



Historically Black Colleges and Universities
Economic Series

The Economic Impact of Johnson C. Smith University

JOHNSON C. SMITH UNIVERSITY
SURROUND YOURSELF WITH SUCCESS AT JCSU



NORTH CAROLINA INSTITUTE OF
MINORITY ECONOMIC
DEVELOPMENT

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About the Authors

The North Carolina Institute of Minority Economic Development commissioned this study to assess the economic impact of Johnson C. Smith University. 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 works to build the asset base of underutilized and undeveloped populations through economic development strategies that build businesses and sustain institutions vital to vibrant communities. Since inception in 1986, the Institute has published more than 15 studies/reports. Over the past five years (2004- 2009) its business development clients have realized more than \$230 million in contracts and financial transactions.

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Profile of Johnson C. Smith University

Founded in 1867 under the auspices of the Committee on Freedmen of the Presbyterian Church, U.S.A., Johnson C. Smith University (JCSU) is an independent, private, coeducational institution of higher learning. Located in the rapidly growing metropolis of Charlotte, North Carolina, "Queen City of the South," this historically African-American university has a residential campus with a familiar atmosphere in which students are stimulated and nurtured by dedicated and caring faculty and staff.

Consistent with its Christian roots, the university recognizes the importance of moral and ethical values to undergird intellectual development and all endeavors. JCSU believes in the unrelenting pursuit of knowledge and in the values of cultivating the life of the mind. The university assigns great significance to the development of self-confidence, to the understanding of ones' own heritage as well as an awareness of the cultures of others, to exploration of the myriad forces affecting people of a complex technological age, and to formulating a sense of one's role in this schema.

The mission of JCSU is to provide an outstanding education for a diverse group of talented and highly motivated students from various ethnic, socioeconomic, and geographical backgrounds. The university offers a liberal education in conjunction with concentrated study in specialized fields, in preparation for advanced study and specific careers.

JCSU has a unique and important relationship with the Duke Endowment when it was established as one of the beneficiary institutions when the endowment was established in 1924. The Duke Endowment is one of the 20 largest endowments in the country with over \$2.5 billion in assets. Over the years the endowment has given JCSU over \$85 million with a gift in FY10 of \$5.7 million, the largest to date and a



reflection of the endowment's confidence in and support of the future of JCSU. This relationship has allowed JCSU to grow a sizeable endowment for an HBCU of its size. This endowment further strengthens and positions the university to make an impact on its students and surrounding community.



JCSU is poised to not only build upon but to drive the surrounding the Historic West End and Beatties Ford Road redevelopment area while generating tomorrow's leaders.

In the next decade JCSU will leverage the multi-billion dollar investment in the turnaround of one of Charlotte's most blighted areas by generating approximately \$1 billion in economic impact, conferring over 2,000 degrees with each degree worth \$1.33 million in additional work-life earnings.¹

Why is this important? But for JCSU's investment and commitment, the commercial redevelopment we see today would not be possible. JCSU is more than an HBCU, or a University. It is a significant, purposeful economic engine of the Charlotte – Gastonia-Concord NC- SC MSA generating an annual economic impact of \$68 million (in 2007 dollars) as well as an employment impact including multiplier effects of 776 full- and part-time jobs.² JCSU would rank 80 – 85th among Charlotte corporate engines and organizations based on number of employees³.

Implications going forward – JCSU will communicate to the greater community what we do – we lead development, we empower our community and we create leaders. We understand our niche, value it and use that learning to improve our neighborhood, region, state and world.

Reasons to Believe – Highlights of Key Accomplishments

- Held inaugural theatrical performance at the Arts Factory, which is the University's first, off-site instructional facility for students majoring in the visual and performing arts.

