

**IN the Spotlight:**

## The Recession of 2001

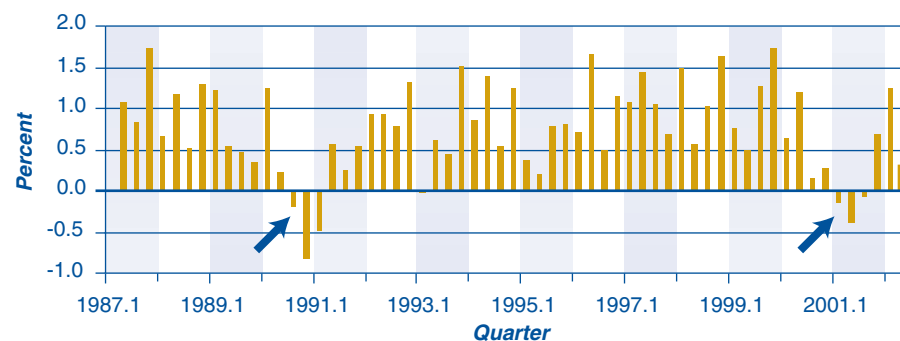
The standard way of defining a recession looks at the value of economic output adjusted for inflation. This measure is known as Real Gross Domestic Product (GDP). Two consecutive quarters of decline in Real GDP is generally considered to be a recession. By this definition, the U.S. had a recession in the first three quarters of 2001 (see Figure 1).

This most recent recession was equal in duration to the recession of 1990 (three quarters) but was not as severe, and the economy did not take as long to recover. Figure 2 shows how each recession proceeded from its prior peak. In the 1990-91 recession, GDP fell 1.5 percent from its peak in the second quarter of 1990. The 2001 recession

*(continued on page 2)*

**Figure 1: Percent Change in Gross Domestic Product**

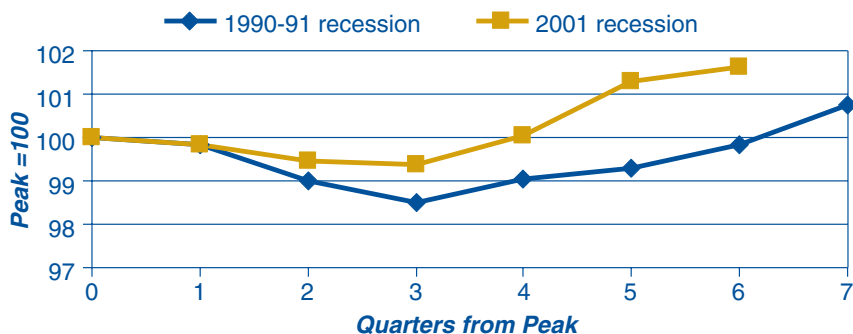
The U.S. experienced a recession in the first three quarters of 2001



Source: U.S. Bureau of Economic Analysis

**Figure 2: Comparison of Two Recent Recessions**

The 2001 recession was over in just one quarter



Source: U.S. Bureau of Economic Analysis

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**Indiana  
Unemployment  
Rate for  
September 2002:  
4.6%**

**IN the Spotlight**

(continued from page 1)

**Many people are reacting to the recent recession as if it were the mother of all economic calamities.**

saw a 0.6 percent decline from the peak in the fourth quarter of 2000.

The U.S. economy took a year to exceed its prior peak in the 1990-91 business cycle. The 2001 recession was over in just one quarter.

Many people, however, are reacting to the recent recession as if it were the mother of all economic calamities. Part of this response is due to the dramatic decline in the stock market, which gets considerable press attention and which, because of more wide-spread stock ownership, is of greater importance to people than it would have been in the past.

Another part of the response is traditional. Many people have never seen a business cycle in their active economic

