found Bennett to be the ideal place to foster the constant rhythm of ideas. Each student's individual need for self-expression and desire for achievement is constantly nurtured. The College fosters a strong respect for every student. Today, in the midst of a very active renaissance, Bennett is preparing contemporary women to be well educated, productive professionals, informed, participating citizens, and enlightened parents. The College offers twenty-four areas of study in Education, the Social Sciences, the Humanities, and in Natural and Behavioral Sciences and Mathematics. Numerous opportunities to study at other higher education institutions at home and abroad are available to continue the educational enrichment of Bennett's students.

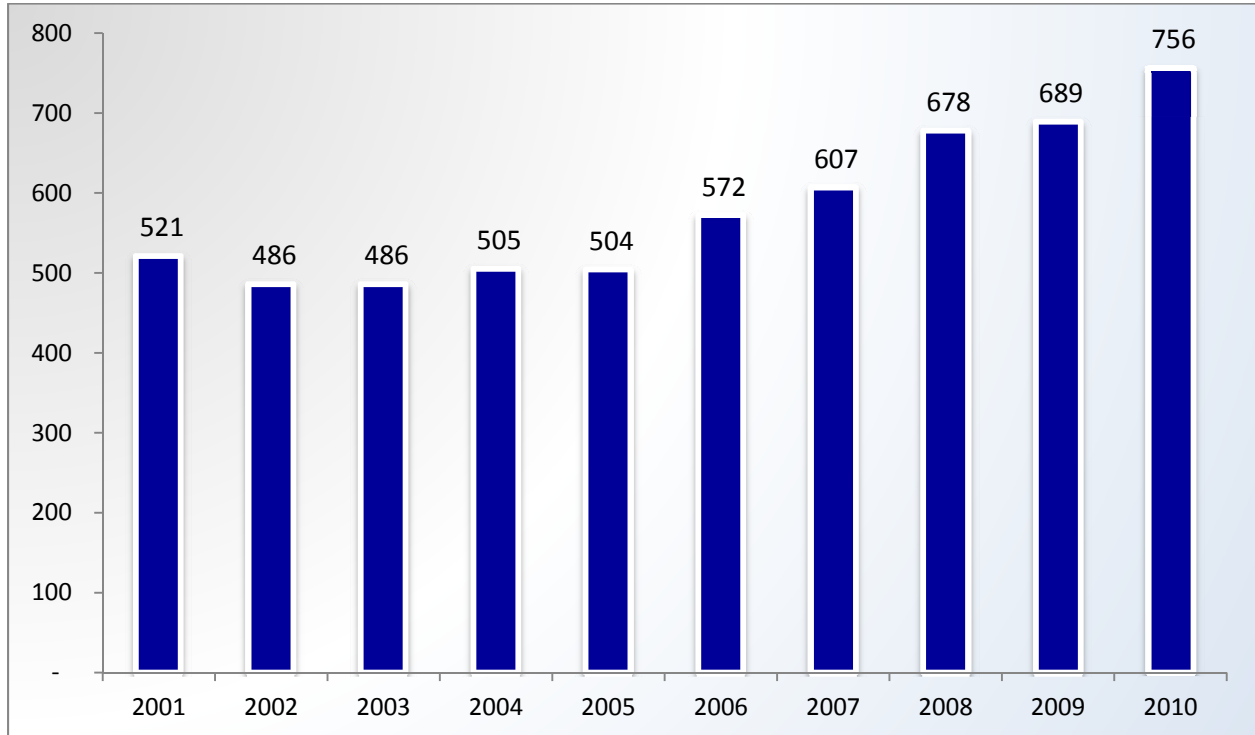
The College welcomes students, faculty, and staff from diverse backgrounds, recognizing that the educational experience is enriched and strengthened when multiple voices are represented and heard. Operating in an interdisciplinary, learning-centered environment, students, working with faculty and staff, will learn to use sophisticated intellectual skills, think analytically, and solve problems in ways that respect a variety of viewpoints and deepen their understanding of different cultures.

At Bennett College, education takes place in an environment of open inquiry where teachers and students are immersed in educational processes that build community, foster authentic research, create knowledge, and advance scholarship and personal empowerment. Students will leave Bennett College prepared for success in the world of work and further studies, possessing a greater appreciation of the history and culture of Africa and the African Diaspora, the struggles and accomplishments of women, and a realization of their own ability and the possibilities to help change the world.

Enrollment

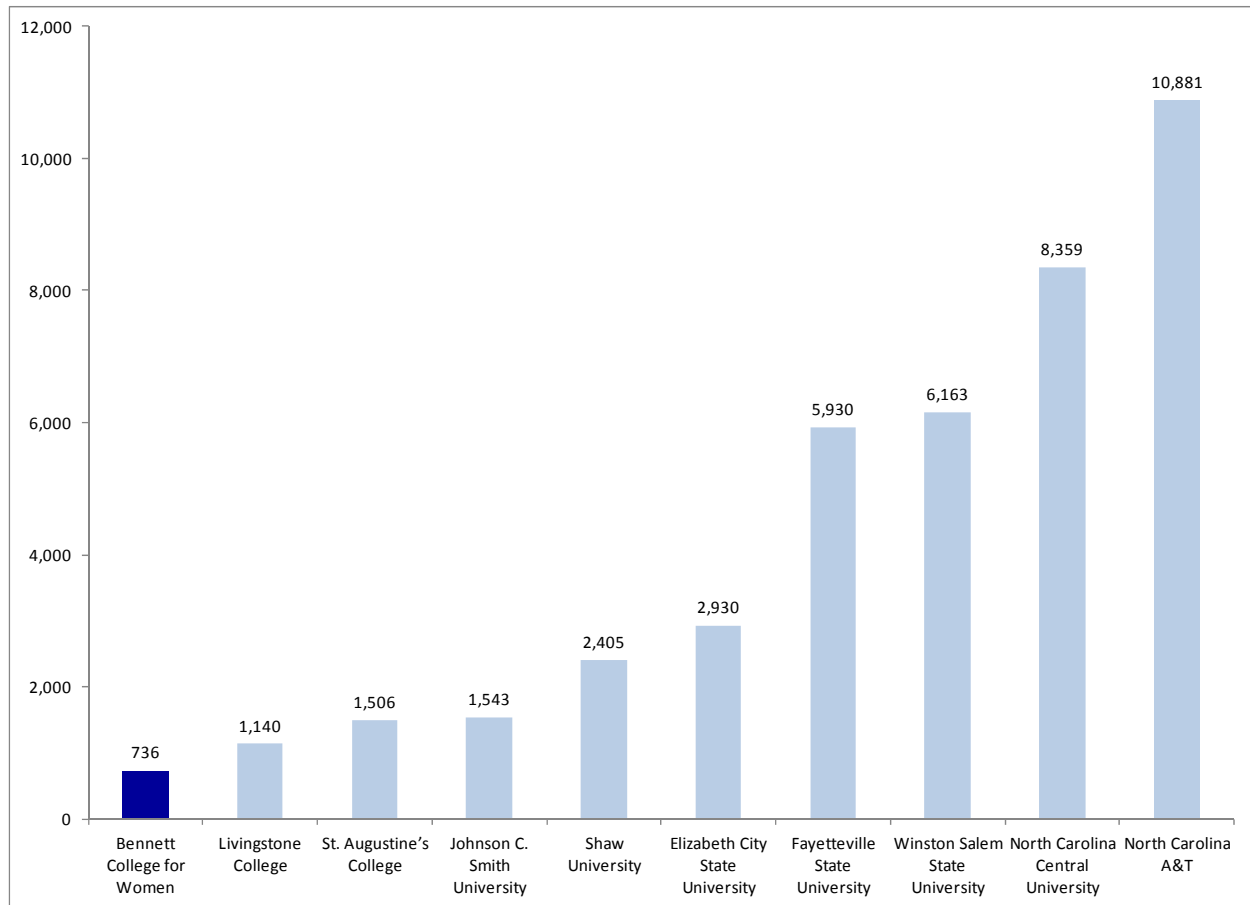
According to data provided by the US Department of Education's Integrated Postsecondary Education Data System (IPEDS), Bennett College had a total enrollment of 756 students in 2010. An analysis over a ten-year period shows from 2001-2010, a 45 percent change in enrollment.