¹ Economic Impact of JCSU, Jeffrey M. Humphreys, PhD, December 2010

² Ibid

³ Source: Charlotte Chamber of Commerce

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- Established the Center for Spiritual Life which governs programming that enriches the religious, spiritual, and intellectual life of JCSU students, as well as represents the University in its relations with the surrounding religious community.
 - Launched the Soul of the Northwest Corridor Initiative, which examines what community qualities attach residents to the area, how the area is performing in these areas and how this attachment can serve as a catalyst for the community's well being, specifically in local economic growth.
 - Co-hosted a two-day symposium, Black and Minority Males Taking Flight through Personal Development, Knowledge Sharing and Commitment to Community, as part of the 2nd Annual Commemorative Classic.
 - Presented a white paper: Gaining Traction in Doing Business in Charlotte, North Carolina: Compelling Reasons for Community-Wide Support for Minority-Owned Businesses. This study was completed in conjunction with the Urban Business Network.
 - Only North Carolina HBCU to be awarded a grant to establish prevention and educational programming from the U.S. Department of Justice - Office of Violence Against Women
 - Named to the President's Higher Education Community Service Honor Roll. The Corporation for National and Community Service honors organizations for their exemplary service efforts and service to America's communities
 - JCSU created the Beatties Ford Road Task Force by a unanimous vote of the JCSU Board of Trustees in 2008 with a goal of revitalizing the area around the Campus. The task force has received two planning grants to support planning for key initiatives, the Wachovia Wells Fargo Foundation Grant (\$500,000) and the Advantage Carolina Grant from the Charlotte Chamber of Commerce (\$75,000).

Grounded in excellent leadership under the Presidency of Dr. Ronald Carter and strong business fundamentals, JCSU has the requisite foundation to launch this phase of its history ensuring a legacy for

generations. While its past is storied, its present and future offer meteoric potential. The reverberation will be felt from both JCSU's direct contribution and those 2,000 degree-holding graduates!

JCSU Redefining the Urban Landscape

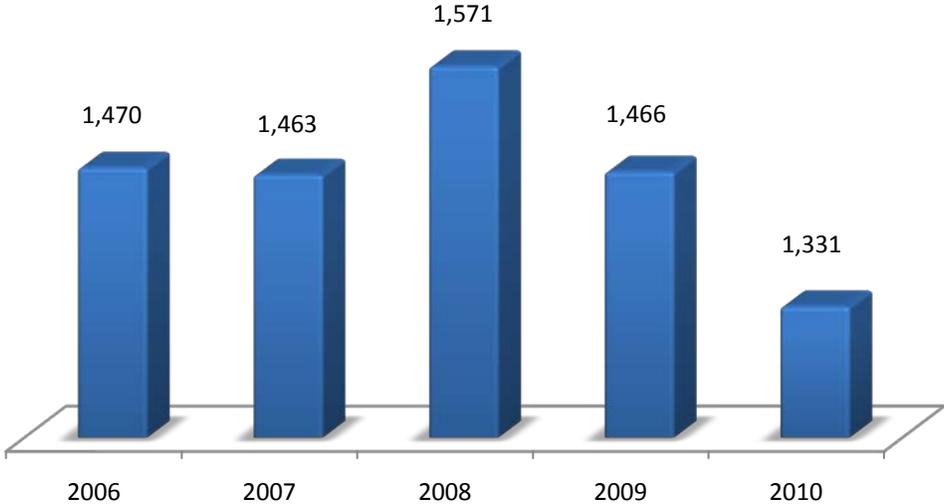
Making The Case - Why Was An Economic Impact Study Needed?

This study will set out to examine the impact of Johnson C. Smith University on the economy of Charlotte-Gastonia-Concord NC-SC MSA. In fulfilling this mission, the study will answer the following perennial questions: What is the short economic impact of Johnson C. Smith University on its host community? What are the college degrees granted by JCSU worth?

To have a lasting and significant economic impact, there must be, as a foundation, an institution that is financially strong with an enrollment strategy for sustainability along with top quality academic programs. JCSU continues to build on this foundation with strong financial performance undergirded with the support of the Duke Endowment. As part of the President's "Transformative Vision", JCSU has recently reengineered and revitalized its Strategic Enrollment Planning process. JCSU's goal is to be recognized as a selective institution of higher education moving away from a nearly open admissions policy to a strategy to target and attract students with higher grades and test scores. As a result JCSU enrollment is decreasing in a strategic effort to raise standards and selectivity thereby ensuring sustainability. JCSU currently enrolls over 1,300 students annually making for a solid and stable anchor of the Historic West End and Beatties Ford Road community. Demand for a JCSU education is strong with first time freshman applications averaging 5,000 annually. It is the quantity as well as quality of the students who provide the foundation for the enterprise. The tables below from JCSU show the five-year trends in enrollment and applicants:

