# **in**_context_

## INDIANA'S WORKFORCE AND ECONOMY

### inside

### January Unemployment Rates

Indiana's January unemployment rate climbed to 5.8 percent in 2007, up 0.5 percentage points from a year earlier. Meanwhile, the U.S. rate fell to 4.9 percent.
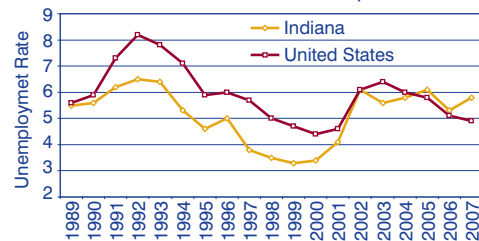


*not seasonally adjusted

### Percent Change in Population, April 2000 to July 2006

More than one-third of Indiana's 92 counties grew by at least 1,000 residents from 2000 to 2006, according to the newest data released by the U.S. Census Bureau. Hamilton County led the state both numerically and on a percentage basis, with an increase of more than 68,000 people, or 37.3 percent.
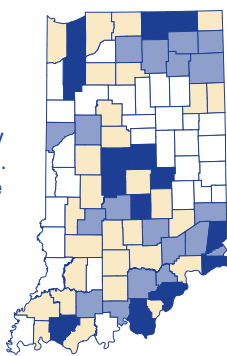


- More than 6% (14 counties)
- 3.1% to 6% (19 counties)
- 0 to 3% (29 counties)
- Decline (30 counties)

Source: IBRC, using U.S. Census Bureau data

## Applying Cluster Insights in a Rural Region

Clusters are a useful tool for strategic planning in rural regions. A recent study yielded a national database and a process to serve as a prototype for rural regional development planning and action throughout the country.[1] The study was funded by the U.S. Economic Development Administration and conducted by the Purdue Center for Regional Development, the Indiana Business Research Center at Indiana University's Kelley School of Business, and Strategic Development Group, Inc.

This article highlights a portion of this work, which used Economic Growth Region 8 (EGR 8) as a pilot region to mobilize local stakeholders in a planning process that was grounded in both secondary data analysis and local primary data collection.

### EGR 8 Overview

Indiana's EGR 8 is a primarily rural region,[2] although Indiana's seventh most populous city, Bloomington, is located in Monroe County. Aside from Monroe County, with a population of 121,407 in 2005, most of the region's counties have relatively small populations, ranging from 10,386 (Martin County) to 46,403 (Lawrence County). **Table 1** shows the best-known employers in EGR 8.

### The Planning Process

A local 25-member Regional Advisory Committee (RAC) oversaw the planning process for EGR 8. Each county's lead economic development official served on the committee, as well as eight members of the Purdue Cooperative Extension Service from counties in the region. Representatives from business, government, regional planning organizations and the nonprofit sector fleshed out the group. Combining the results from cluster analysis with ground-level information helped the committee develop strategies for regional cluster activation.

### Cluster Analysis

For each of the 17 industry clusters, **Figure 1** shows employment, the

#### TABLE 1: WELL-KNOWN EMPLOYERS IN EGR 8

Baxter (Pharmaceuticals)

Bloomington Hospital (Health Care)

Boston Scientific (Medical Devices)

Cook, Inc. (Medical Devices)

Cook Urological (Medical Devices)

Internal Medicine Associates (Health Care)

Cook Pharmica (Pharmaceuticals)

French Lick Springs Resort (Tourism)

General Electric (Consumer Appliances)

General Motors (Automotive Supplier)

GPC (Corn-Based Products)

Indiana University–Bloomington (Education)

Lehigh Cement (Cement Products)

National Gypsum (Building Products)

NSWC Crane (U.S. Naval Base)

Visteon (Automotive Supplier)

Source: PCRD



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INDIANA UNIVERSITY
Indiana Business Research Center

**A State & University Partnership for Economic Development**
Indiana Department of Workforce Development ■ Indiana Business Research Center, IU
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INDIANA WORKFORCE DEVELOPMENT

