

Regional Economic Linkages and Economic Impacts

Dr. Bradford F. Mills
Department of Agricultural and Applied Economics
Virginia Tech

What is economic impact

- “Economic impact” has no precise standard definition.
- Region’s
 - **industrial output,**
 - **value added**
 - **and/or employment.**

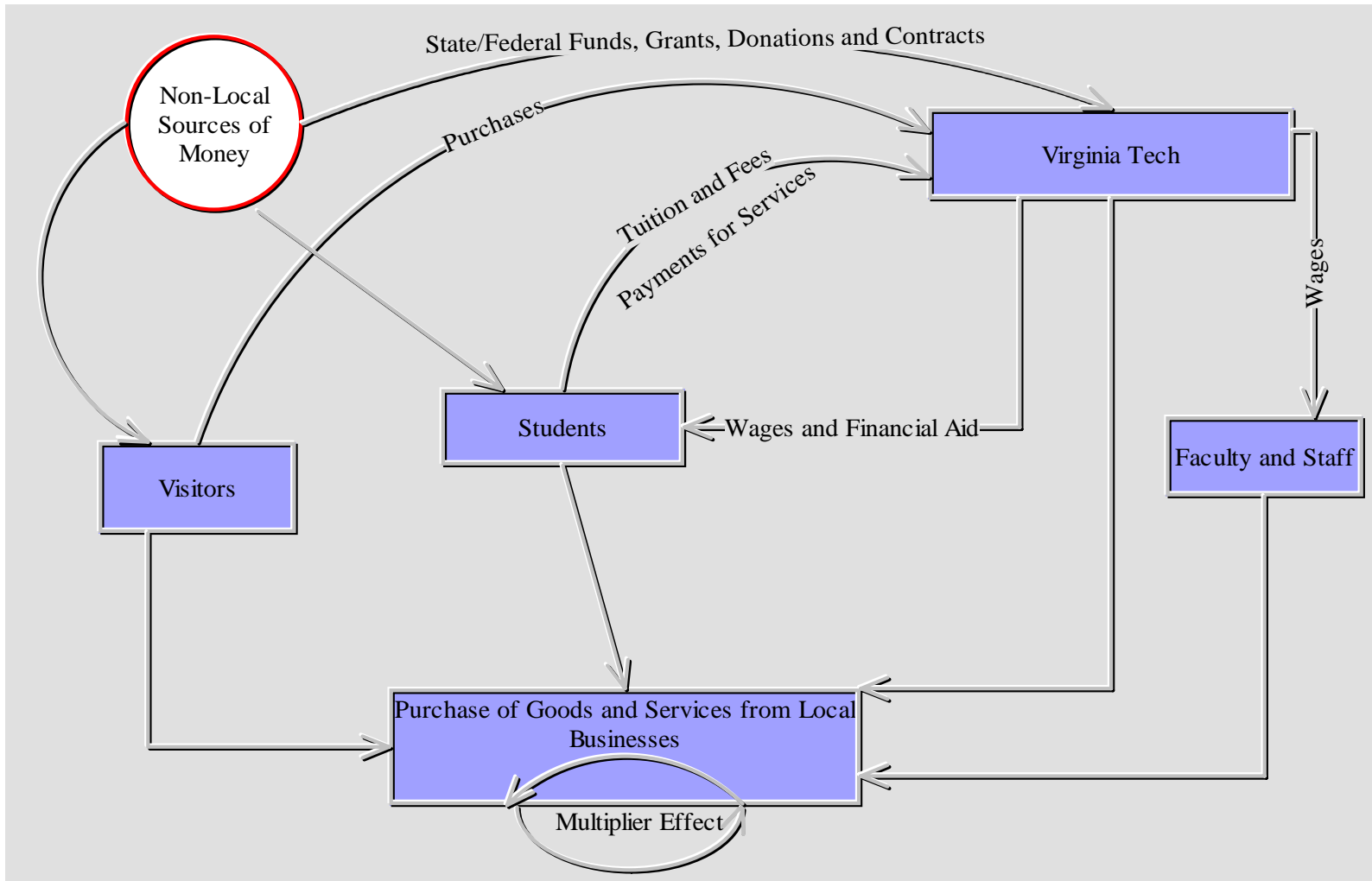


Figure 1: Summary of Virginia Tech I-O Model

Direct, indirect, and induced effects

- Direct effect:
 - Input purchases
 - Payroll outlays
- Indirect effects:
 - Increased purchases of your input suppliers
- Induced effects:
 - Purchases resulting from increased household income

Why measure economic impact?