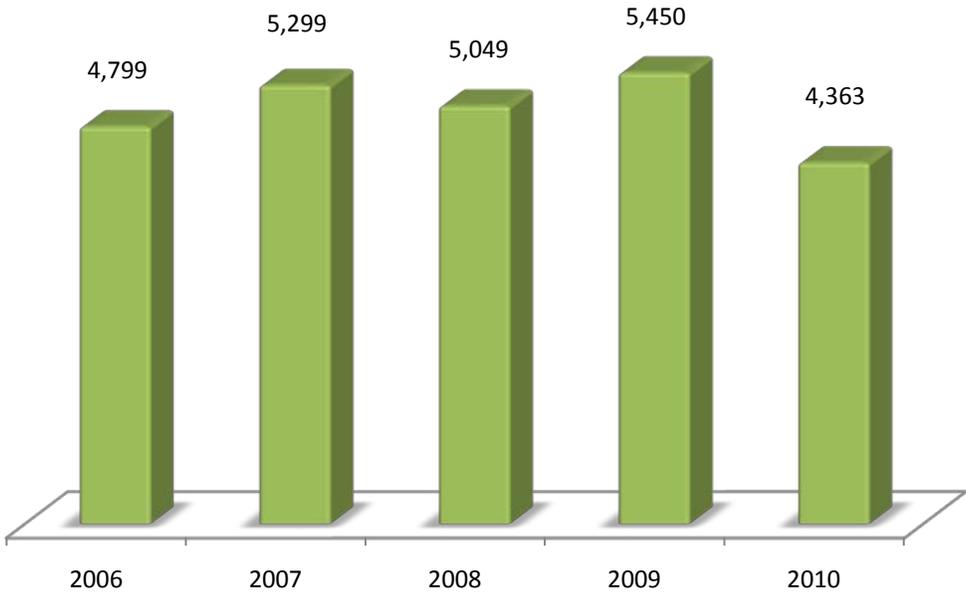
Enrollment

Figure 1: Johnson C. Smith Student Enrollment (2006-2010)



Applicants

Figure 2: Johnson C. Smith First-Time Freshman Applications (2006-2010)



Economic Impact Highlights

The fundamental finding of this study is that Johnson C. Smith University creates substantial economic impacts in terms of output, value-added, labor income, and employment. The economic impact of Johnson C. Smith University on its host communities in 2007 includes:

- \$68.4 million in output (sales);
- \$41.8 million in value added (gross regional product);
- \$30.3 million in labor income; and
- 776 full- and part-time jobs.

Measured in the simplest and broadest possible terms, the total economic impact of Johnson C. Smith University was \$68.4 million in 2007. Output can be thought of as the equivalent of business revenue, sales, or gross receipts. Of the 2007 total, \$46.3 million (68 percent) is initial spending by the institutions and students; \$22.1 million (32 percent) is the induced or respending (multiplier) impact. Dividing the 2007 total output impact (\$68.4 million) by initial spending by the institutions and students (\$46.3 million) yields an average multiplier value of 1.48. On average, therefore, every dollar of initial spending generates an additional 48 cents for the economy of the region hosting the institution.

In 2007, value added comprises \$41.8 million (61 percent) of the \$68.4 million output impact, with domestic and foreign trade comprising the remainder \$26.7 million (39 percent) of the output impact. Labor income received by residents of the communities that host one or more institutions equals \$30.3 million, and represents 72 percent of the value-added impact. Expressed in other dimensions, the employment impact of Johnson C. Smith University, including multiplier effects, is 776 full- and part-time jobs.

2007 Economic Impact of Johnson C. Smith University Summary:

\$68.4 million

in output (sales);

\$41.8 million

in value added (gross regional product);

\$30.3 million

in labor income

776

full- and part-time jobs.

In addition to the short-term impacts of college-related spending on their host communities, the 213 graduates of Johnson C. Smith University (2008) can expect work-life earnings of \$643 million (\$ 2008), of which \$284 million (44%) represents the incremental work-life earnings that can be attributed to their college degrees. That amounts to an additional \$1.33 million in work-life earnings per degree conferred. On average, that's what a college degree is worth.



