

Deep Clusters[®] & Economic Development

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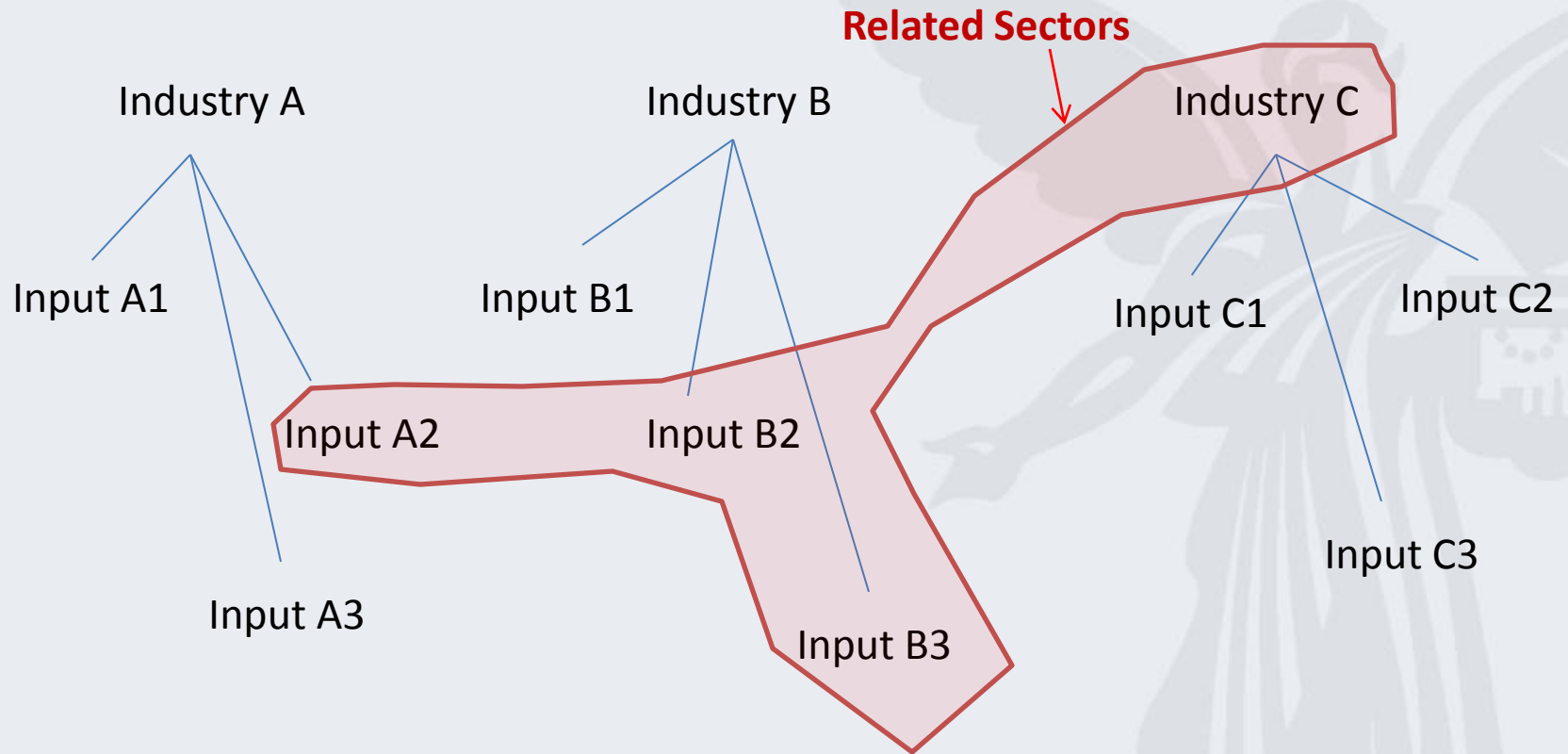
What Are Deep Clusters ©?

- Extension of traditional Cluster Analysis
- Analysis at the input *and* output levels
- Focus on cross industry Supply Chain Linkages
- Emphasizes human capital, business R&E, and attraction

Four Phases

- Phase 1: Industry & Supply Chain Identification
- Phase 2: Regional Human Capital Mapping
- Phase 3: Locational Elasticity of Key Sectors
- Phase 4: Strategic Planning & Marketing

Phase 1: Industry & Supply Chain Identification



*Share of industries imported into region are identified

Pharmaceutical and Medicine Manufacturing

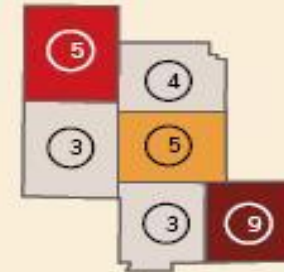
These maps show the cluster analysis of output sectors in Boone, Clinton, Hendricks, Marion, Montgomery, and Tippecanoe counties in Indiana, as measured in sales (\$M).

At right: The circled number within a county represents the number of times these sectors registered a value within that county.