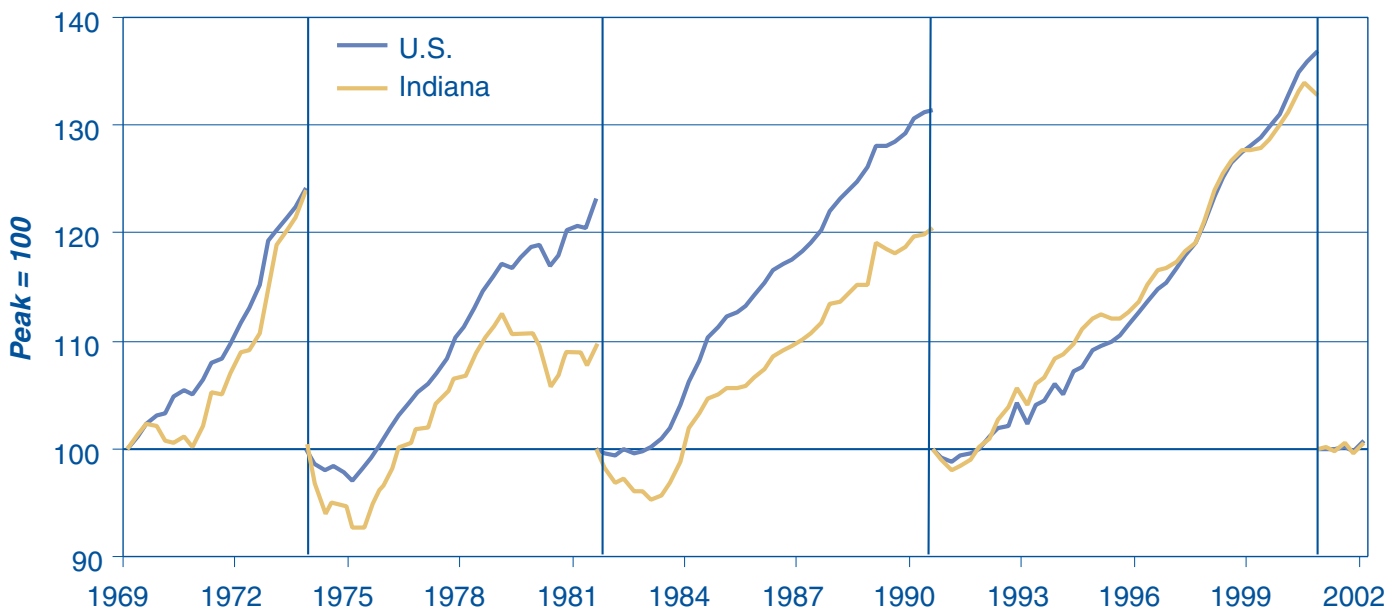
lives. If we assume 20 years of age is the average entry age into the full-time civilian labor force, people who are under 31 years old today never saw a recession. That is approximately 2.7 million people in Indiana and 123 million nationwide.

Figure 3 demonstrates how recent recessions have been experienced in Indiana and the U.S. The measure here is real personal income as reported by the U.S. Bureau of Economic Analysis. From this graph it becomes very clear that the 2001 recession was not comparable with prior recessions.

In earlier recessions, the decline from the peak was more severe than in the 2001 recession. In each recession Indiana suffered more than the nation.

**Figure 3: Cycles in Real Personal Income**

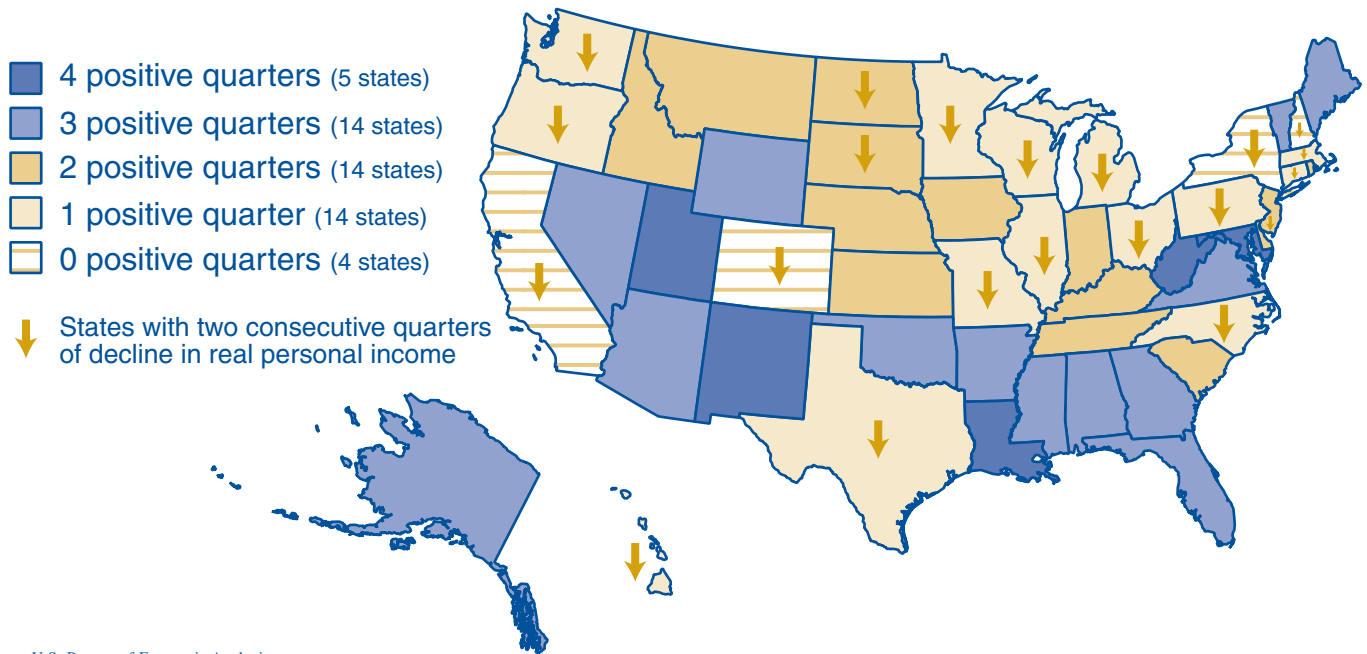
**In each recession, Indiana suffered more than the nation, but the difference could hardly be seen in 2001**