The Short-Term Economic Impact of Johnson C. Smith University-Related Spending In 2007

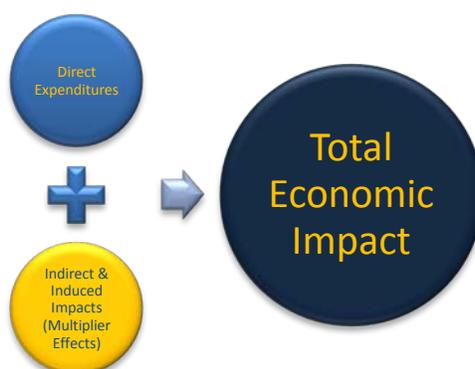
The total annual economic impact of college-related spending is defined to consist of the net changes in regional output, value added, labor income, and employment that are due to initial spending by Johnson C. Smith University, by its' faculty and staff, and by its' students. Four important categories of college/university-related expenditures are:

1. Spending by JCSU for wages and salaries;
2. Spending by JCSU for other budget categories (e.g. outlays for items other than wages and salaries);
3. Spending by undergraduate students who attended JCSU; and
4. Spending by the graduate and professional students who attended JCSU.



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 3 provides a schematic representation of impact relationships.

Figure 3: Schematic representation of 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 Johnson C. Smith University, 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 Johnson C. Smith University 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.

Results

Total initial spending accruing to Johnson C. Smith University'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 2007, total initial spending for Johnson C. Smith University was \$46.3 million. Initial spending for Johnson C. Smith University is reported in the first column of Table 1.

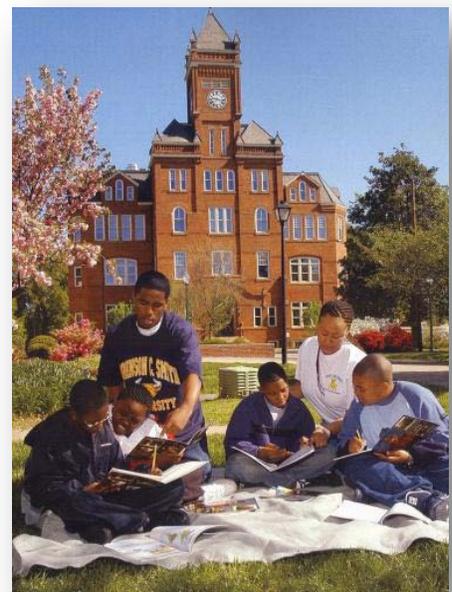


Table 1: Total Economic Impact of Johnson C Smith University in 2007⁴

Institution	Initial Spending (2007 dollars)	Output Impact (2007 dollars)	Value Added Impact (2007 dollars)	Labor Income Impact (2007 dollars)	Employment Impact (jobs)
JOHNSON C SMITH UNIVERSITY	46,292,363	68,426,519	41,770,385	30,267,275	776
Wages & Salaries	14,487,481	29,400,657	21,374,062	18,384,649	426
Other Institutional Spending	14,109,757	17,327,230	6,847,211	4,434,417	99
Undergraduate Students	17,695,125	21,698,632	13,549,112	7,448,209	251
Graduate/Professional Students	0	0	0	0	0

Total Output Impact

For each category of initial spending, an IMPLAN model of Johnson C. Smith University’s regional economy was used to calculate the total output impact. Output impacts for 2007 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.

Johnson C. Smith University generated an output impact on the Charlotte-Gastonia-Concord NC-SC MSA of \$68.4 million in 2007. The output impact was 1.48 times greater than their initial spending. The output impacts are reported in the second column of Table 1.

⁴ 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 2007 Staff Survey, Fall 2007 Enrollment Survey, and the 2007 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.

Johnson C. Smith University generated a value-added impact of \$41.8 million in 2007. The value-added impact equaled 90 percent of initial spending in 2007. 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. Johnson C. Smith University generated a labor income impact of \$30.3 million. The labor income impact equaled 65 percent of initial spending in 2007. Labor income is reported in the fourth column of Table 1.