**FIGURE 1: EGR 8 CLUSTER SIZE, LOCATION QUOTIENTS AND PERCENT CHANGE IN LQ, 2001–2004**
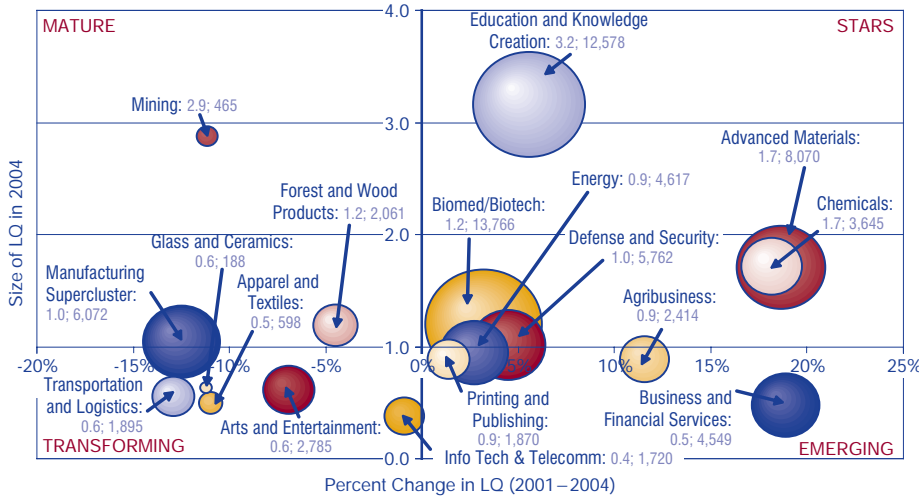
MATURE

Mining: 2.9; 465

Education and Knowledge Creation: 3.2; 12,578

STARS

Advanced Materials: 1.7; 8,070

Forest and Wood Products: 1.2; 2,061

Energy: 0.9; 4,617

Chemicals: 1.7; 3,645

Glass and Ceramics: 0.6; 188

Biomed/Biotech: 1.2; 13,766

Defense and Security: 1.0; 5,762

Manufacturing Supercluster: 1.0; 6,072

Apparel and Textiles: 0.5; 598

Agribusiness: 0.9; 2,414

Transportation and Logistics: 0.6; 1,895

Arts and Entertainment: 0.6; 2,785

Printing and Publishing: 0.9; 1,870

Business and Financial Services: 0.5; 4,549

TRANSFORMING

Info Tech & Telecomm: 0.4; 1,720

EMERGING

Size of LQ in 2004

Percent Change in LQ (2001–2004)

Note: The first value by the cluster name is the LQ for that particular cluster: the second value is the number of employees in the cluster in 2004.
Source: PCRD, using BLS-CEW data provided by the IBRC

**FIGURE 2: EGR 8 MINUS MONROE COUNTY: CLUSTER SIZE, LOCATION QUOTIENTS AND PERCENT CHANGE IN LQ, 2001–2004**
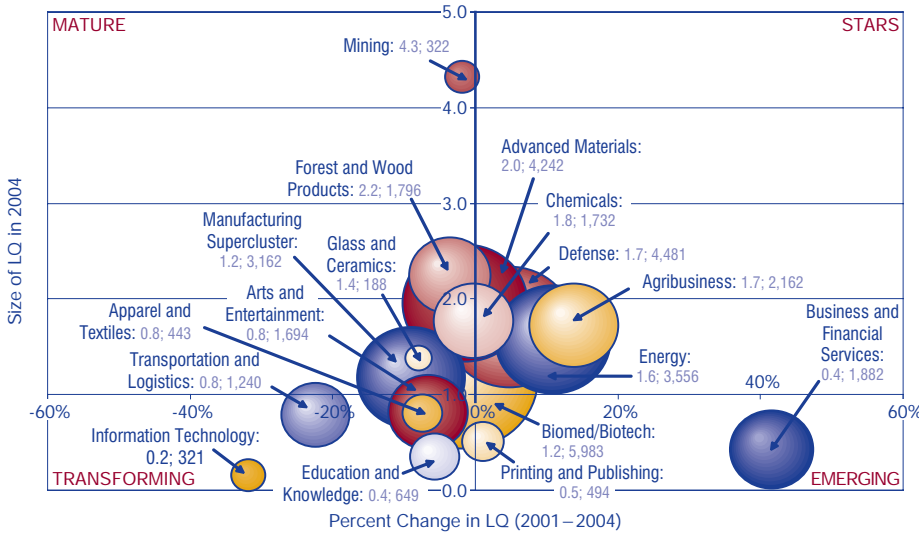