Figure 1: Bennett College Student Enrollment (2001-2010)



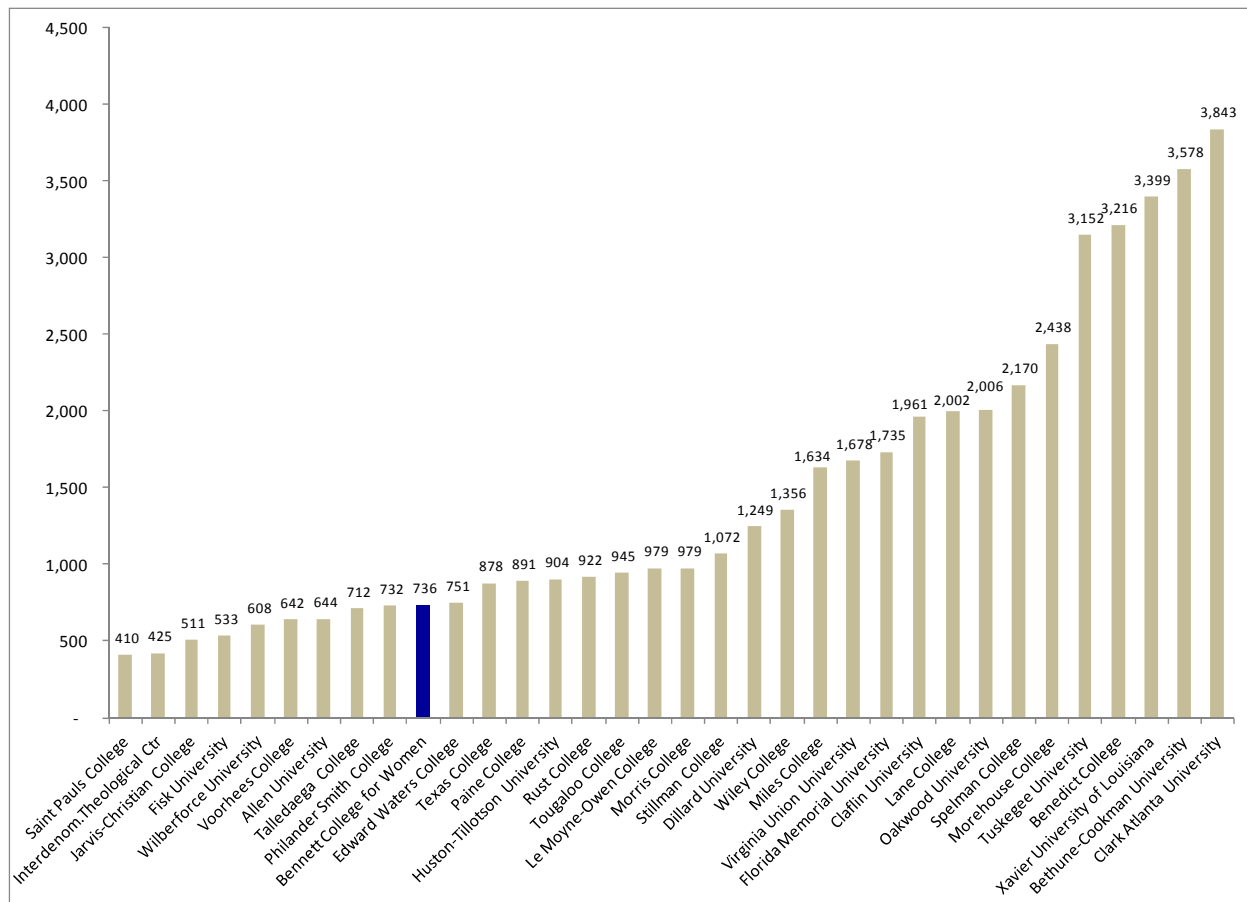
Bennett College is the only all-women's HBCU in North Carolina. Figure 2 illustrates how Bennett College's 2011 student enrollment compares to other HBCUs in North Carolina.

Figure 2: NC Historically Black Colleges & Universities Total Student Enrollment (2010-2011)



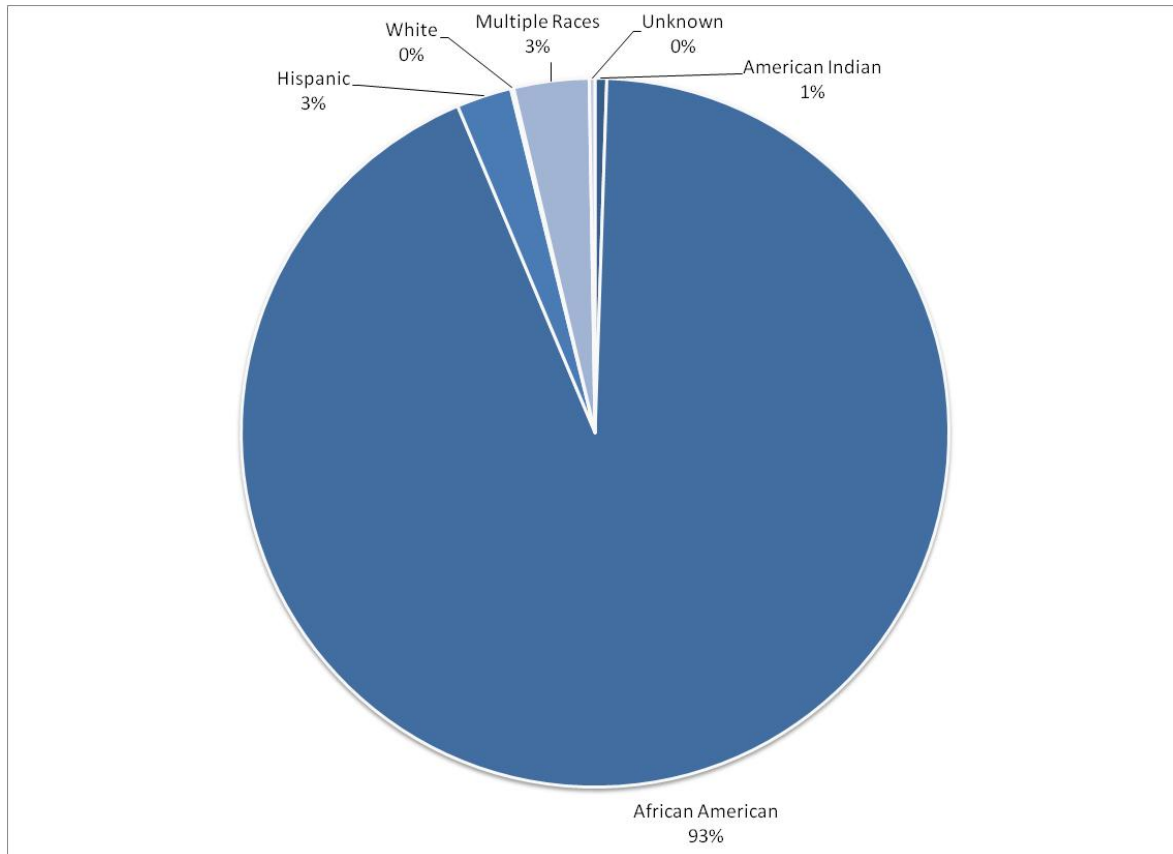
Bennett College and Spelman College are the only all-women HBCUs in the nation. Both are private colleges. Figure 3 illustrates how Bennett College's 2011 student enrollment compares to other UNCF schools.