Employment Impacts

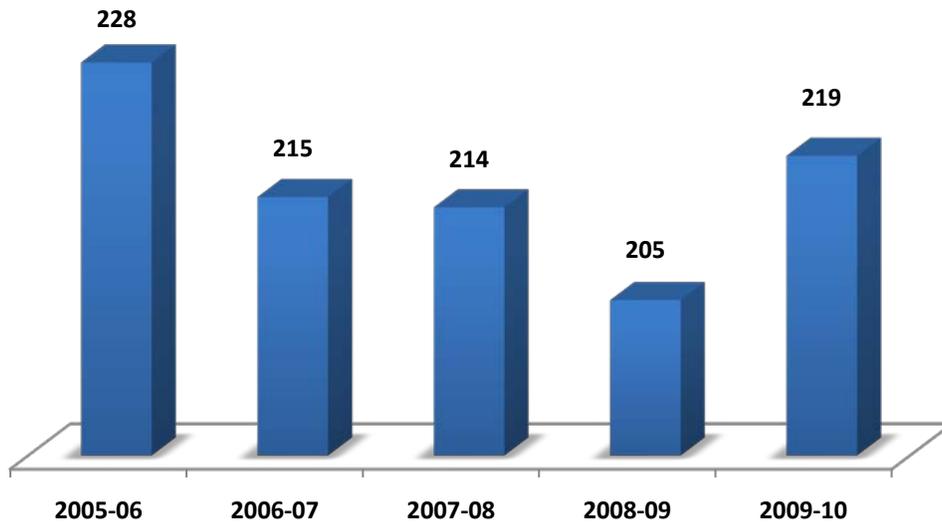
The economic impact of hosting Johnson C. Smith University probably is most easily understood in terms of its effects on employment. Johnson C. Smith University generated an employment impact of 776 full- and part-time jobs. Employment impacts are reported in the fifth column of Table 1.

Increases in Work-Life Earnings Associated With Degrees from Johnson C. Smith University

One tangible 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 Johnson C. Smith University 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 Johnson C. Smith University who received degrees in 2008. The number of degrees conferred was obtained from the NCES's IPEDS.

Figure 4: The number of graduates from July 1-June 30 for each academic year



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 U.S. Census Bureau based the estimates on earnings data for 1997-1999 from the Current Population Surveys conducted 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 2 are based on the estimates produced by Mark Kantrowitz, but they were converted from 2005 dollars (as originally published) to 2008 dollars using the U.S. Bureau of Labor Statistic's Consumer Price Index (all urban consumers).

Table 2: Synthetic Estimates of Work-Life Earnings of 2008 Graduates of Johnson C Smith University (millions of 2008 dollars)⁵

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
JOHNSON C SMITH UNIVERSITY	-	-	213	643	284
Professional	6.18	3.16	0	0	0
Doctoral	4.91	1.89	0	0	0
Master's	3.68	0.66	0	0	0
Bachelor's	3.02	1.33	213	643	284
Associate's	2.12	0.43	0	0	0

⁵ The Synthetic work-life earnings estimate for a high school graduate, including GED, is \$1.69 (expressed in millions of 2008 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 \$2008. The number of degrees conferred (2008) was obtained from the National Center for Education Statistics' Integrated Postsecondary Education Data System.

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 (2008) compared to \$2.12 million for the average worker with an Associate's degree, or \$3.02 million for the average worker with a Bachelor's degree, or \$3.68 million for the average worker with a Master's degree, or \$4.91 million for the average worker with a Doctoral degree (PhD), or \$6.18 million for the average worker with a Professional Degree.

Incremental work-life earnings per degree are reported in the second column of Table 2:

- 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 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 2. 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 2.

Results

The analysis expects that the 213 graduates of Johnson C. Smith University can expect work-life earnings of \$643 million (2008), which is \$284 million more than they could expect to earn had they not earned their college degrees. Thus, in terms of incremental (additional) work-life earnings, the collective worth of the degrees granted by Johnson C. Smith University is \$284 million, or about \$1.33 million per graduate. The economic worth of higher education over the course of a graduate's working life thus is considerable. On average, the work-life earnings of graduates with a bachelor's degree will be \$1.33 million more than for persons with a high school degree.

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 Johnson C. Smith University will realize significantly higher work-life earnings when they earn a college degree.

This study shows that Johnson C. Smith University 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

JCSU is the catalytic thrust for the Historic West End and Beatties Ford Road past, present and future redevelopment. Its impact is quantified by the findings from this economic impact study.