Source: U.S. Bureau of Economic Analysis

**Figure 4: Number of Calendar Quarters with Growth in Real Personal Income During 2001**

**Only 21 states had two consecutive quarters of decline in real personal income over the past six quarters**



Source: U.S. Bureau of Economic Analysis

But the most recent decline barely shows up as a recession at all and there is little disparity between Indiana and the U.S. as a whole. Where the nation showed a decline from the peak (in 2000:4) of 0.32 percent, Indiana was close behind with a decline of just 0.34 percent. By the first quarter of 2002, the U.S. recovered to 0.78 percent above the prior peak and Indiana—at 0.50 percent above its prior peak—was one of 21 states to recover from the recession.

Figure 4 indicates that four states failed to have even one quarter of growth in real personal income during 2001. Because these four included California and New York, they had a great influence on national data and the media. Indiana was one of 14 states

with two positive quarters in 2001. Kentucky matched us in that regard, but our other neighbors, Michigan, Illinois and Ohio, only had a single quarter of growth. Five states enjoyed a year in which there was no decline at all in personal income. In fact, only 21 states had two consecutive quarters of decline in real personal income over the past six quarters. Indiana was not one of them.

Thus, the recent recession was shallow, short and of limited geographic dispersion. We must await revisions to the data before any conclusive statements can be made. Despite the feelings of our citizens and the rhetoric of some politicians, this economy may not be as bad as we have been believing.

**Despite the feelings and rhetoric, this economy may not be as bad as we have been believing.**

—Morton J. Marcus, Executive Director, Indiana Business Research Center, Kelley School of Business, Indiana University

## Looking to 2003—Recovery to Continue

The national economy will continue to recover from recession in early 2003 and will avoid a “double-dip” downturn that was feared by some economists, according to a forecast presented in November by economists in Indiana University’s Kelley School of Business.

According to the forecast, the national economy will continue to grow next year at this year’s rate with the consumer continuing to be the key to growth. Investment spending by firms, which plunged during the recession, should stabilize and begin to grow. The gross domestic product (GDP) is expected to increase by 3.2 percent in 2003.

Steady auto sales and a strong housing market are expected to continue and will help the Indiana economy, which benefits from durable goods purchases. Also, an increase in jobs at service-oriented firms should fuel the state’s employment growth in the next year. State employment is expected to turn around in 2003 with the addition of 30,000 jobs.

The annual forecast is prepared by a group of IU economists who use the Indiana Econometric Model as their starting point. The model combines state statistics and a national forecast

to develop projections for the coming year. The panel has presented an annual forecast since 1972.

A more detailed presentation of the national, international, state and local metro area forecasts will be available in the Winter issue of the *Indiana Business Review*, due out in print and online in December ([www.ibrc.indiana.edu](http://www.ibrc.indiana.edu)).