Figure 3: United Negro College Fund Schools Student Enrollment (2010-2011)



Although the diversity of student race and ethnicity at Bennett College students is changing as enrollment increases, African American women make up the largest (93%) of students enrolled currently (see Figure 4).

Figure 4: Bennett College Student Enrollment Racial and Ethnic Distribution (2010)



Tuition and Fees

The 2010-2011 tuition and fees at Bennett College was \$18,915. Figure 5 illustrates how Bennett's tuition compares to other HBCUs in North Carolina.

Figure 5: NC Historically Black Colleges & Universities Tuition Costs (2010-2011)

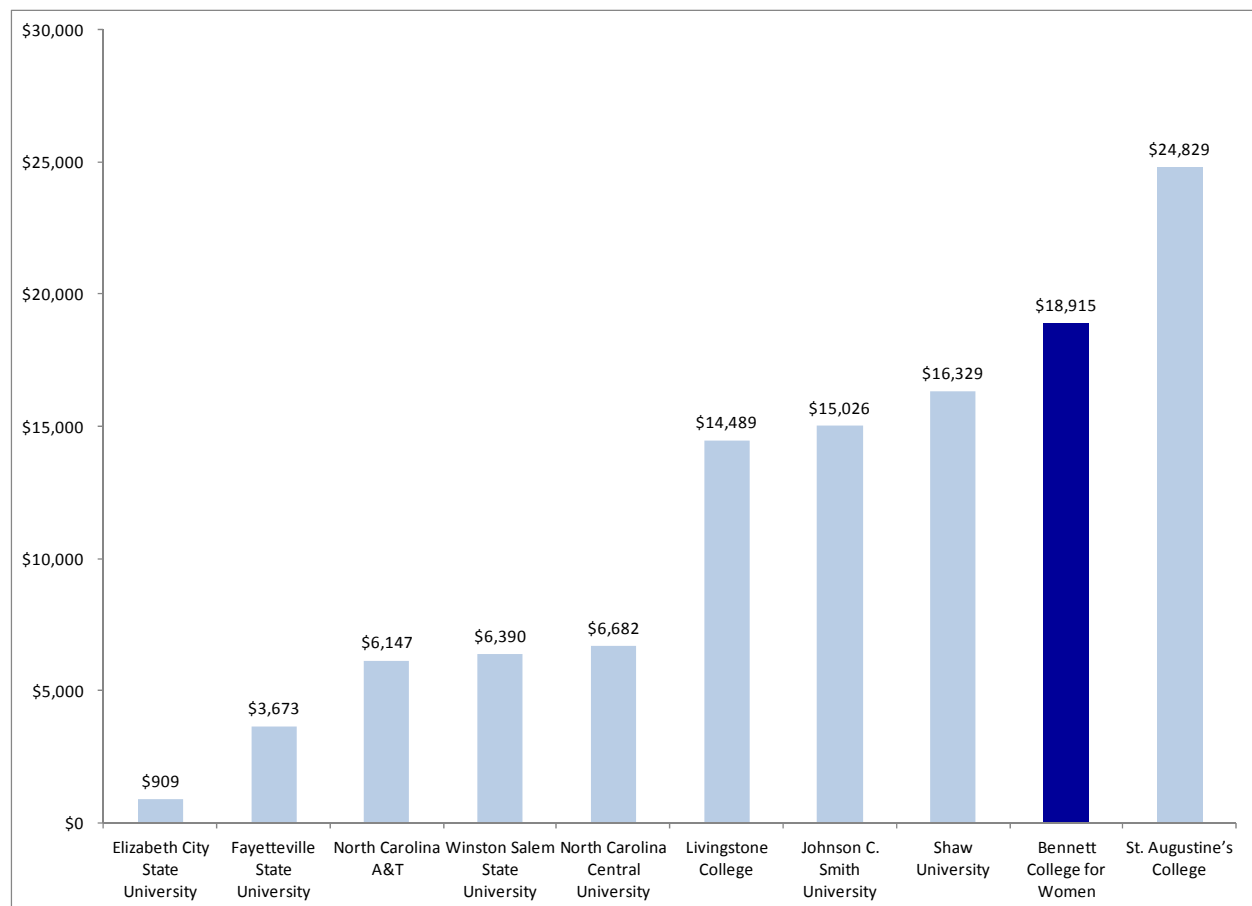
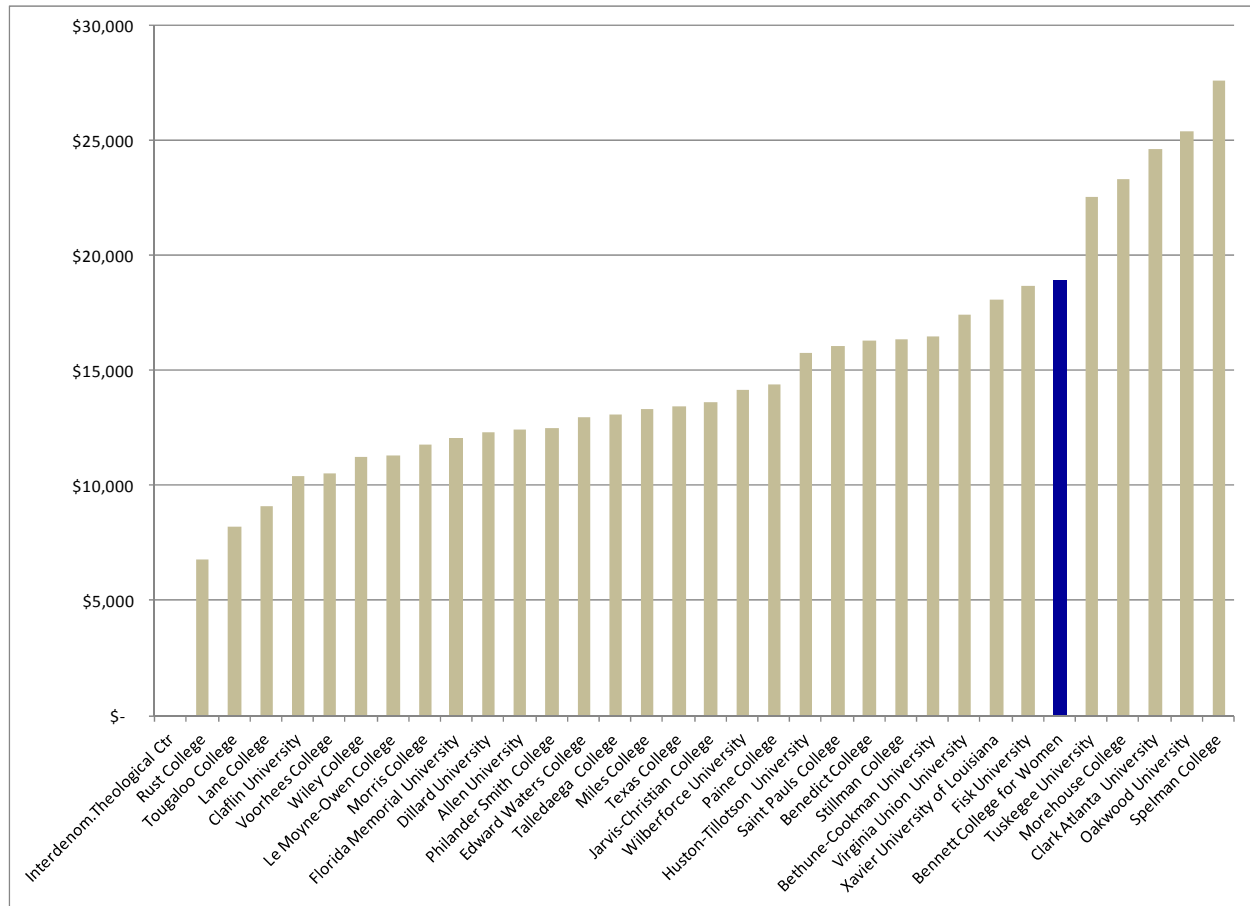