The fundamental finding of this study is that Johnson C. Smith University creates substantial economic impacts in terms of output, value-added, labor income, and employment. The economic impact of Johnson C. Smith University on its host communities in 2007 includes:

- \$68.4 million in output (sales);
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*JCSU is poised to execute the President's - **A Transformative Vision-In-Mission***

By Academic Year 2013-2014, Johnson C. Smith University will be recognized in North Carolina as Charlotte's premier independent urban University, offering a comprehensive (as defined by the Southern Association of Colleges and Schools) quality educational and applied research environment.

Limitations

Several types of short-term college-related expenditures were not estimated, including spending by visitors and spending by retirees who live in the MSA. Expenditures supported by employees of Johnson C. Smith University's 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 Charlotte-Gastonia-Concord NC-SC MSA if that person's job at Johnson C. Smith University did not exist.

Perhaps the greatest limitation of this report is that there was no attempt to evaluate the long-term impacts of Johnson C. Smith University on the economic development of the MSA, the state, and the nation. Johnson C. Smith University 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 or 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 Charlotte-Gastonia-Concord NC-SC MSA by improving residents' quality of life.

Methodology

Unit of Analysis

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 definitions of Johnson C. Smith University's regional economy (the Charlotte-Gastonia-Concord NC-SC MSA) was based on the standard metropolitan and micropolitan statistical area definitions released by the Office of Management and Budget and consists of Anson, Cabarrus, Gaston, Mecklenburg, and Union counties in North Carolina and York County in South Carolina.

The geographic areas corresponding to the regional model that were built for Johnson C. Smith University, which include the labor forces directly involved in their economic spheres 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 June 6, 2003. The geographic area of the regional model therefore takes into consideration population and commuting patterns from the 2000 Census.

Statistical Mode

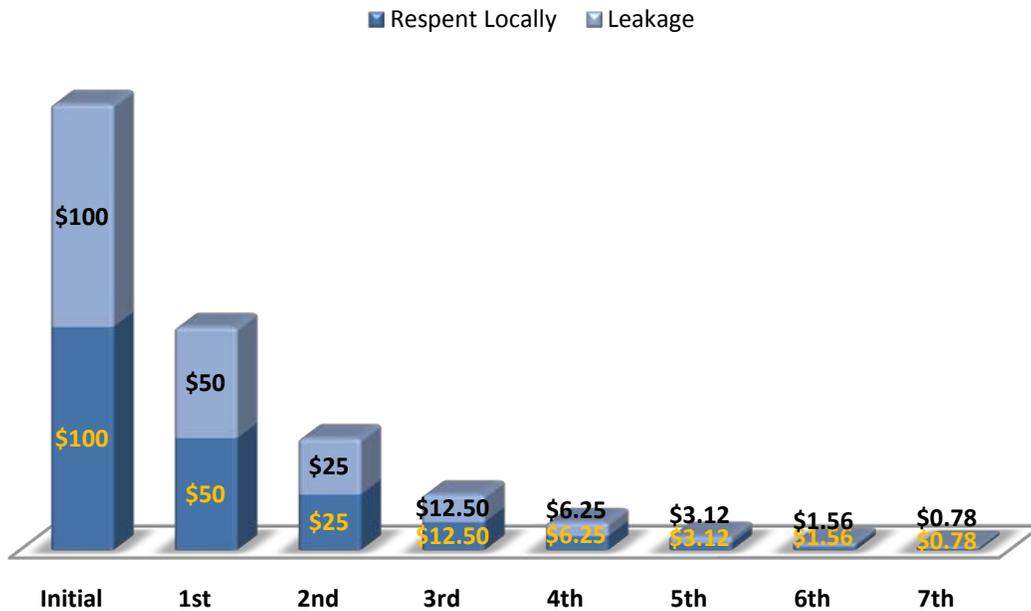
Estimating the economic impact of Johnson C. Smith University on its regional economies involved four basic steps. First, the most recent National Center of Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS) finance and employment data (fiscal year 2007) were obtained for Johnson C. Smith University; and then these institutional expenditures were allocated to industrial sectors recognized by the economic impact modeling system. Second, spending by students was estimated based on the IPEDS Fall Enrollment Survey and other sources; and then these student expenditures were allocated to industrial sectors recognized by the economic modeling system. Third, the IMPLAN Professional Social Accounting and Impact Analysis Software was used to build a regional economic model specific to Johnson C. Smith University. A detailed discussion of the IMPLAN modeling system, including its structure, methods, and use, can be found in *IMPLAN Professional Version 2.0*:

Users Guide, Analysis Guide, and Data Guide (www.IMPLAN.com). Once the economic model was generated, the total economic impacts of all categories of initial spending were estimated.

