

# FACT SHEET

*Demonstrating the Economic Value of North Carolina State University to the Economic Development Partnership Region and the state of North Carolina*

JANUARY 2015

North Carolina State University (NCSU) improves higher education delivery throughout the region and helps students increase their employability and potential. By facilitating new research and entrepreneurship and drawing students and visitors to the Economic Development Partnership Region, the university also generates new dollars and opportunities for the region. The purpose of this analysis is to assess the impact of NCSU on the regional economy, defined as the counties of Chatham, Durham, Franklin, Granville, Harnett, Johnston, Lee, Moore, Orange, Person, Vance, Wake, and Warren. The analysis also looks at the benefits generated for students, North Carolina as a whole, and taxpayers.

*Our analysis shows that in FY 2012-13, the \$1.3 billion in payroll and operations spending of NCSU, together with its construction spending and the spending of its students, visitors, alumni, and start-up companies, created **\$4.8 BILLION** in added regional income. This is equal to approximately **4.4%** of the total Gross Regional Product of the Economic Development Partnership Region, and is equivalent to creating **59,237** new jobs.*

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## IMPACT ON THE REGIONAL BUSINESS COMMUNITY

During the analysis year, FY 2012-13, NCSU spent **\$802.2 MILLION** on payroll and benefits for **12,535** full-time and part-time employees, and spent another **\$492.4 MILLION** on goods and services to carry out its day-to-day operations and research. This initial round of spending creates more spending across other businesses throughout the regional economy, resulting in the commonly referred to multiplier effects. We estimate these multiplier effects in this study and report the *additional* economic activity that is created by the initial spending of NCSU.\* Impacts are reported in terms of total income, which is analogous to Gross Regional Product, and the corresponding number of jobs created.

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\* Note: Our estimated economic impacts are conservative in that we directly take into account the fact that state and local dollars spent on the university could have been spent elsewhere in North Carolina if not directed toward NCSU, and thus would have created some economic impacts regardless. We account for these alternative uses of funds directly in our analysis by (i) assuming that if funds were not directed to NCSU, they would have been returned to the taxpayer and generate economic impacts through household spending on goods and services, and (ii) subtracting the estimated economic impacts generated by this alternative use of funds from the estimated economic impacts of NCSU. Thus, we report a net impact of NCSU that is above and beyond what would have occurred had the funds been returned to the taxpayer.

## INTELLECTUAL PROPERTY CREATED BY NCSU

	INVENTIONS	PATENT APPLICATIONS	LICENSES
2009-10	124	32	74
2010-11	164	85	86
2011-12	274	63	59
2012-13	238	58	111
<b>TOTAL</b>	<b>800</b>	<b>238</b>	<b>330</b>

## IMPACT OF SPIN-OFF COMPANIES

Spin-off companies include those that were created and fostered through programs at NCSU that support entrepreneurial business development, as well as companies that were created by faculty, students, or alumni from their work at NCSU. The collective impact of spin-off companies related to NCSU in FY 2012-13 was \$596.4 million in added regional income, equivalent to 10,166 new jobs. These impacts are important because they comprise a significant part of the region's business environment. The connection between NCSU and its related spin-off companies is less direct than with start-up companies licensing technology of NCSU. For this reason, the impact of business spin-offs related to NCSU are presented separately for the university in this analysis.

These economic impacts break down as follows:

### *Operations spending impact*

- Payroll and non-pay expenditures to support day-to-day operations (less research) of NCSU amounted to **\$610.8 MILLION** and **\$266.4 MILLION**, respectively. The net impact of the university's operations spending in the Economic Development Partnership Region during the analysis year was approximately **\$795.3 MILLION** in added regional income, which is equivalent to creating **11,807** jobs.

### *Research spending impact*

- Research activities of NCSU impact the regional economy by employing people and making purchases for equipment, supplies, and services. They also facilitate new knowledge creation throughout the Economic Development Partnership Region through inventions, patent applications, and licenses. In FY 2012-13, NCSU spent **\$191.5 MILLION** on payroll to support research activities.
- Research spending of NCSU generates **\$395.4 MILLION** in added regional income for the Economic Development Partnership Region economy, which is equivalent to creating **5,578** new jobs.

### *Construction spending impact*

- NCSU built or renovated a number of its facilities during the analysis year. This spending generated a short-term infusion of income and jobs in the regional economy.
- The net impact of the university's construction spending in FY 2012-13 was **\$73.1 MILLION** in added regional income, equivalent to **1,752** new jobs.

### *Business start-up impact*

- NCSU creates an exceptional environment that fosters innovation and entrepreneurship, evidenced by the number of start-up companies related to NCSU in the region. In FY 2012-13, start-up companies related to the university created **\$1.1 BILLION** in added regional income for the Economic Development Partnership Region economy, which is equivalent to creating **4,984** jobs.

**IMPACTS CREATED BY NCSU IN FY 2012-13**

INCOME	JOB
<b>\$795.3 MILLION</b>	<b>11,807</b>
Operations spending impact	
<b>\$395.4 MILLION</b>	<b>5,578</b>
Research spending impact	
<b>\$73.1 MILLION</b>	<b>1,752</b>
Construction spending impact	
<b>\$1.1 BILLION</b>	<b>4,984</b>
Business start-up impact	
<b>\$133 MILLION</b>	<b>2,355</b>
Student spending impact	
<b>\$26.8 MILLION</b>	<b>672</b>
Visitor spending impact	
<b>\$2.3 BILLION</b>	<b>32,089</b>
Alumni impact	
<b>\$4.8 BILLION</b>	<b>59,237</b>
Total impact	