Figure 6 shows how Bennett's 2010-2011 tuition compares to other UNCF schools.

Figure 6: United Negro College Fund Schools Tuition Costs (2010-2011)



Economic Impact Highlights

The fundamental finding of this study is that the Bennett College creates substantial economic impacts in terms of output, value-added, labor income, and employment. The economic impact of Bennett College on its host community in 2010 includes:

- \$39 million in output (sales);
- \$29 million in value added (gross regional product);
- \$20 million in labor income; and
- 525 full- and part-time jobs.

Measured in the simplest and broadest possible terms, the total economic impact of Bennett College was \$39 million in 2010. Output can be thought of as the equivalent of business revenue, sales, or gross receipts. Of the 2010 total, \$29 million (74 percent) is initial spending by the institutions and students; \$10 million (26 percent) is the induced or respending (multiplier) impact. Dividing the total output impact (\$39 million) by initial spending by the institutions and students (\$29 million) yields an average multiplier value of 1.35. On average, therefore, every dollar of initial spending generates an additional 35 cents for the economy of the region hosting the institution.

In 2010, value added comprises \$29 million (73 percent) of the \$39 million output impact, with domestic and foreign trade comprising the remainder – \$10 million (27 percent) – of the output impact. Labor income received by residents of the

2010 ECONOMIC IMPACT OF BENNETT COLLEGE SUMMARY:

\$39 million

in output (sales)

\$29 million

in value added (gross regional
product)

\$20 million

in labor income

525

full- and part-time jobs

\$331 million

projected work-life earnings of 109
graduates (2011 \$)

Greensboro-High Point MSA equals \$20 million, and represents 70 percent of the value-added impact. Expressed in other dimensions, the employment impact of Bennett College, including multiplier effects, is 525 full- and part-time jobs.

In addition to these short-term recurring impacts, the one-time (nonrecurring) impact of \$8.6 million in construction expenditures on output was \$14.5 million in FY 2010. The FY 2010 economic impacts of these capital outlays on value added, labor income, and employment were \$7.3 million, \$5.2 million, and 127 jobs, respectively.

In addition to the short-term impacts of college-related spending on its host community, the 109 graduates of Bennett College (2011) can expect work-life earnings of \$331 million, of which \$146 million (44%) represents the incremental work-life earnings that can be attributed to their college degrees. That amounts to an additional \$1.34 million in work-life earnings per degree conferred. On average, that's what a college degree is worth.

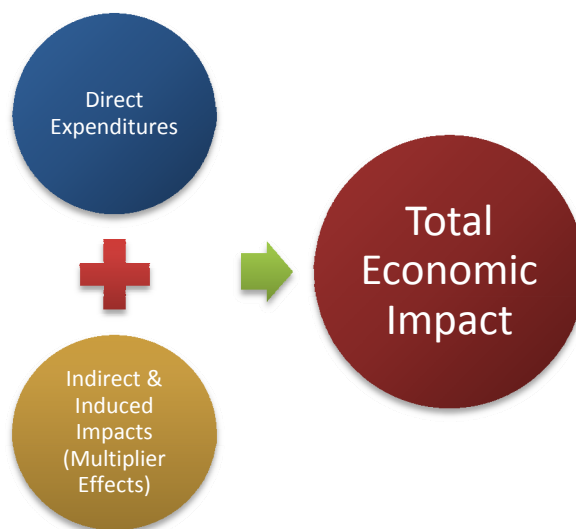


A 2011 degree conferred at
Bennett College amounts to
\$1.34 million of additional work-
life earnings (per degree).

Part I: The Short-Term Economic Impact of Bennett College-Related Spending in 2010

The total annual economic impact of university-related spending is defined to consist of the net changes in regional output, value added, labor income, and employment that are due to initial spending by Bennett College, by its' faculty and staff, and by its' students. The total economic impact includes the impact of the initial round of spending and the secondary, or indirect and induced, spending – often referred to as the multiplier effect – created as the initial expenditures are re-spent. Figure 7 provides a schematic representation of impact relationships.

Figure 7: Schematic representation of economic impact relationships



There are two types of secondary spending, indirect spending and induced spending. Indirect spending refers to the changes in inter-industry purchases as a region's industries respond to the additional demands triggered by spending by Bennett College, its faculty and staff, and its students. It consists of the ripples of activity that are created when the institution, its employees, and its students purchase goods or services from other industries located in the host community. Induced spending is similar to indirect spending except that it refers to the additional demand triggered by spending by households as their income increases due to changes in production. Basically, the induced impact captures the ripples of activity that are

created when households spend more due to the increases in their earnings that were generated by the direct and indirect spending.

The sum of the direct, indirect, and induced economic impacts is the total economic impact, which often is expressed in terms of output (sales), value added (gross regional product), income, or employment. Total industry output is gross receipts or sales, plus or minus inventory. It is the value of production by industry (including households) for a given period of time (one year). Total output impacts are the most inclusive, largest, measure of economic impact. Because of their size, output impacts typically are emphasized in economic impact studies and receive much media attention. One problem with output as a measure of economic impact, however, is that it includes the value of inputs produced by other industries, which means that there inevitably is some double counting of economic activity. The other measures of economic impact (value added, labor income, and employment) are free from double counting and provide a much more realistic measure of the true economic impact of Bennett College on its regional economy.

