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## **The Economic Impact of Tennessee State University on the State of Tennessee, 2010-2011**

Soumendra Ghosh, Anis Mnif, & Sabeen Fahim<sup>1</sup>

The year 2012 is a landmark for Tennessee State University (TSU). It marks the centennial year for this land-grant, historically Black, public institution. One hundred years of service to a community which has experienced social, racial, and economic transformations merits special recognition. Through its academic programs, Tennessee State University has been a major producer of teachers and educational administrators in the mid-state region. Its nursing and health profession programs have been significant contributors to the area's health care industry. Likewise, TSU's agricultural research activities have impacted the industry both regionally as well as globally. In particular, the agricultural research station in McMinnville continues to keep the Tennessee nursery industry commercially competitive. In terms of broad monetary measures, Tennessee State University contributes over \$610 million to the State's economy. Tennessee State University, Nashville's only comprehensive public university, is an economic powerhouse generating economic activity for the entire state including all 95 counties.

Tennessee State University's economic impact on the State in fiscal year 2010-11 includes over 5,500 jobs and a total dollar impact of \$610 million. Of this total impact, TSU directly injects approximately \$330 million into the State's economy. Indirect and induced impacts total another \$280 million.<sup>2</sup> More precisely, every dollar directly expended induces additional spending of approximately 84 cents.

The top sectors impacted by the presence of TSU include education, buildings and dwellings, grant-making and social advocacy, travel and reservations, real estate, facility support services, health, hospitality, and wholesale and retail trade. The fiscal year 2010-2011 has seen a total impact of approximately \$610 million in the local economy. This is due to the direct, indirect, and induced expenditures attributable to economy. The economic impact of the University is computed by grouping

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<sup>1</sup> This article is a brief version of the longer study provided by the authors.

<sup>2</sup> See the appendix for a discussion on the research methodology and economic terms.

expenditures into three broad categories: university, students, and visitors. Expenditures under each category generate direct, indirect, and induced effects, as well as tax revenues. The output of these 3 categories constitutes TSU's total impact. The first category includes the impact of the University in terms of its expenditures on construction, operations, travel, and capital outlay. This category also includes the expenditures incurred by the faculty and staff of TSU in the local economy. The second category constitutes the students' spending pattern and its aggregate impact on the local economy. The last category includes the spending of visitors to TSU and their contribution to the local economy.

The University's expenditures generated a total impact of \$394 million for the 2010-2011 fiscal year. The direct University impact totaled approximately \$206 million, generated nearly \$49 million in indirect impact and \$139 million in induced impact. The \$394 million of total impact included construction and renovation activities, employee compensation, as well as faculty and staff salaries and benefits, operations and maintenance, travel, supplies, etc. During the year 2010-2011, TSU had 3,726<sup>3</sup> employees on its payroll, generating a total of \$190.5 million in labor income injected into the local economy. The top sectors affected by the labor income include: education, social advocacy organizations, real estate, and construction businesses. Other major impacted sectors include state and private health, hospitality, air transportation, food services and wholesale trade businesses.

A survey was conducted to estimate the expenditures incurred by TSU students. The results were used to categorize and estimate the overall economic impact of TSU student expenditures. Excluding tuition, TSU students' spending of \$104 million injects \$181 million into the local economy. Students' spending areas include: study materials, transportation, cell phones, utilities, electronics, social activities, food and beverages, and other expenditures supporting quality of life.

TSU regularly receives visitors to the campus for different purposes. The major events attracting visitors are: homecoming, graduation and convocation ceremonies,

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<sup>3</sup> This figure reflects the number of jobs on TSU's payroll (all regular full-and-part time employees, adjuncts, temps and students) as well as all contracted employees by other agencies working in various jobs at TSU.

sports, conferences, community events, recruitment activities and job fairs, as well as family and friends who visit their loved ones. The local industries impacted as a result of TSU visitors' spending were hospitality, air transportation, food services, auto rental and leasing, general merchandise stores, wholesale trade, and many others. All these expenditures are directly related to visitor traffic. Thereby, the visitors' impact represents 250,000 visitor days to the Greater Nashville area in 2010-2011. The visitors' direct spending of approximately \$20 million generated \$35 million in spending impact.

Tennessee State University generates tax revenues directly through purchases of goods and services and indirectly through taxes paid by TSU employees. In addition, employees of businesses that sell to TSU students and visitors pay taxes to all levels of government. The total tax impact is nearly \$74 million, including \$49 million as federal taxes and the remaining \$25 million as state and local taxes.

The economic impact analysis shows that TSU plays a major role in the State's economy, with a total impact of \$610 million. The estimates in this study are conservative in nature, and the quantified economic impact should not diminish other important aspects of TSU's presence. Higher education is an important investment that produces enormous pecuniary as well as non-pecuniary returns to individuals, communities, businesses, and the government, both in the short and long run. However, these impacts are hard to quantify in pure monetary terms. Hence, in the broader context, the higher earnings over the lifetime of TSU graduates, the community outreach programs offered by TSU, and the superior research efforts at TSU all need to be taken into consideration for evaluating the total influence that TSU exerts on the State.

## **Appendix**

### **RESEARCH METHODOLOGY**

This economic impact study has been conducted using an Input-Output model. Such a model tracks the dollar flow in and out of the local economy, thereby demonstrating the ripple effects of the economic contribution of TSU to the local economy. The modeling software used to analyze data and compile results was

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IMPLAN3, Impact Analysis for Planning.<sup>4</sup> IMPLAN is widely popular among economists who use it for the estimation of economic contributions to local, state, and national economies.

## **TERMS AND DEFINITIONS**

In order to understand the analyses and results, key terms and definitions are presented below.<sup>5</sup>

### **INPUTS**

Inputs incorporate a broad expense category for an industry or final-use category.

### **OUTPUT/ RESULTS/ DELIVERABLES**

Output represents the value of industry production. In IMPLAN, these are annual production estimates for the year of the data set and are in producer prices. For manufacturers, this would be sales plus or minus change in inventory. For service sectors, production is the same as sales. For retail and wholesale trade, the output is the same as gross margin, not gross sales.

### **LIMITATIONS / SCOPE OF STUDY**

The scope of this study is limited to the State of Tennessee. This area of study includes all cities and counties of the state and excludes any jurisdiction outside of Tennessee.

### **DIRECT EFFECT**

Direct effect is a set of expenditures applied to the predictive model (i.e., Input-Output multipliers) for impact analysis. It is a series of production changes or expenditures made by producers/consumers as a result of an activity or policy. These initial changes are determined by an analyst to be a result of this activity or policy. Applying these initial changes to the multipliers in an IMPLAN model will then display how the region will respond economically to these initial changes.

### **INDIRECT EFFECT**

Indirect effect represents the impact of local industries' buying goods and services from other local industries. The cycle of spending works its way backward through

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<sup>4</sup> IMPLAN is currently used by hundreds of government agencies, colleges and universities, non-profit organizations, corporations, and business development and community planning organizations.

<sup>5</sup> Retrieved from IMPLAN.

Ghosh et al.: The Economic Impact of Tennessee State University on the State of Tennessee 2010-2011  
the supply chain until all money leaks from the local economy, either through imports or by payments to value added. The impacts are calculated by applying Direct Effects to the Input-Output Multipliers.

#### INDUCED EFFECT

Induced effect is the response by an economy to an initial change (direct effect) that occurs through re-spending of income received by a component of value added. IMPLAN's default multiplier recognizes that labor income (employee compensation and proprietor income components of value added) is not a leakage to the regional economy. This money is recirculated through the household spending patterns causing further local economic activity.