MATURE

Mining: 4.3; 322

STARS

Forest and Wood Products: 2.2; 1,796

Advanced Materials: 2.0; 4,242

Manufacturing Supercluster: 1.2; 3,162

Chemicals: 1.8; 1,732

Glass and Ceramics: 1.4; 188

Defense: 1.7; 4,481

Agribusiness: 1.7; 2,162

Arts and Entertainment: 0.8; 1,694

Apparel and Textiles: 0.8; 443

Business and Financial Services: 0.4; 1,882

Transportation and Logistics: 0.8; 1,240

Energy: 1.6; 3,556

Information Technology: 0.2; 321

Biomed/Biotech: 1.2; 5,983

TRANSFORMING

Education and Knowledge: 0.4; 649

Printing and Publishing: 0.5; 494

EMERGING

Size of LQ in 2004

Percent Change in LQ (2001–2004)

Note: The first value by the cluster name is the LQ for that particular cluster: the second value is the number of employees in the cluster in 2004.
Source: PCRD, using BLS-CEW data provided by the IBRC

location quotient (LQ, a measure of relative cluster concentration) and change in LQ.[3]

The highest location quotients in EGR 8 were associated with six clusters: education and knowledge creation; mining; advanced materials; biomedical/biotechnical; chemicals and chemical-based products; and forest and wood products. Four of these clusters had increasing LQs (meaning they became even more concentrated) from 2001 through 2004, with the advanced materials and chemicals clusters increasing quite dramatically.

Five clusters showed increased specialization during this period but still had relatively modest LQs: defense and security; agribusiness, food processing and technology; energy; printing and publishing; and business and financial services. The increase in the LQ for the latter cluster was substantial, increasing by nearly 20 percent.

Six clusters had relatively low LQs and also saw their LQs decrease from 2001 through 2004: manufacturing; arts, entertainment, recreation and visitor industries; glass and ceramics; transportation and logistics; apparel and textiles; and information technology and telecommunications.

Many of the region's main economic assets are located in Monroe County.

**Location quotients** show where industry sectors are more strongly concentrated in particular localities than they are in the nation as a whole. To the extent that a particular location quotient is greater than 1, the area is considered to be more specialized in that industry or cluster than the nation is, and industries in the cluster are assumed to be producing for export outside the area as well as for local consumption.

- **Stars:** clusters that are relatively specialized (LQ > 1) and are becoming even more specialized over time within the study area

- **Emerging:** clusters that are relatively unspecialized (LQ < 1) but are becoming more specialized over time within the study area

- **Mature:** clusters that are relatively specialized (LQ > 1) but are becoming less specialized over time within the study area

- **Transforming:** clusters that are relatively unspecialized (LQ < 1) and are becoming even less specialized over time within the study area

Figure 2 shows the LQs of industry clusters in the region excluding Monroe County.

Table 2 shows each county in the region and its specialized clusters. The counties are all quite different with respect to the local concentration of their cluster industries. While EGR 8 as a whole has a diverse and reasonably robust cluster array, each county (with the exception of Monroe and to some extent Lawrence) has a relatively small number of cluster strengths when taken individually.