Value added (or gross regional product) consists of employee compensation, proprietor income, other property income, and indirect business taxes. Value added is equivalent to gross output (sales or receipts and other operating income, commodity taxes, and inventory change) minus intermediate inputs (consumption of goods and services purchased from industries or imported). It is often referred to as the state- or regional-level counterpart of the nation's gross domestic product (GDP).

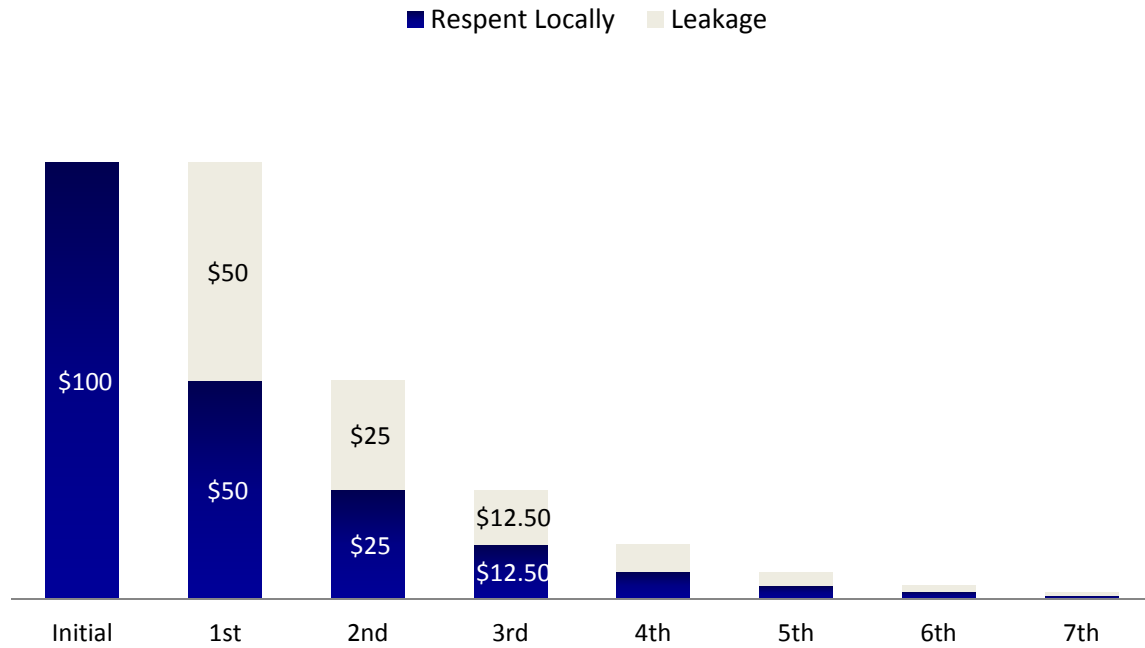
Income comprises all forms of employment income, including wages, salaries, and proprietors' incomes. It does not include non-wage compensation (e.g., pensions and health insurance), transfer payments (e.g., welfare or Social Security benefits), or unearned income (e.g., dividends, interest, and rent). Employment includes total wage and salary employees as well as self-employed individuals. It includes both full- and part-time jobs and is measured in annual average jobs. Employment therefore is expressed as the full- and part-time job count and not as full-time equivalents.

The regional economic area is the host community, including the surrounding counties from which employees and students commute. The effects of expenditures that go to persons, businesses, or governments located outside the regions are not included in the value added, labor income, and employment impact estimates. The definition of Bennett College's regional economy (the Greensboro-High Point MSA) was based on the standard metropolitan and micropolitan statistical area definitions released by the Office of Management and Budget and consists of Guilford, Randolph, and Rockingham counties.

The multiplier concept is common to virtually all economic impact studies. Multipliers measure the response of the local economy to a change in demand or production. In essence, multipliers capture the impact of the initial round of spending (for final consumption) plus the impacts generated by successive rounds of re-spending of those initial dollars. The magnitude of a particular multiplier depends upon what proportion of each dollar spent leaves the region during each round of spending. Multipliers therefore are unique to the region and to the industry that receives the initial round of spending. Economic multipliers are model-based and dependent on the specific spending patterns of the industry and applicable regional economies.

Figure 8 illustrates the successive rounds of spending that might take place if a person buys an item locally. Assume that the amount spent is \$100 and that the appropriate regional output multiplier is 2.0. The initial injection of spending to the region is \$100, which creates a direct economic impact of \$100 to the regional economy. Of that \$100, only \$50 is re-spent locally; the rest flows out of the region through non-local taxes, non-local purchases, and income transfers. After the first round of re-spending, the total economic impact to the region is \$150. During the second round of re-spending, \$25 is re-spent locally and \$25 leaks out of the region, a 50 percent leakage. Now, the total economic impact to the region is \$175. After seven rounds of re-spending, less than one dollar remains in the local economy, but the total economic impact has reached almost \$200. The induced (multiplier effect) impact to the region (\$100) equals the total impact (\$200) minus the direct impact (\$100).

Figure 8: Initial and Re-Spending Economic Impact (Multiplier Effect) Illustration



Initial Direct or Indirect Impact		\$100
1 st Round of Re-spending	\$50 re-spent locally	\$50 leakage ²
2 nd Round of Re-spending	\$25 re-spent locally	\$25 leakage
3 rd Round of Re-spending	\$12.50 re-spent locally	\$12.50 leakage
4 th Round of Re-spending	\$6.25 re-spent locally	\$6.25 leakage
5 th Round of Re-spending	\$3.12 re-spent locally	\$3.12 leakage
6 th Round of Re-spending	\$1.56 re-spent locally	\$1.56 leakage
7 th Round of Re-spending	\$.78 re-spent locally	\$.78 leakage
Total Economic Impact:		\$200
Total Leakage:		\$100

The multiplier traces the flows of re-spending that take place throughout the region until the initial dollars have completely leaked from it to other regions. Obviously, multiplier effects within large, self-sufficient areas are likely to be larger than those in small, rural, or specialized

² Leakage indicates amounts spent outside area and not re-circulated locally.

areas that are less able to capture spending for necessary goods and services. Multiplier effects also vary greatly from industry to industry, but in general, the greater the interaction with the local economy, the larger the multiplier for that industry. For example, personal services, business services, and entertainment industries have intricate relationships with local supporting industries, and therefore have relatively high multiplier values. Conversely, electric, gas, and sanitary services usually are less intertwined with local supporting industries, and their multipliers are lower.

Results

Total initial spending accruing to Bennett College's regional economy equals the summation of spending originating from spending by the institution for wages and salaries; spending by the institution for other budget categories (e.g., outlays for items other than wages and salaries); and spending by students attending the institution. For 2010, total initial spending for Bennett College was \$29 million. Initial spending for Bennett College is reported in the first column of Table 1 on page 17.