### Gross Domestic Product:

- It is expected to increase by 3.2 percent (adjusted for inflation).

### Inflation:

- As measured by the consumer price index, inflation will hover just above 2 percent for the year.

### Unemployment:

- Nationally, it will approach, but remain below, 6 percent.

### Consumer Spending:

- The consumer will continue to support the expanding economy with autos again selling close to 17 million units and a firm housing market approaching recent high levels of construction and sales.

### Government Spending:

- Expansionary federal government spending will be largely offset by flat state and local expenditures.

### Investment:

- Business investment in equipment has been lagging, but should advance as the year progresses, adding strength to the economic expansion. Investment in structures, however, is not expected to offer much new strength in 2003.

### Short-term Interest Rates:

- These may fall at first but should be steady when looked at on an annual basis. Long-term rates (30-year mortgages) are seen as stable to rising over the course of the year.

### Productivity:

- Robust productivity growth in the U.S. versus abroad will keep the dollar strong and contribute to continuation of the large international trade deficit.

### Indiana:

- It will be the first time in several years that the state will experience growth in total employment.

### Risk:

- The major risk of the forecasts comes from the uncertainties about war with Iraq. Even if war itself does not develop, the threat of war keeps petroleum prices high and investors on edge.

## Outlook 2003:

Get detailed economic forecasts in the upcoming issue of the *Indiana Business Review*, online this December at

[www.ibrc.indiana.edu](http://www.ibrc.indiana.edu)

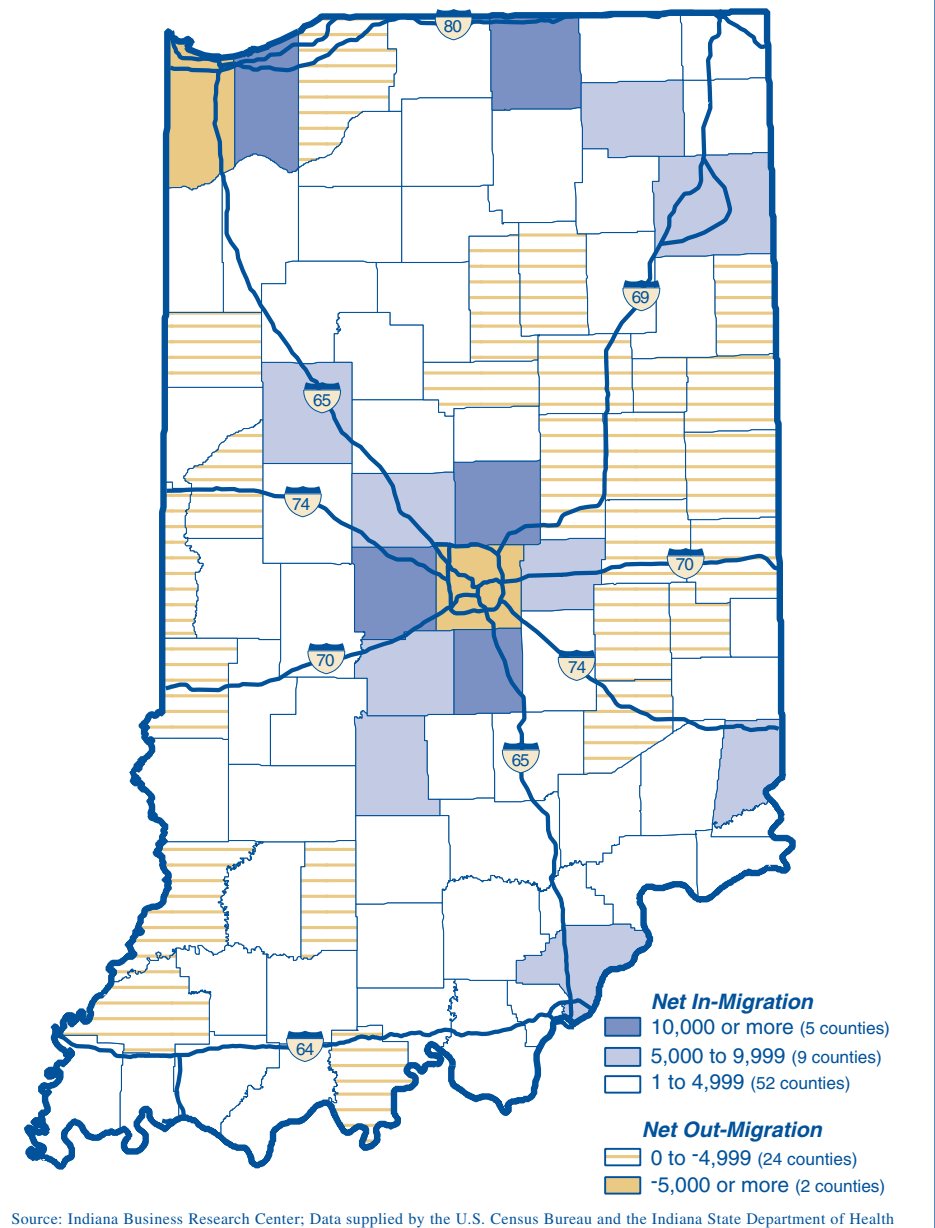
## The Impact of Migration on Population Change