- Understand linkages between sectors and regions
 - Inform policy decisions
 - E.g. business recruitment strategies, coordinated tax assessments
 - Enhance mechanisms for regional cooperation

How to measure economic impact

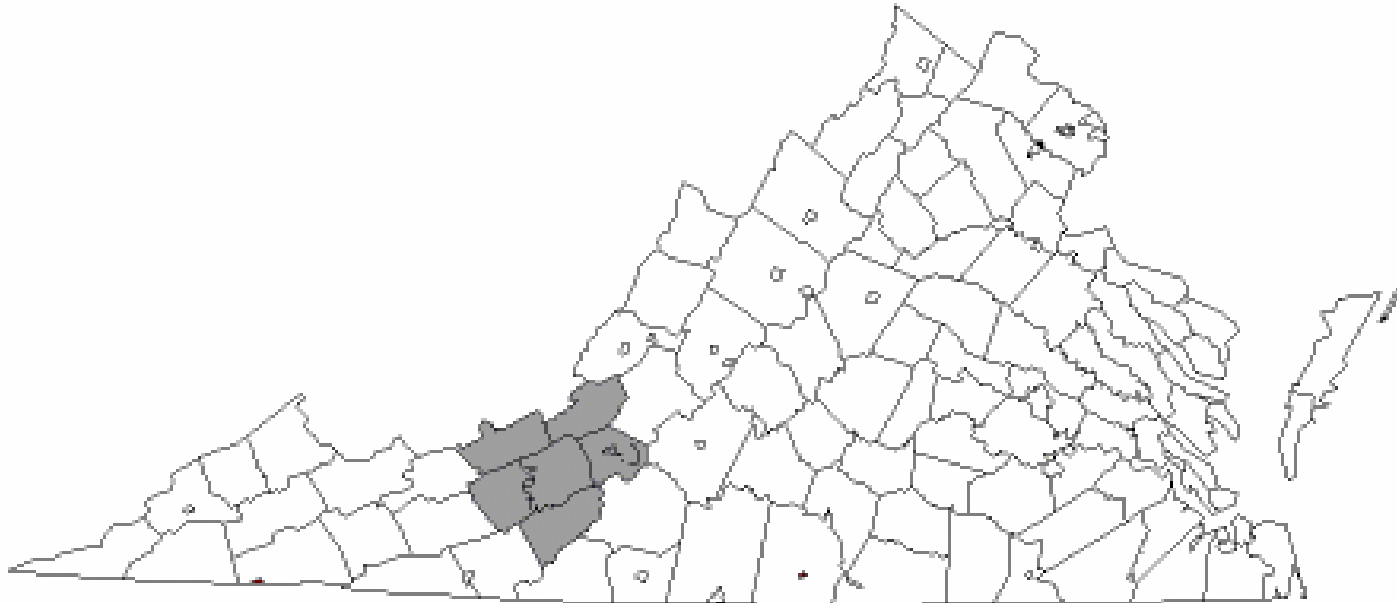
- Identify region
- Detail inter-relationship of economic actors in the region
 - IMPLAN/ Input – Output Analysis
- Establish Counterfactual
 - What would be the level of economic activity in the region without intervention

VT Impact Study

Compare the state of the local economy with and without the university

- Spending by the University and its Affiliates including Virginia Tech, the Virginia Tech Foundation, Virginia Tech Intellectual Properties, and the Cooperative Extension Service.
- Local spending by University Associates including undergraduate and graduate students, faculty and staff.
- Local spending by non-local visitors to the University such as football game attendees, conference attendees and individuals visiting students.

The Region



Expenditures

- Level
- Types of goods and services purchased
- Where the expenditures take place
(regional purchase coefficients)

