Economic Impact Analysis

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Input-Output Analysis

• Used in rural urban interdependencies study
• Measures flow of goods and services throughout an economy during a given time period
• Descriptive, general expenditure pattern, Quesnay
• Predictive, input-output method, Leontief
IMPLAN

• Input-output modeling software used in the rural urban study
• Widely-used for county-level analysis
• History of IMPLAN
  – Origins in Forestry Service
  – University of Minnesota
  – MIG, Inc.
• Data gathered from a variety of sources
Terms to Know

• **Output** – Equal to sales
• **Employment** – Part-time and full-time treated equally in the model
• **Value Added** – Includes employee compensation, proprietor income, other property income, and indirect business taxes
• **Labor Income** – Employee compensation and proprietor income
Economic Impact Analysis

Direct:
Initial Change

Indirect:
Related to Inputs

Induced Related to Labor

TOTAL

Local Economy

Secondary Economy
Economic Impact Analysis

Indirect Impacts:
Suppliers of Material Inputs
Economic Impact Analysis

Induced Impacts:
Labor Income
A Test Drive of IMPLAN’s New Multi-Regional Analysis Capability

The IMPLAN National Trade Flows Model: **doubly-constrained gravity model** estimates gross trade flows between counties.

- **gravity model**: flows are proportional to “size” of counties and inversely proportional to “distance”.
- **doubly-constrained**: flows are balanced so that trade flows from county i to all other counties j equal county i’s total supply and county j’s total demand.
- **data** – ORNL county-to-county distances
  - Commodity Flows Survey ton-miles data by commodity
  - IMPLAN commodity S/D by county
### Major Industry Sectors in IMPLAN

**Agriculture: 1-19**  
Mining: 20-30  
Utilities: 31-33  
Construction: 34-40  

**Manufacturing: 41-318**  
Wholesale Trade: 319  
Retail Trade: 320-331  
Transport & Ware: 332-340  
Information: 341-353  
Finance & Insurance: 354-359  

- Real Estate and Rental: 360-366  
- Professional (Scientific/Technical): 367-380  
- Management of Companies: 381  
- Administrative and Waste Services: 382-390  
- Educational Services: 391-393  
- Health and Social Services: 39-401  
- Arts, Entertainment, Recreation: 402-410  
- Accommodation & Food Services: 411-413  
- Other Services: 414-426  
- Government and Other: 427-440

*The IMPLAN sectors were first sorted into the 17 MRP clusters. For the agribusiness and manufacturing cluster analyses, the $1 billion initiating change was distributed over the sectors in that cluster in proportion to each sector’s gross output in the region.*
Economic Impact Analysis

• Credible information helps communities make informed decisions

• Current and predicted interactions in a local economy

• A formula to estimate employment, income, and business activity caused by economic events

• An Extension program using the IMPLAN economic analysis tool
Economic Impact Analysis program

• Futures Workshop
  • Profile, QuickTake 100, & Facilitated discussion
• Economic Impact Analysis
  • Basic
  • Advanced
Components of Futures Workshop

1. County Profile
2. QuickTake 100
3. Facilitated Discussion
   • Optional:
     • General economic data
     • State of the Economy
Basic or Advanced EIA

- The Impact Question......??
- Ground-truthing the data
- Analyze and report (findings)
- Present report and discussion
Minnesota Valley Regional Rail Authority

• Background and History
  – Class III RR owned by Carver, Sibley, Renville, Redwood, Yellow Medicine counties
  – Study commissioned in 2008

• Document the direct economic activity of the railroad including jobs, wages, and sales
  – MVRRA rail line contributed $3.2M in output
  – 21 ft and pt jobs
  – $1.4 in labor income in 2008
Minnesota Valley Regional Rail Authority

• Identify the indirect and induced “ripples’ of economic activity resulting from Railroad business
  – Which sectors – shippers wholesaled $1.3B worth of goods and services in 2008 & shipped $302 M in output!
  – Additional jobs –671 FT and PT jobs
  – Additional wages - $28M in labor income in 2008
  – Additional sales – without the RR improvements, revenues would have decreased by at least $4.9 M.
Minnesota Valley Regional Rail Authority

- Use information in strategic plan and decisions for the Rail Authority, Shippers, Coalition, and the Operating Company
Minnesota Valley Regional Rail Authority

- **Statewide significance:**
  - Disburse the report to inform public and private partners regarding funding and public policy decisions
    - Minnesota State Legislature
    - Minnesota Department of Transportation
    - Federal Rail Authority
    - Railroad operators of the Midwest
  - Economic Contribution of MVRRA & Shippers to MN State Economy – 2008
    - $359M in output
    - 1031 FT and PT jobs
    - $45.6 M in labor income in MN!
Q & A

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• Julie Rath, MVRRA Exec. Director
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