Table 1: Total Economic Impact of Bennett College in 2010³

Institution	Initial Spending (2010 dollars)	Output Impact (2010 dollars)	Value Added Impact (2010 dollars)	Labor Income Impact (2010 dollars)	Employment Impact (jobs)
BENNETT COLLEGE	28,811,144	38,995,491	28,507,759	19,841,542	525
Wages & Salaries	10,368,618	18,370,082	15,346,404	13,148,339	317
Other Institutional Spending	8,940,686	7,986,545	5,021,065	2,436,625	65
Undergraduate Students	9,501,840	12,638,864	8,140,290	4,256,578	143

TOTAL OUTPUT IMPACT

For each category of initial spending, an IMPLAN model of Bennett College's regional economy was used to calculate the total output impact. Output impacts for 2010 are reported in the second column of Table 1. The output impact includes the impact of the first round of spending and the impacts generated by the re-spending of these amounts – the multiplier effect.

Bennett College generated an output impact on the Greensboro-High Point region of \$39 million in 2010. The output impact was 1.35 times greater than their initial spending. The output impacts are reported in the second column of Table 1.

³ Output refers to the value of total production, including domestic and foreign trade. Value added includes employee compensation, proprietary income, other property type income, and indirect business taxes. Labor income includes both the total payroll costs of workers who are paid by employers and payment received by self-employed individuals. Employment includes both full-time and part-time jobs. Initial spending estimates are based on survey data obtained from the National Center for Education Statistics' Integrated Postsecondary Education Data System (Fall 2010 Staff Survey, Fall 2010 Enrollment Survey, and the 2010 Finance Survey. The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN system, Type SAM multipliers, and consumption functions provided by MIG, Inc.

TOTAL VALUE-ADDED IMPACT

Because value-added impacts exclude expenditures related to foreign and domestic trade, they provide a much more accurate measure of the actual economic benefits flowing to businesses and households in a region than the more inclusive output impacts.

Bennett College generated a value-added impact of \$29 million in 2010. The value-added impact equaled 73 percent of the output impact. The value-added impacts are reported in the third column of Table 1.

LABOR INCOME IMPACTS

The IMPLAN model also was used to calculate impacts in terms of labor income. Bennett College generated a labor income impact of \$20 million. The labor income impact equaled 70 percent of the value added impact. Labor income is reported in the fourth column of Table 1.

EMPLOYMENT IMPACTS

The economic impact of hosting Bennett College probably is most easily understood in terms of its effects on employment. Bennett College generated an employment impact of 525 full- and part-time jobs. Employment impacts are reported in the fifth column of Table 1.



Part II: The Economic Impact of Construction Projects

Expenditures for major construction projects also generate economic impacts on a one-time or non-recurring basis. Initial spending for construction during FY 2010 was obtained from the NCES's IPEDS 2010 Finance Survey, "Construction in progress", Part A, line 15. The amount reported for FY 2010 was \$8,616,270. The economic impacts of expenditures for construction in progress were estimated using the IMPLAN system.



In FY 2010, the economic impact of construction expenditures by Bennett College on output was \$14.5 million. The impacts on regional GDP and labor income were \$7.3 million and \$5.2 million, respectively. The FY 2010 employment impact of construction outlays was 127 jobs. The economic impacts generated by construction expenditures are reported in Table 2.

Table 2: Economic Impact of Construction Expenditures by Bennett College

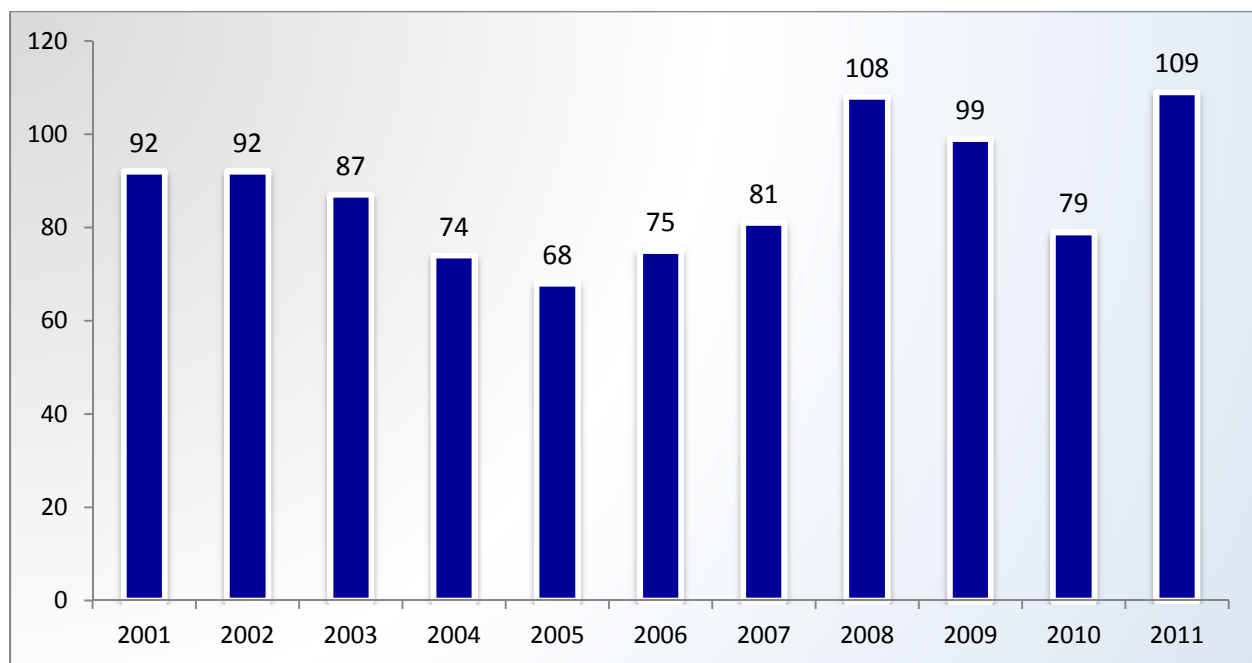
Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
BENNETT COLLEGE					
Construction in FY 2010	8,616,270	14,491,611	7,337,790	5,191,406	127



Part III: Increases in Work-Life Earnings Associated with Degrees from Bennett College

From the perspective of the students and their parents, perhaps the most relevant measure of the economic “worth” of higher education is increased earnings over a working lifetime. The increase in earnings associated with a degree will of course vary from one individual to another and overtime; it is possible, however, to estimate aggregate benefits to graduates of Bennett College in a given year, as well as benefits accruing to the average degree holder. This section of the report presents such estimates for graduates of Bennett College who received degrees in 2011. The number degrees conferred by the institution was obtained from the NCES’s IPEDS.

Figure 9: Undergraduate Degrees Conferred (2001 - 2011)



The higher work-life earnings obviously benefit degree holders, but due to migration and a host of other factors there is controversy in the academic literature regarding whether or not increases in work-life earnings should be included in estimates of the economic impact of a college or university on its host community (Brown and Heaney 1997).