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 4 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 5: How multipliers capture the impact of respending initial impacts if the output multiplier equals 2.0



Initial Direct or Indirect Impact	\$100	
First Round of Respending	\$50 respend locally	\$50 leakage ^{6*}
Second Round of Respending	\$25 respend locally	\$25 leakage
Third Round of Respending	\$12.50 respend locally	\$12.50 leakage
Fourth Round of Respending	\$6.25 respend locally	\$6.25 leakage
Fifth Round of Respending	\$3.12 respend locally	\$3.12 leakage
Sixth Round of Respending	\$1.56 respend locally	\$1.56 leakage
Seventh Round of Respending	\$.78 respend 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 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

⁶ Leakage indicates amounts spent outside area and not recirculated locally.

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.

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, which allow all spending to 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, Johnson C. Smith University 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 the economic models are designed to measure the total economic impact of college-related spending on its host community, but if Johnson C. Smith University were to close or otherwise cease to exist, economic activity might not drop as much as the models indicate. The net drop in economic activity might be less than indicated by the models 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 university-related spending are reported. Thus, the economic impact estimates should be considered an upper bound on the true economic impact of university-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 NON-WAGE AND SALARY (OTHER) ITEMS

In addition to expenditures for wages and salaries, the IPEDS *Finance Survey* provided institution-level expenditure data for all other major categories of spending, including instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, transfers, independent organizations, and other expenditures.

To eliminate the potential for double counting, expenditures for auxiliary enterprises, scholarships, fellowships, and net grant aid to students were not included in initial spending. Spending associated with these budget items 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.

Similarly, scholarships and fellowships transfer income to students, and students' spending of these funds is reflected in the amounts attributed to students' personal expenditures.

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 Johnson C. Smith University 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 undergraduates.

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 \$12,250. 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, or \$6,125 per part-time undergraduate student. Initial spending by students is reported in column 1 of Table 1.

BWC Consulting Firm Profile

BWC Consulting is a strategic and financial management consulting firm specializing in economic development advisory, higher education advisory, management and investment financing consulting services designed to strengthen urban communities. BWC provides unparalleled insight that helps clients develop innovative strategies to actualize their vision. Our “high performance business” approach builds on our expertise in finance, management, and entrepreneurship to help organizations perform at the highest levels so they can create sustainable value for their key stakeholders and their communities. Utilizing a business model based on wealth creation, diversity of collaboration, community building and new urbanism principles, BWC helps clients:



- Implement sound business financial strategies;
- Achieve sustainability; and
- Build wealth in the communities in which they operate.

Methodology:

BWC performed an enterprise assessment in order to understand and assess the financial health and viability of JCSU. In addition we researched the Charlotte area to understand JCSU’s place in this important center of commerce in North Carolina and the greater Mid-Atlantic and Southeastern region. This review included a review and analysis of the following:

- JCSU audited financial statements, FY2009 and FY 2010
- JCSU historical enrollment, applicant, and graduation data
- JCSU White Paper: Gaining Traction in Doing Business in North Carolina
- JCSU recent Bulletin publications
- Charlotte USA Economic Development Guide 2010
- Charlotte Chamber of Commerce Reports and Website

Analysis included calculation of key financial ratios and review of endowment history and performance. This review and analysis formed the basis for an assessment of the institution and its ability to sustain itself as an ongoing concern hence maximizing the learning from the short term economic impact study presented in this report.



**The NORTH CAROLINA INSTITUTE OF MINORITY ECONOMIC DEVELOPMENT
(THE INSTITUTE)**

is a statewide nonprofit organization representing the interest of underdeveloped and underutilized sectors of the state's economic base. The Institute's working philosophy is that--information and business development are critical to wealth creation and to building the asset base among low-wealth sectors of the population.

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