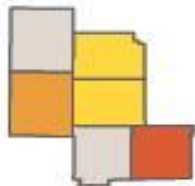
SALES (\$M)



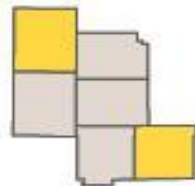
TOP PERFORMING KEY SECTOR IN SALES (\$M)



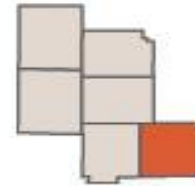
160 PHARMACEUTICAL AND MEDICINE MANUFACTURING



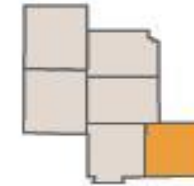
126 PAPERBOARD CONTAINER MANUFACTURING



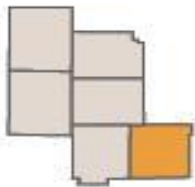
150 OTHER BASIC INORGANIC CHEMICAL MANUFACTURING



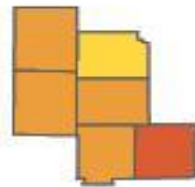
151 OTHER BASIC ORGANIC CHEMICAL MANUFACTURING



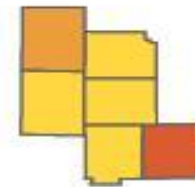
171 OTHER MISC. CHEMICAL PRODUCT MANUFACTURING



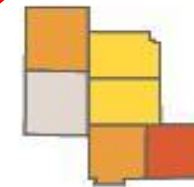
172 PLASTICS, PACKAGING MATERIALS, FILM AND SHEET



177 PLASTICS, PLUMBING FIXTURES AND ALL OTHER PLASTIC PRODUCTS



446 SCIENTIFIC RESEARCH AND DEVELOPMENT SERVICES

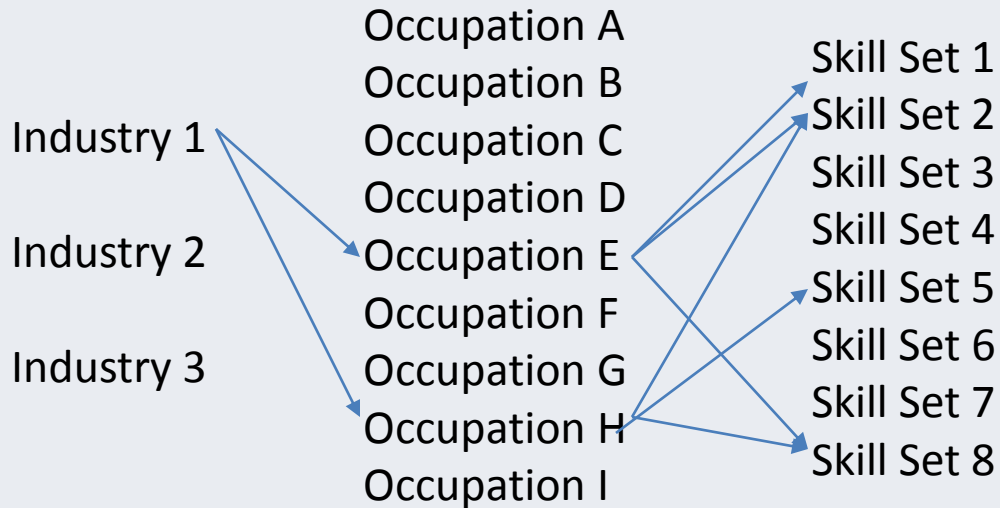


450 ALL OTHER MISC. PROFESSIONAL AND TECHNICAL SERVICES

Common Sector in four Industries

May also be common

Phase 2: Regional Human Capital Mapping



This Results in:

- Inventory of regional assets
- Identify Education/Training needs for Deep Clusters[©]
- Projected Employment/Wage trends

*This also permits us to Identify labor shortages, surplus, growth & compensation (a quest for good jobs)

Sample Output of Human Capital Mapping

<u>Industry</u>	<u>NIOM</u>	<u>Occupation</u>	<u>Skill Identification</u>	<u>Training Inventory</u>	<u>Job Information</u>
Cutting Tool and Machine Tool Accessory manufacturing	283	Numerical Tool and Process Control Programmers	Complex Problem Solving Critical Thinking Equipment Selection Mathematics Operation and Control	IvyTech IvyTech IPFW IvyTech IvyTech	<div style="background-color: #ADD8E6; padding: 10px; border: 1px solid #ADD8E6;"> <p><u>Average Wage</u> \$48,673</p> <p><u>Wage Growth</u> 5.11%</p> <p><u>Shortage Occupation</u> No</p> </div>
			Operation Monitoring Operations Analysis Programming Quality Control Analysis	DWD (contract) BSU BSU BSU/ISOM	
			Reading Comprehension Technology Design Troubleshooting Writing	IvyTech IvyTech IvyTech IvyTech	

Deep Clusters©



Phase 3: Locational Elasticity of Key Sectors

This phase will

Industry 1

Industry 2

Industry 3

- Focus on footloose, but 'present' industry
- Interviews with Leading Firms in Industry
- Secondary analysis of industry
 - Trends
 - Relocation factors
 - Incentives/policies that aid BA efforts
- Generate "lead" list with contact information
- Identify key trade groups
- Tailored, not 'canned' report

Deep Clusters[©]

- Exploits data quickly
- Depends on human judgment
- Tailored to regions
- Focused on integrating into regional strategy and/or marketing
- Long shelf life