Economic Impacts of Purdue University
on the Tippecanoe County Economy

By Kevin T. McNamara*

Purdue University, Indiana's land-grant university, is located in Tippecanoe County, Indiana. Purdue had an enrollment of 34,484 students during the 1994-1995 academic year. While Purdue's extension, research, and teaching activities provide services to all Indiana residents, the University has specific benefits or impacts on Tippecanoe County. These benefits/impacts range from cultural, to educational, to social, to recreational. The University also has economic benefits for the community. These benefits result from the University spending money to employ faculty/staff, and from the University purchasing supplies and services in the local economy to support its educational programs.

One method of measuring the local economic benefits associated with Purdue University is to use economic impact multipliers to estimate the total economic impacts associated with the university's operations. A multiplier is a number that represents the total level of activity that results from an initial activity in an economy. Multipliers can measure economic impact through business activity (output), income (salary and wages), and employment (jobs). Multipliers for all three measures are used below to estimate Purdue University's impact on the Tippecanoe County economy. An input-output model of Tippecanoe County was constructed using IMPLAN (an input-output

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model developed by the U.S. Forest Service) to obtain output, income and employment multipliers that can be used to estimate the impacts Purdue University has on the Tippecanoe County economy.\(^1\)

Purdue University stimulates three types of economic activity in the Tippecanoe County economy: direct, indirect, and induced impacts.

- Direct impacts are the purchases, payments, and employment made by the University as it spends money in the local economy.
- Indirect impacts are activities in the local economy that result from local firms selling goods and/or services to the University.
- Induced impacts are activities in the local economy that result from household spending of income earned from either the University or their suppliers.

Purdue University spent $503,710,814 to support its academic, research and teaching programs during the 1994-1995 academic year (Table 1). This is Purdue University’s direct expenditure impact on the local economy. This spending resulted an additional $509,906,457 of expenditure or sales in the Tippecanoe economy-the indirect and induced impacts (Table 2). Purdue’s total expenditure or sale impact on the Tippecanoe County economy (the combination of direct, indirect and induced impacts) was an estimated $1,013,617,271 (Table 3).

Purdue University's 1994-1995 payroll was $368,846,493 (Table 1). This is the institution's direct income impact. The indirect and induced income impacts (income paid by businesses supplying Purdue or meeting household spending needs Purdue/supplier employees) was an estimated $198,808,260 (Table 2). The total income impact of Purdue University on the Tippecanoe County was $567,654,753 Table 3).

\(^{1}\)The input/output multipliers used in this analysis are called Type III multipliers. Type III multipliers estimate the total direct, indirect, and induced impacts associated with an activity on a specific economy.
Purdue University's activities generated jobs in the Tippecanoe economy. Purdue employed 8,350 people\(^2\) during the 1994-1995 academic year (Table 1). Indirect and induced employment associated with Purdue is 3,039 (Table 2). The total employment impact of Purdue on the Tippecanoe County economy is 11,389 (Table 3).

Purdue University impacts the Tippecanoe community beyond the economic impacts associated with operation of their academic program. Additional economic benefits result from auxiliary enterprises such as student housing/food services, from student spending in the local economy, and from visitor spending associated with athletic events, cultural events, and campus visits. The University also impacts the economy and community in ways not easily measured by sales, income or employment. Examples include providing educational, cultural and recreational activities; and, employing faculty and staff that make critical contributions to the community through volunteer activities.

\(^2\)Full-time equivalents, West Lafayette campus, excluding auxiliary services employees.
Table 1. Direct Expenditure, Wage, and Employment Impacts of Purdue University on Tippecanoe County Economy, 1994-1995 Academic Year

| Expenditures¹ | $503,710,814 |
| Payroll¹      | $368,846,493 |
| Employment²   | 8,350        |

¹ Expenditures and wages for West Lafayette Campus for instruction, research, extension, and related activities. Institution's auxiliary enterprises are not included.

² Total faculty and staff employment data for 1994-1995 represent full-time and adjusted part-time jobs.

Table 2. Indirect and Induced Expenditure, Income, and Employment Impacts of Purdue University on Tippecanoe County Economy, 1994-1995 Academic Year

<table>
<thead>
<tr>
<th>Expenditure¹</th>
<th>Indirect and Induced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll</td>
<td>$509,906,457</td>
</tr>
<tr>
<td>Total Employment</td>
<td>3,039</td>
</tr>
</tbody>
</table>

¹ Type III multipliers were obtained from an input-output model constructed for the Tippecanoe County economy with IMPLAN: output multiplier = 2.0123; the total income multiplier = 1.5390; employment multiplier = 1.3639.

Table 3. Total Expenditure, Income, and Employment Impacts of Purdue University on Tippecanoe County Economy, 1994-1995 Academic Year

<table>
<thead>
<tr>
<th></th>
<th>Output</th>
<th>Income</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Impacts</td>
<td>503,710,814</td>
<td>368,846,493</td>
<td>8,350</td>
</tr>
<tr>
<td>Indirect and Induced Impacts</td>
<td>509,906,457</td>
<td>198,808,260</td>
<td>3,039</td>
</tr>
<tr>
<td>Total Impact</td>
<td>1,013,617,271</td>
<td>567,654,753</td>
<td>11,389</td>
</tr>
</tbody>
</table>
Glossary of Economic Terms

**Direct Impacts:**
- Purchases, payments, and employment made by a university/college as it spends money in the economy.

**Indirect Impacts:**
- Activities in the economy that result from input suppliers.

**Input Suppliers:**
- Firms that sell goods and/or services to the university/college.

**Output:**
- Business expenditures.

**Income:**
- Salary and wages.

**Employment:**
- Number of jobs.

**Multiplier:**
- A number that represents the total level of activity that results from an initial activity in the economy.

**Induced Impacts:**
- Activities in the local economy that result from household spending of income earned from either the university or the input suppliers.