Estimating Work-Life Earnings

In 2002, the U.S. Census Bureau issued synthetic estimates of work-life earnings: “The Big Payoff: Educational Attainment and Synthetic Estimates of Work-Life Earnings” (P23-210). The estimates were based on earnings data for 1997-1999 from the *Current Population Surveys* conducted by the U.S. Census Bureau in 1998, 1999, and 2000. A typical work-life was defined as the period from age 25 through age 64. The synthetic estimates were created by using the working population’s 1-year annual earnings and summing their age-specific average earnings for people ages 25 through 64 years. The resulting totals represent what individuals with the same education level could expect to earn, on average, in today’s dollars, during a hypothetical 40-year working life. The estimates should be considered to be illustrative and do not predict actual future earnings. The synthetic work-life earnings are “expected average amounts” based on cross-sectional earnings data.

In 2007, Mark Kantrowitz updated the Census Bureau’s synthetic estimates of work-life earnings based on data from the Census Bureau’s 2006 *Current Population Survey*. Kantrowitz’s estimates of work-life earnings were published the *NASFAA Journal of Student Financial Aid* (Vol. 37, No. 1), “The Financial Value of a Higher Education.” The estimates of “synthetic work-life earnings per degree” reported in the first column of Table 3 are based on the estimates produced by Mark Kantrowitz, but they were converted from 2005 dollars (as originally published) to 2010 dollars using the U.S. Bureau of Labor Statistic’s Consumer Price Index (all urban consumers).

**Table 3: Synthetic Estimates of Work-Life Earnings of 2010 Graduates of Bennett College
(millions of 2010 dollars) ⁴**

Institution	Synthetic Work-Life Earnings Per Degree	Incremental Work-Life Earnings Per Degree	Number of Degrees Conferred	Synthetic Work-Life Earnings All Graduates	Incremental Work-Life Earnings All Graduates
BENNETT COLLEGE	-	-	109	331	146
Professional	6.21	3.18	0	0	0
Doctoral	4.93	1.89	0	0	0
Master's	3.7	0.66	0	0	0
Bachelor's	3.03	1.34	109	331	146
Associate's	2.13	0.43	0	0	0

Work-life earnings increase dramatically with education level. For example, over a working lifetime, the average worker with a high school diploma earns an average of \$1.69 million compared to \$2.13 million for the average worker with an Associate's degree, or \$3.03 million for the average worker with a Bachelor's degree, or \$3.70 million for the average worker with a Master's degree, or \$4.93 million for the average worker with a Doctoral degree (PhD), or \$6.21 million for the average worker with a Professional Degree.

Incremental work-life earnings per degree are reported in the second column of Table 3. Incremental work-life earnings for graduates with an Associate's degree are defined as the difference in synthetic work-life earnings between workers with a high school diploma and an Associate's degree. Incremental work-life earnings for graduates with a Bachelor's degree are

⁴ The Synthetic work-life earnings estimate for a high school graduate, including GED, is \$1.69 (expressed in millions of 2010 dollars). The estimates of synthetic work life earnings per degree were obtained (in 2005 dollars) from Mark Kantrowitz, "The Financial Value of a Higher Education", NASFAA Journal of Student Financial Aid, Vol 37, NO. 1, 2007. The U.S. Bureau of Labor Statistics' consumer price index for all urban consumers was used to convert \$2005 to \$2010. The number of degrees conferred (2010) was obtained from the National Center for Education Statistics' Integrated Postsecondary Education Data System.

defined as the difference in synthetic work-life earnings for workers with a high school diploma and a Bachelor's degree. Incremental work-life earnings for graduates with a Master's degree are defined as the difference in synthetic work-life earnings between workers with a Bachelor's degree and a Master's degree. Incremental work-life earnings for graduates with a Doctoral degree are defined as the difference in synthetic work-life earnings between workers with a Bachelor's degree and a Doctoral Degree. Incremental work-life earnings for graduates with a Professional degree are defined as the difference in synthetic work-life earnings between workers with a Bachelor's degree and a Professional degree.

Synthetic work-life earnings of all graduates can be obtained by multiplying the number of degrees conferred by estimated synthetic work-life earning per degree. These amounts are reported in the fourth column of Table 3 on page 23. Similarly, incremental work-life earnings of all graduates can be obtained by multiplying the number of degrees conferred by estimated incremental work-life earnings per degree. These amounts are reported in the fifth column of Table 3.



Results

The analysis expects that the 109 graduates of Bennett College can expect work-life earnings of \$331 million (\$ 2010), which is \$146 million more than they could expect to earn had they not earned their college degrees (Table 3). Thus, in terms of incremental (additional) work-life earnings, the collective worth of the degrees granted by Bennett College is \$146 million, or about \$1.34 million per graduate. The economic worth of higher education over the course of a graduate's working life thus is considerable.

Although average earnings rise considerably with educational attainment, individual earnings within each specific education level can vary substantially. These differences result from a variety of factors, including occupational choice and labor force experience. Nonetheless, most graduates of Bennett College will realize significantly higher work-life earnings when they earn a college degree.

This study shows that Bennett College plays a major role in raising the earning potential of its graduates. Investments in education should significantly increase the work-life earnings of many North Carolinians and foster the economic development of the entire state.

Conclusions

In the simplest terms, the collective or rolled-up economic impact of Bennett College on its host community was \$39 million in 2010. This amount represents the impact of spending by the institution, spending by its faculty and staff, and spending by students. Bennett College added \$20 million in labor income to the local economy and 525 jobs. In addition, the economic impact of construction projects on output was \$14.5 million in FY 2010.

Although this study measures \$39 million in recurring annual economic impact, plus a \$14.5 million impact generated by spending on construction projects, the actual annual impact of college-related spending is much higher. The study's limited scope did not include the short-term impacts of spending by visitors, retirees, and non-college-related income received by employees of the institutions.

In addition to the annual impacts of college-related spending, the 2011 graduates of Bennett College can expect to realize work-life earnings of \$331 million, of which \$146 million (44%) represents the incremental work-life earnings that can be attributed to their college degrees. That amounts to an additional \$1.34 million in work-life earnings per degree conferred. On average, that's what a college degree is worth. .

Additional economic impact categories NOT included in report analysis include:

- ▶ *Spending by visitors, retirees, non-university related income received by employees*
- ▶ *Contribution to the Greensboro community's economic vitality based on Bennett College's superior educational reputation*
- ▶ *Thousands of hours of community service*

Limitations

Several types of short-term university-related expenditures were not estimated, including spending by visitors and spending by retirees who live in the Greensboro-High Point MSA. Expenditures supported by employees of the Bennett College non-institutional income also were not estimated. Such income may result from an employee's consulting, investments, and other personal business activities, and often would not come to the Greensboro-High Point MSA if that person's job at Bennett College did not exist.

Perhaps the greatest limitation of this report is that there was no attempt to evaluate the long-term impacts of Bennett College on the economic development of the Greensboro-High Point MSA, the state, and the nation. Bennett College not only spends money year by year, but also has long-term impacts on the labor force, business and industry, and government. Businesses benefit from easy access to a large pool of part-time and full-time workers. Moreover, companies and agencies that depend on highly specialized skills often cluster around colleges and universities, and this may be particularly true of high-tech and information-based companies – which, despite the recent recession, still are expected to account for a disproportionately high share of future economic growth.

In addition, cultural and educational programs and facilities may be available to the general public and provide intangible benefits to the Greensboro-High Point MSA by improving residents' quality of life.