*Student spending impact*

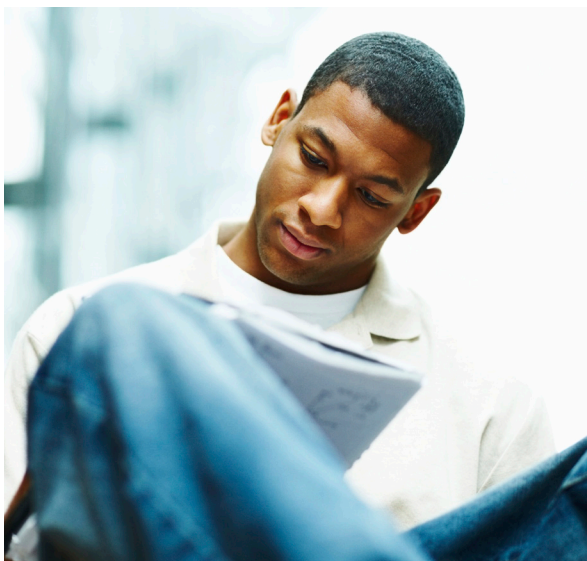
- Around **60%** of graduate and undergraduate students attending NCSU originated from outside the region. Some of these students relocated to the Economic Development Partnership Region and spent money on groceries, transportation, rent, and so on at Economic Development Partnership Region businesses.
- The expenditures of students who relocated to the region during the analysis year added approximately **\$133 MILLION** in regional income for the Economic Development Partnership Region economy, which is equivalent to creating **2,355** new jobs.

*Visitor spending impact*

- Out-of-region visitors attracted to the Economic Development Partnership Region for activities at NCSU brought new dollars to the economy through their spending at hotels, restaurants, gas stations, and other regional businesses.
- Visitor spending added approximately **\$26.8 MILLION** in regional income for the Economic Development Partnership Region economy, which is equivalent to creating **672** new jobs.

*Alumni impact*

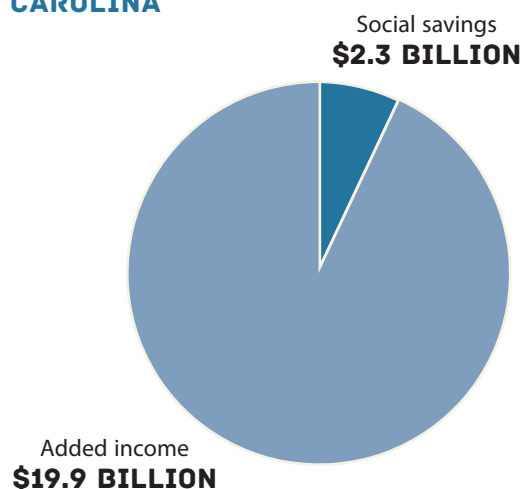
- Over the years, students gained new skills, making them more productive workers, by studying at NCSU. Today, thousands of these former students are employed in the Economic Development Partnership Region.
- The accumulated contribution of former NCSU students currently employed in the Economic Development Partnership Region workforce amounted to **\$2.3 BILLION** in added regional income to the Economic Development Partnership Region economy, which is equivalent to creating **32,089** new jobs.



## FOR EVERY \$1 SPENT BY...

<b>STUDENTS</b>	<p><b>\$3.00</b></p> <p>Gained in lifetime income for STUDENTS</p>
<b>SOCIETY</b>	<p><b>\$9.00</b></p> <p>Gained in added state income and social savings for SOCIETY</p>
<b>TAXPAYERS</b>	<p><b>\$3.80</b></p> <p>Gained in added taxes and public sector savings for TAXPAYERS</p>

## PRESENT VALUE OF ADDED INCOME AND SOCIAL SAVINGS IN NORTH CAROLINA



### ABOUT EMSI

Economic Modeling Specialists International turns labor market data into useful information that helps organizations understand the connection between economies, people, and work. Since 2000, EMSI has completed numerous economic impact studies for educational institutions across the US, Canada, the UK, and Australia. It also provides industry-leading labor market data via software and reports to higher education professionals, workforce planners, and regional developers in the U.S. and internationally. For more information, visit [www.economicmodeling.com](http://www.economicmodeling.com).

## RETURN ON INVESTMENT TO STUDENTS, SOCIETY, AND TAXPAYERS

### Student perspective

- Students attending NCSU during FY 2012-13 paid a total of **\$277.5 MILLION** to cover the cost of tuition, fees, books, and supplies. They also forwent **\$1.1 BILLION** in money that they would have earned had they been working instead of learning.
- In return for the money students invest to earn their degrees, they will receive a present value of **\$4.3 BILLION** in estimated increased earnings over their working lives.
- This translates to a return of **\$3.00** in higher future income for every \$1 that students invest in their NCSU education. The average annual return for students is **14.0%**.

### Societal perspective

- North Carolina as a whole will receive a present value of **\$19.9 BILLION** in added state income over the course of the students' working lives. Communities will also benefit from **\$2.3 BILLION** in present value social savings related to reduced crime, lower unemployment, and increased health and well-being across the state.
- For every dollar that society spent on educations at NCSU during the analysis year, North Carolina communities will receive a cumulative value of **\$9.00** in benefits, for as long as the 2012-13 students of NCSU remain active in the state workforce.

### Taxpayer perspective

- In FY 2012-13, state and local taxpayers in North Carolina invested **\$617.4 MILLION** to support the operations of NCSU. The net present value of the added tax revenue stemming from the students' higher lifetime incomes and the increased output of businesses amounts to **\$1.9 BILLION** in benefits to taxpayers. Savings to the public sector add another **\$448.5 MILLION** in benefits due to a reduced demand for government-funded services in North Carolina.
- Dividing benefits to taxpayers by the associated costs yields a **3.8** benefit-cost ratio, i.e., every \$1 in costs returns \$3.80 in benefits. The average annual return on investment for taxpayers is **11.9%**.