The population of any given area can only change through three processes: birth, death and migration. Health departments at the state and local levels keep fairly complete records of births and deaths, but information on gross migration flows—in or out—is practically non-existent. The net effect of migration on population size can be reasonably approximated, however, from census counts and vital statistics. Using data provided by the Indiana State Department of Health, along with 1990 and 2000 census counts, the Indiana Business Research Center estimates that net migration, the difference between inflows and outflows, accounted for 216,000 new state residents in the 1990s—40 percent of Indiana’s total population increase for the decade.

Figure 1 presents one view showing the magnitude of net migration by county in the 1990s. Indiana’s two largest counties in population size, Marion and Lake, each lost more than 5,000 residents through migration. A large cluster of 15 counties in east central Indiana, along with nine other mostly rural counties scattered throughout western Indiana, also experienced net out-migration. Led by Hamilton County with a gain of 58,000 people, five counties gained over 10,000 new residents through migration. Hendricks, Johnson and Porter—counties on the suburban fringes of Indianapolis and Gary—also experienced migration gains over 10,000. In Elkhart County, a large stream of Hispanic migrants accounted for much of the population growth over the decade.

**Figure 1: Estimated Net Migration by County, 1990-2000**

**Suburban growth around Indianapolis was especially strong**

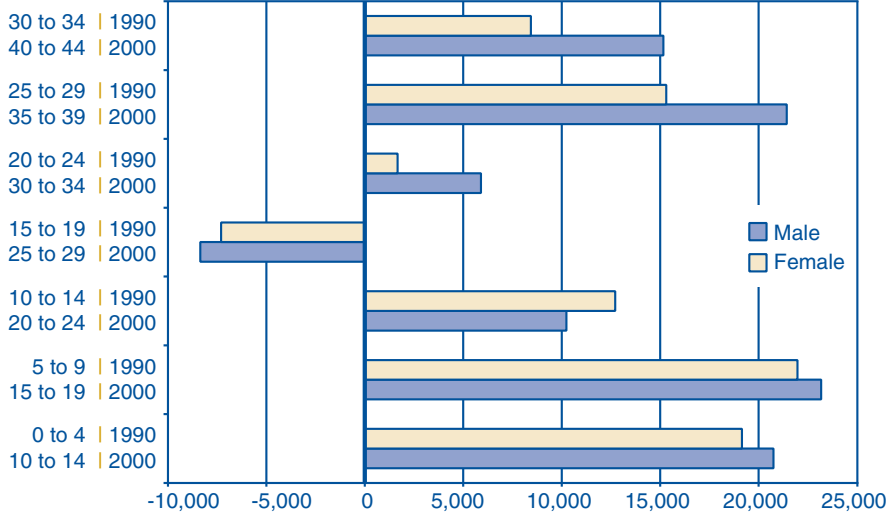


Suburban growth around Indianapolis was especially strong, such that six of seven counties bordering on Marion County gained at least 5,000 new residents via migration. The numbers indicate that migrants into the Indianapolis suburbs did not come

exclusively from Marion County. The eight doughnut counties that make up the balance of the Indianapolis Metropolitan Statistical Area (MSA) collectively had a net gain of 122,000 migrants, while Marion County’s net loss was fewer than 6,000.