Methodology

Estimating the economic impact of Bennett College on its regional economy involved four basic steps. First, the most recent National Center of Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) finance data (fiscal year 2010) were obtained for Bennett College; and then these institutional expenditures were allocated to industrial sectors recognized by the economic impact modeling system. Second, spending by undergraduate, graduate, and professional students was estimated based on the IPEDS Fall Enrollment Survey and other sources; and then these expenditures were allocated to industrial sectors recognized by the economic modeling system. Third, the IMPLAN Professional Social Accounting and Impact Analysis Software (Version 3.0) and data for 2010 were used to build a regional economic model specific to Bennett College. A detailed discussion of the IMPLAN modeling system, including its structure, methods, and use, can be found in *IMPLAN Version 3.0 User's Guide* (www.IMPLAN.com). Once the economic model was generated, the total economic impacts of all categories of initial spending were estimated.

The geographic area corresponding to the regional model that was built for Bennett College, which includes the labor force directly involved in its economic sphere was based on the standard metropolitan and micropolitan statistical area definitions released by the Executive Office of the President, Office of Management and Budget on December 1, 2009. The geographic area of the regional model for Bennett College therefore takes into consideration population and commuting patterns.

Type SAM (Social Accounting) multipliers from the IMPLAN modeling system were used to estimate the economic impacts associated with all categories of spending. Type SAM multipliers capture the original expenditures resulting from the impact, the indirect effects of industries buying from industries, and the induced effects of household expenditures based on information in the social account matrix. The multipliers account for Social Security and income tax leakage, institutional savings, commuting, and inter-institutional transfers, and people-to-people transfers.

Wherever appropriate, the IMPLAN software applied margins to convert purchaser prices to producer prices. In input-output models, all expenditures are in terms of producer prices. Spending therefore can be allocated to the industries that actually produce the good or service. The margins are derived from U.S. Bureau of Economic Analysis data. The margins used differed depending on the consumer. For example, households pay transportation, wholesale, and the full retail margin. In contrast, Bennett College may pay little or no retail margin as they have typically more buying power than a household. Also, some sectors of the model do not have margins. For example, because there are no wholesalers or retailers involved when someone rents a room, hotels and lodging do not have margins.

The model's default estimates of the local economy's regional purchase coefficients were used to derive the ratio of locally purchased to imported goods. The regional purchase coefficient represents the proportion of the total demands for a given commodity that is supplied by the region to itself. The regional purchase coefficients were estimated with an econometric equation that predicts local purchases based on each region's unique characteristics. In addition, the entire analysis was conducted using the full range of industrial sectors in order to avoid aggregation bias.

It should be noted that economic models are designed to measure the total economic impact of college-related spending on its host community, but if Bennett College were to close or otherwise cease to exist, economic activity might not drop as much as the model indicates. The net drop in economic activity might be less than indicated by the model because some spending might be directed toward other activities within the region. For example, a portion of the displaced students might transfer to other colleges or universities within the region. Since it is extraordinarily difficult to predict such adjustments, the total rather than net economic impacts of college-related spending are reported. Thus, the economic impact estimates should be considered an upper bound on the true economic impact of college-related spending. This approach is consistent with the vast majority of studies of the economic impact of institutions of higher education that have been produced.

INITIAL SPENDING FOR WAGES AND SALARIES

The primary data resource was IPEDS, established by the NCES. Specifically, the *Fall Staff Survey* and the *Finance Survey* provided all of the institution-level data regarding staffing and spending for wages and salaries. The most recent surveys reported expenditure levels for the 2010 fiscal year. Spending for wages & salaries and fringe benefits is reported in the first column of Table 1. This amount was allocated to various economic sectors recognized by the IMPLAN software based on the typical expenditure pattern for households of moderate income.

INITIAL SPENDING FOR NON-WAGE AND SALARY (OTHER) ITEMS

In addition to expenditures for wages & salaries and fringe benefits, the IPEDS *Finance Survey* provided institution-level expenditure data for all other major categories of spending. To eliminate the potential for double counting, expenditures for auxiliary enterprises were not included in initial spending. Spending associated with this budget item is largely accounted for in the spending amounts attributed to faculty, staff, and students. Auxiliary Enterprises are essentially self-supporting operations of the institution that exist to furnish a service to students, faculty, or staff, and that charge a fee that is directly related to, although not necessarily equal to, the cost of service.

Budgeted expenditures were allocated to various economic sectors based on a typical expenditure (consumption) pattern for US colleges and universities that was developed by the IMPLAN modelers at MIG, Inc. This specific expenditure pattern was imported into the model from the IMPLAN Pro Library. Initial spending by Bennett College for items other than wages and salaries is reported in column 1 of Table 1.

STUDENTS PERSONAL EXPENDITURES

The students who attend an educational institution spend significant amounts of money in the local economy as a part of their living expenses, so the dollar value of this spending also was estimated. Since a detailed survey of students' spending habits was not feasible, typical expenditure levels per student and the pattern of spending by industry were estimated based on data obtained from several sources, including: (1) various *Consumer Expenditure Surveys* that are conducted annually by the U.S. Bureau of Labor Statistics (BLS); (2) a special BLS study that appeared in the July 2001 issue of the *Monthly Labor Review* that examined the expenditures of college-age students and non-students; and (3) a nationwide (not North Carolina specific) sample of the estimated costs of attendance prepared by individual institutions. Although the estimated costs of attendance prepared by individual institutions were not detailed enough to be used in the IMPLAN modeling system, they did provide information that was used to develop a profile of average expenditures for some of the items typically purchased by students.

Although the Bureau of Labor Statistics' *Consumer Expenditure Surveys* cover consumer units consisting of one person at low income levels, no recent data are available expressly for college students; therefore, in order to adapt the data for this study, spending estimates for several categories of goods or services were increased, decreased, or eliminated. For example, compared to a weighted average of consumer units at lower income levels, students' expenditures for books and food consumed away from home were increased substantially, while students' expenditures for grocery stores, cash contributions, insurance and pensions, and health care were reduced. Because expenditures for vacation and travel do not take place locally, such expenditures were eliminated entirely. After adjustment, the average local expenditure per undergraduate student per academic year was estimated at \$12,720. This amount includes spending for some items that were purchased locally by others (e.g., parents) on behalf of the students. For example, parents may pay landlords directly for shelter (rent). It should be noted that these amounts do not include tuition and fees. The economic impact of

economic activities supported through tuition and fees is already captured in the impact estimates attributed to spending by the institution.

Students' expenditures were distributed to the IMPLAN sectoring scheme based on national average expenditure patterns, data provided by various *Consumer Expenditure Surveys*, and estimated costs of attendance prepared by a sampling of institutions. Part-time students were assumed to spend one-half the amount of full-time students. Initial spending by students is reported in column 1 of Table 1.



The NORTH CAROLINA INSTITUTE OF MINORITY ECONOMIC DEVELOPMENT

“THE INSTITUTE”

The Institute works to build the asset base of undeveloped populations through economic development strategies that build businesses, create jobs, and sustain institutions vital to economically vibrant and socially responsible communities.

114 W. Parrish Street
Durham, NC 27701

919.956.8889

info@ncimed.com

www.ncimed.com



Building Businesses. Building Communities. Generation by Generation.