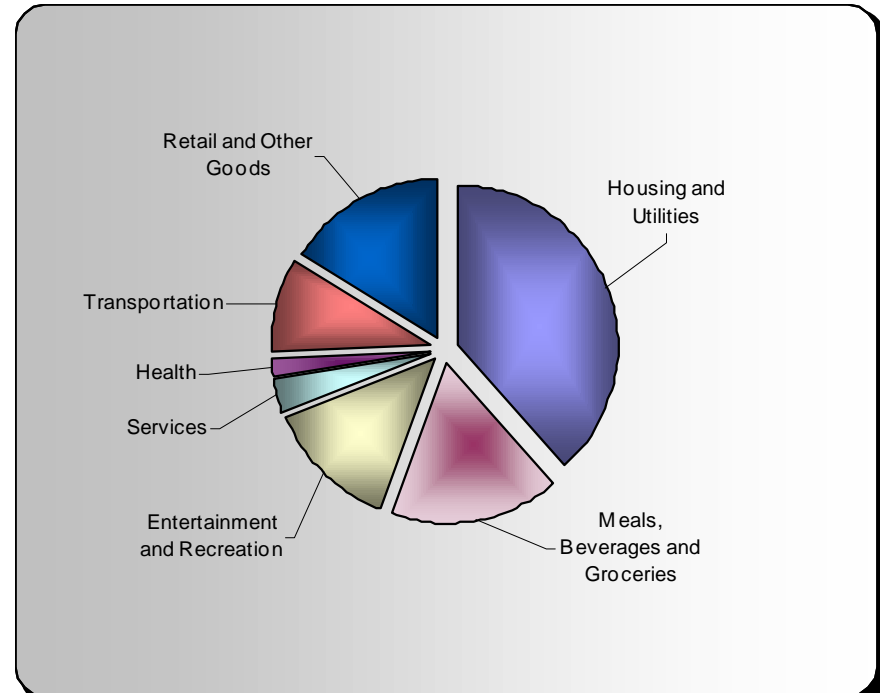
Direct VT and affiliates spending

NRRV

\$175 million

Undergraduate Expenditures

Net spending \$66 million



Virginia Tech Employees

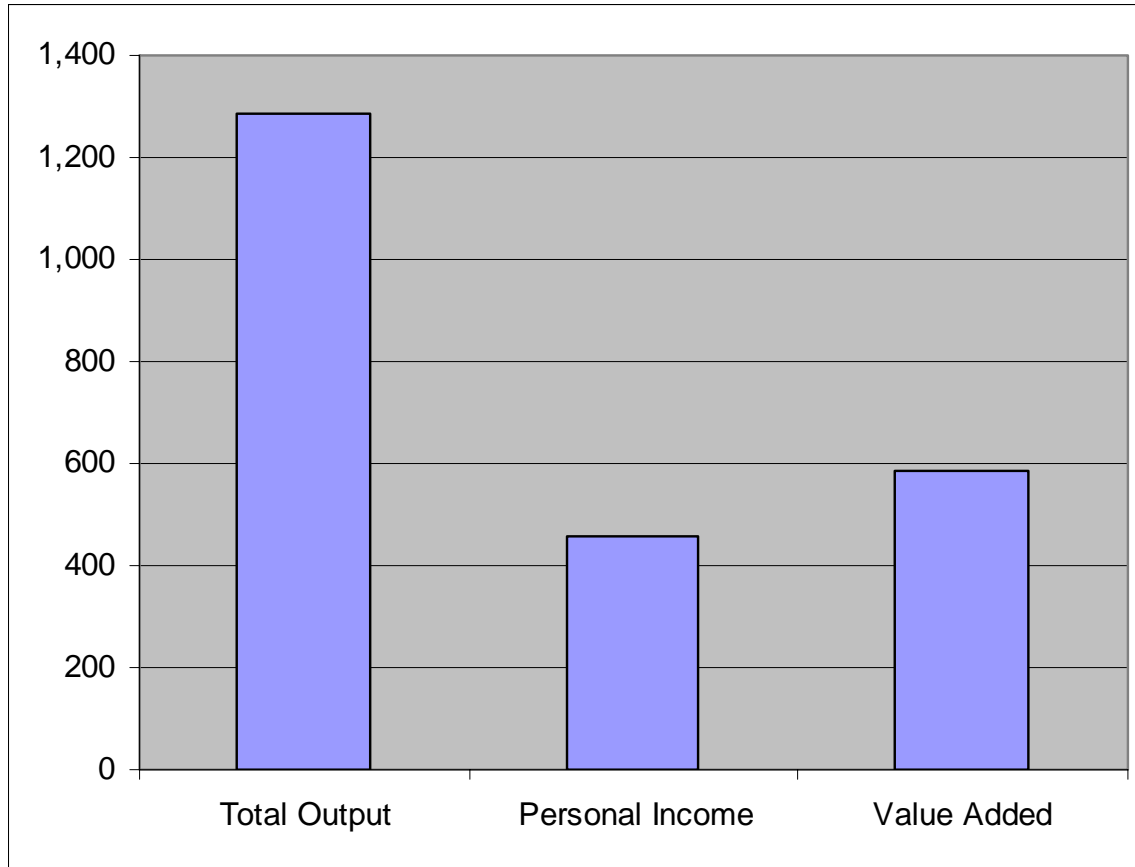
Total disposable income of \$224 million

		Percent Spent by Study Area
Category	Fraction	NRRV
Housing	33.87	93.63
Food	17.81	95.59
Entertainment	4.48	83.71
Personal Services	2.82	90.85
Health and Medical	5.01	92.66
Transportation	10.07	90.87
Retail Merchandise	5.98	86.38
Savings	19.95	77.22

Visitor Spending

<i>Visitor Type</i>	Direct Spending (\$ Million)
Conferences	8.8
Football	13.1
Student Move-In	2.4
Student Visits	8.2
Total	32.5

Estimated Impacts of Virginia Tech the NRRV (\$ million)



Plus, 14,000 jobs

Percentage of Economy Attributable to Virginia Tech

	County	NRRV
Output (TIO)	37.9%	7.0%
Value Added	27.3%	5.9%
Employment (FTE)	25.5%	6.1%
Personal Income	33.3%	7.5%