This distribution of cluster assets suggests a two-pronged strategic approach. First, the region should attempt to take advantage of existing cluster strengths in its more rural areas. Second, the strategy should create stronger connections between the lesser developed areas and the more developed metro area of Monroe County. This latter approach might pursue a variety of tactics: workforce development, vendor relationships and entrepreneurship.

## Ground-Level Data

To supplement the cluster analysis, the planning team collected additional local information through interviews, focus groups and a survey of business executives.

### Interviews and Focus Groups

The planning team met with five of the six mayors in the region for in-depth interviews. The mayors, as a whole, were extremely supportive of the planning effort and offered to participate in implementing the new strategy.

In addition, regional focus groups explored the following topics:

1. Arts, Entertainment, Recreation and Visitor Industries
2. Biomed/Biotech and Advanced Materials
3. Defense and Information Technology
4. Agribusiness, Forest and Wood Products, and Energy

### EGR 8's Business Climate Survey

Respondents rated the importance of several local factors to the success of their businesses.[4] Four factors stood above the rest in importance (rated very or moderately important by more than 70 percent of those responding): workforce quality, responsive local government officials, labor availability and being close to customers.

As shown in **Table 3**, nearly half the respondents considered the availability of labor to be excellent or good for management and administrative salaried workers. Overall, the labor supply was

**TABLE 2: CLUSTERS WITH LOCATION QUOTIENTS OF 1.2 OR MORE IN EGR 8 COUNTIES, 2004**

| Clusters | Metro Sphere | Rural-Metro Interface | | | | | | Rural Sphere |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Monroe | Greene | Brown | Owen | Lawrence | Martin | Orange | Daviess |
| Advanced Materials | 1.5 | | | 6.6 | 4.1 | 1.3 | | |
| Agribusiness, Food Processing and Technology | | 1.4 | | | | | | 6.3 |
| Apparel and Textiles | | | 4.1 | | | | 1.4 | 1.6 |
| Arts, Entertainment, Recreation and Visitor Industries | | | 4.5 | | | | 1.8 | |
| Biomedical/Biotechnical (Life Sciences) | 1.3 | | | 2.7 | | | | 1.2 |
| Business and Financial Services | | | | | | | | |
| Chemicals and Chemical-Based Products | 1.7 | | | | 3.8 | 2.6 | | |
| Defense and Security | | | | | | 10.8 | | |
| Education and Knowledge Creation | 5.6 | | | | | | | |
| Energy (Fossil and Renewable) | | 3.5 | | | | 1.5 | 2.7 | 1.3 |
| Forest and Wood Products | | | | 2.3 | | | 11.4 | 2.2 |
| Glass and Ceramics | | | 1.9 | | 4.7 | | | |
| Information Technology and Telecommunications | | | | | | | | |
| Manufacturing Supercluster | | | | | 3.6 | | | |
| Computer and Electronic Product Manufacturing | | | | | | | | |
| Electrical Equipment, Appliance and Component Manufacturing | 7.1 | | | | | 5.4 | | |
| Fabricated Metal Product Manufacturing | | | | | 2.6 | | | |
| Machinery Manufacturing | | | | | 2.4 | | | |
| Primary Metal Manufacturing | | | | | 18.1 | | 3.3 | |
| Transportation Equipment Manufacturing | | | | | 4.9 | | | |
| Mining | 1.6 | | | 3.0 | 9.8 | 2.7 | 7.6 | |
| Printing and Publishing | 1.2 | | | 1.4 | | | | |
| Transportation and Logistics | | | | | | | | 1.5 |

