

Economic Impacts of Rose-Hulman Institute of Technology on the Vigo County Economy

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Rose-Hulman Institute of Technology is located in Vigo County, Indiana. Rose-Hulman had an enrollment of 1,425 students during the 1993-1994 academic year. In providing education to students enrolled at Rose-Hulman Institute of Technology, the school impacts Vigo County. These benefits range from cultural, to educational, to social, to recreational. The School also has economic benefits for the community. These benefits result from the School spending money to employ faculty/staff, and from the School purchasing supplies and services in the local economy to support its educational programs.

One method of measuring the local economic benefits associated with Rose-Hulman Institute of Technology is to use economic impact multipliers to estimate the total economic impacts associated with the school'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 or sales), income (salary and wages) and employment (jobs). Multipliers for all three measures are used below to estimate Rose-Hulman Institute of Technology's impact on the Vigo County economy. An input-output model of Vigo County was constructed using IMPLAN (an input-output model developed by the U.S. Forest Service) to obtain output, income and

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employment multipliers to estimate the impacts Rose-Hulman Institute of Technology has on the Vigo County economy.¹

Rose-Hulman Institute of Technology stimulates three types of economic activity in the Vigo County economy: direct, indirect and induced impacts.

- Direct impacts are the purchases, payments and employment made by the school 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 school.
- Induced impacts are activities in the local economy that result from household spending of income earned from either the school or their suppliers.

Rose-Hulman Institute of Technology spent \$20,972,988 to support its academic programs during the 1993-1994 academic year (Table 1). This is Rose-Hulman Institute of Technology's direct expenditure or sales impact on the local economy. This spending resulted in an additional \$15,880,747 of output or sales in the Vigo County economy, the indirect and induced impacts (Table 2). Rose-Hulman Institute of Technology's total expenditure or sales impact on the Vigo County was an estimated \$36,863,735 (Table 3). The total impact is the combination of direct, indirect and induced impacts.

Rose-Hulman Institute of Technology had a payroll of \$11,251,127 to support its academic program for the 1993-1994 academic year, the direct impact (Table 1). The indirect and induced income impact (income paid by business supplying Rose-Hulman Institute of Technology or meeting household spending needs of Rose-Hulman/supplier employees) was an estimated \$9,356,437 (Table

¹The 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.

2). The total local income impact (sum of direct, indirect and induced impacts) associated with Rose-Hulman Institute of Technology's spending was \$20,607,564 (Table 3).

Rose-Hulman Institute of Technology's activities generated jobs in the Vigo economy. These include 270 faculty and staff jobs at the School, the direct employment impact (Table 1). An additional 195 jobs with input suppliers of the School and firms selling goods and/or services to households that earn income from either the School or input firms are the direct and induced employment impacts (Table 2). Total local employment impact was 465 jobs (Table 3).

Rose-Hulman Institute of Technology impacts the Vigo 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, students' spending in the local economy, athletic events, cultural events, and campus visitors. The School also impacts the economy and community in ways not easily measured by income and employment. Examples include providing educational, cultural and recreational activities; and, employing faculty and staff that make critical contributions to the community through volunteer activities.

Table 1. Direct Expenditure, Wage, and Employment Impacts of Rose-Hulman Institute on Vigo County Economy, 1993-1994 Academic Year

Expenditures ¹	\$20,972,988
Payroll ¹	\$11,251,127
Employment ²	270

¹ Expenditure and wage data from 1993-1994 IPEDs finance data report for instruction, research, service, and related activities. Institution's auxiliary.

² Total faculty and staff employment data for 1993-1994 provided by Rose-Hulman Institute.

Table 2. Indirect and Induced Expenditure, Income, and Employment Impacts of Rose-Hulman Institute on Vigo County Economy, 1993-1994 Academic Year

	Indirect and Induced
Expenditure ¹	\$15,880,747
Income	\$9,356,437
Employment	195

¹ Type III multipliers were obtained from an input-output model constructed for the Vigo County economy with IMPLAN: output multiplier = 17472; the total income multiplier = 1.8316; employment multiplier = 1.7237.

Table 3. Total Expenditure, Income, and Employment Impacts of Rose-Hulman Institute on Vigo County Economy, 1993-1994 Academic Year

	Expenditure	Income	Employment
Direct	\$20,972,988	\$11,251,127	270
Indirect and Induced	\$15,880,747	\$9,356,437	195
Total	\$36,863,735	\$20,607,564	465

Glossary of Economic Terms

Direct Impacts:

Purchases, payments, and employment made by a university/school 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/school.

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.