**Figure 2: Estimated Net Migration in Indiana, 1990-2000**

**Indiana witnessed net out-migration in just one of the seven age groups**



Source: Indiana Business Research Center; Data supplied by the U.S. Census Bureau and the Indiana State Department of Health

The analysis of net migration can be extended to examine its distribution by age. A county's population age 30 to 34 in the year 2000, for example, is composed of county residents who were ages 20 to 24 in 1990, minus resident deaths among persons in this age cohort, plus net migration of persons in the age cohort to and from the county. Net migration, the unknown variable in this equation, is obtained through simple algebra.

Figure 2 shows the pattern of net migration by sex and selected age cohorts for the state between 1990 and 2000. Since this is a cumulative 10-year total referring to age categories 10 years apart, the interpretation of this information can be somewhat elusive. Indiana witnessed net out-migration among only one of the seven featured age cohorts. The cohort composed of people who were ages 15 to 19 in 1990 included students

enrolled in high school in their hometowns as well as some students attending colleges and universities around the state. By 2000, this cohort shrunk by roughly 8,400 men and 7,300 women, as many young adults, by then aged 25 to 29, presumably completed their education and left the state for job opportunities elsewhere. Keep in mind that the negative bars displayed for this cohort do not mean that the state lost members of the 15 to 19 age group. In fact, Indiana's population of 15- to 19-year-olds increased by nearly 25,000 between 1990 and 2000.

The news concerning other age cohorts is more encouraging. Growth in the 10 to 14 cohort in 1990 appears to be a testament to the ability of Indiana's colleges and universities to attract more out-of-state students than the number of high school Hoosiers it loses to other states after graduation.

In the two oldest cohorts depicted in Figure 2, Indiana witnessed substantial net in-migration. The vast majority of people in these cohorts had completed their education by 1990, so migration for education is unlikely to be a factor. In-migrants outnumbered out-migrants in these cohorts, with perhaps many native sons and daughters of Indiana returning to the Hoosier state to raise a family.

Migration flows associated with college attendance are best examined by focusing on a county with a large university, such as Delaware County. Figure 3 clearly displays the impact of Ball State University in the positive net migration values for cohorts who were in the traditional college ages in 2000. This is also demonstrated in the negative values for older cohorts. Many members of the younger cohorts, too young for college in 1990, lived outside Delaware County at that time, but by 2000, large numbers of them had moved to the county to attend BSU. On the other hand, many people among the older cohorts were in the traditional college age range in 1990 and enrolled at BSU; by 2000 they were 25 to 34 years of age and had left the university and the county. (Note that the greater length of the female bars in the relevant college cohorts reflect that college enrollment is dominated by women.)

Figure 4 presents a typical pattern of net migration for a mostly rural Hoosier county. Net out-migration prevails among cohorts ages 10 to 14 and 15 to 19 in 1990. On balance, members of these cohorts moved out of Franklin County to attend college or

seek jobs. In contrast, the cohort that was 20 to 24 in 1990 grew by more than 300 people by the year 2000, presumably on the strength of young adults returning to Franklin County after attending college or gaining work experience elsewhere. The county is adjacent to the Cincinnati-Hamilton, Ohio metropolitan area, and may have benefited from the strong suburbanization trend of the 1990s. This is suggested by the positive net migration streams for cohorts aged 35 to 44 in 2000.

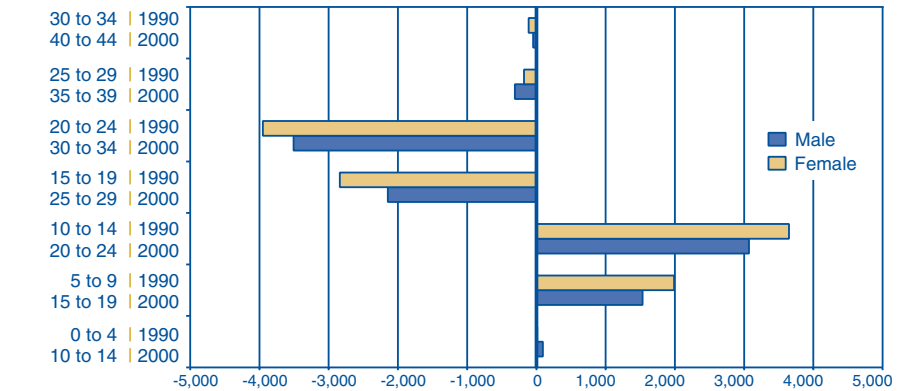
Further evidence of city-to-suburb migration and its distribution by age is presented in Figure 5. The chart shows estimated 1990 to 2000 net migrants for seven age cohorts in the Indianapolis MSA, disaggregated into Marion County and the eight suburban doughnut counties. For the two youngest cohorts (ages 0 to 9 in 1990), Marion County was a net exporter and the suburbs were net importers of children. This reflects, of course, the migration behavior of the children's parents, represented primarily in the top two cohorts of Figure 5.