Source: PCRD, using 2004 BLS-CEW data provided by the IBRC

**TABLE 3: RATINGS OF LABOR AVAILABILITY AND QUALITY IN EGR 8, 2006**

| Type of Labor | Labor Availability Percent of Respondents Indicating: | | | | | Labor Quality Percent of Respondents Indicating: | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Excellent | Good | Fair | Poor | n/a | Excellent | Good | Fair | Poor | n/a |
| **Hourly** Skilled | 1 | 35 | 32 | 19 | 13 | 6 | 50 | 27 | 6 | 12 |
| Semi-Skilled | 4 | 37 | 35 | 7 | 16 | 4 | 45 | 30 | 7 | 14 |
| Unskilled | 15 | 28 | 22 | 12 | 22 | 4 | 28 | 32 | 16 | 19 |
| **Salaried** Management/Administrative | 8 | 40 | 30 | 12 | 11 | 16 | 49 | 20 | 4 | 11 |
| Professional/Technical | 9 | 29 | 31 | 19 | 12 | 13 | 46 | 20 | 9 | 12 |
| Sales/Marketing | 4 | 27 | 25 | 15 | 29 | 4 | 38 | 26 | 3 | 29 |

Source: IBRC, using survey results

best for unskilled workers. Perhaps not surprisingly, these unskilled workers were also rated as lower in quality than the other categories of labor. Management and administrative workers, on the other hand, had the strongest quality ratings with 65 percent rating them either excellent or good.

When discussing regional assets, the most frequent observations concerned the good quality of life in the region, shaped by a variety of factors such as recreational and cultural opportunities, beautiful natural environment, high quality health care, low crime, affordability, and the relaxed pace of life compared to urban areas. Some of the region's more prominent economic assets were also mentioned frequently, including its higher education institutions, the strong life sciences cluster, and the Crane Naval Surface Warfare Center. The region's location was often viewed as a strength, reasonably close to many larger cities and markets and centrally located within the United States.

When discussing regional liabilities, the most common drawback concerned poor transportation infrastructure and the impact this has, together with long distances to larger cities, on access to markets and services. Contrasting with the advantage cited earlier of having access to strong higher education institutions is the relatively low educational attainment of the workforce and the general population.

## Cluster Strategy

The RAC ultimately selected the following cluster groups to be the focus of regional development efforts:

**Energy; Agribusiness, Food Processing and Technology; Forest and Wood Products:** Potential exists for significant growth given the current strength of this cluster and the opportunities for alternative energy—especially in biomass.

**Biomedical/Biotech; Advanced Materials:** The committee is looking to activate a hospital/health care roundtable to help small, local health care groups thrive in a difficult rural environment and to help small advanced materials and manufacturing firms retool to supply the growing biotech sector.

**Arts, Entertainment, Recreation and Visitor Industries:** This cluster has a number of possibilities, ranging from a series of regional festivals to year-around exhibits of the work of regional artists.

**Transportation and Logistics:** The committee not only saw this cluster as a major future area for activation (with the expansion of I-69) but also as a major enabling and supporting cluster for expanding business and cultural tourism.

**Defense and Security:** Because NSWC Crane is the second largest employer in southwest Indiana, this cluster is critical to the region's economic future. Three counties in the region have already pioneered a new tech park on the west side of Crane. At least one county is planning a similar park on the east side. Enabling all eight counties to gain from Crane's economic engine is important.

**Business and Financial Services:** The RAC felt the region was underserved in this cluster and wants to continue developing it.

## Next Steps

The planning team continues to talk with potential funders about providing resources to enable implementation. If funding can be found, implementation could begin in 2007.

## Notes

1. A grant from the U.S. Economic Development Administration supported this study to examine industry clusters in rural communities as a basis for economic development and strategic planning. To read the full report, *Unlocking Rural Competitiveness: The Role of Regional Clusters*, or to access maps and the online database, visit www.ibrc.indiana.edu/innovation/.
2. EGR 8 consists of Brown, Daviess, Greene, Lawrence, Martin, Monroe, Orange and Owen counties.
3. For more detail on location quotients and definitions of the 17 clusters, see the full report at www.ibrc.indiana.edu/innovation/reports.html.
4. The 112 responding organizations were generally long-term residents of the region and only 17 percent were headquartered outside of EGR 8. Forty-six percent of the organizations in this sample were located in Monroe County.

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