In the three middle cohorts, people ages 20 to 34 in 2000, Marion County experienced strong net in-migration, as more young adults moved into the urban center than moved out. This could be for a combination of reasons including jobs and lifestyle. The net flow of migrants is out of Marion County for older cohorts, however, perhaps due to family preferences in favor of suburban school districts.

—John Besl, Research Demographer, Indiana Business Research Center, Kelley School of Business, Indiana University

**Figure 3: Estimated Net Migration in Delaware County, 1990-2000**

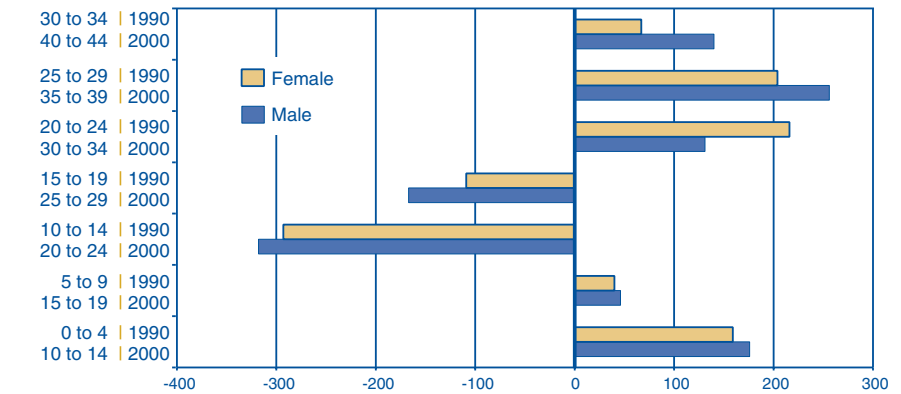
**College enrollment is dominated by women**



Source: Indiana Business Research Center; Data supplied by the U.S. Census Bureau and the Indiana State Department of Health

**Figure 4: Estimated Net Migration in Franklin County, 1990-2000**

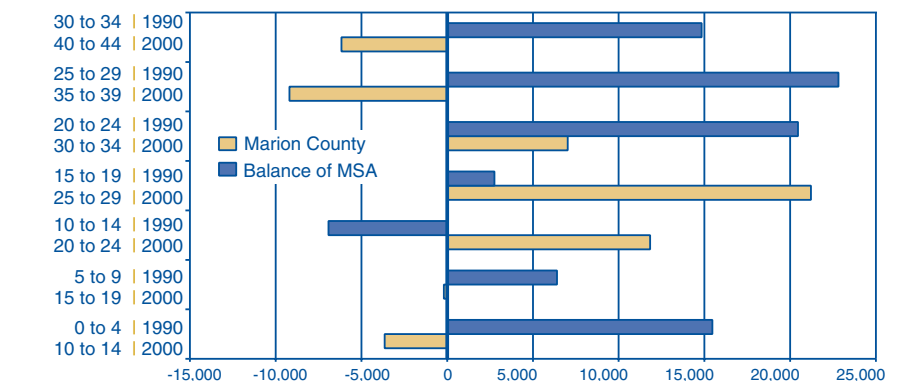
**Strong suburbanization from the Cincinnati metro area benefited Franklin**



Source: Indiana Business Research Center; Data supplied by the U.S. Census Bureau and the Indiana State Department of Health

**Figure 5: Estimated Net Migration in Marion County and Balance of MSA**

**Families with children continue to prefer the suburbs to the city**



Source: Indiana Business Research Center; Data supplied by the U.S. Census Bureau and the Indiana State Department of Health



## Region Six: East Central Indiana

### The Area

Region 6 is comprised of seven counties: Blackford, Delaware, Grant, Henry, Jay, Madison and Randolph. Delaware County is the sole county in the Muncie Metropolitan Statistical Area (MSA). Madison County is part of the Indianapolis MSA.

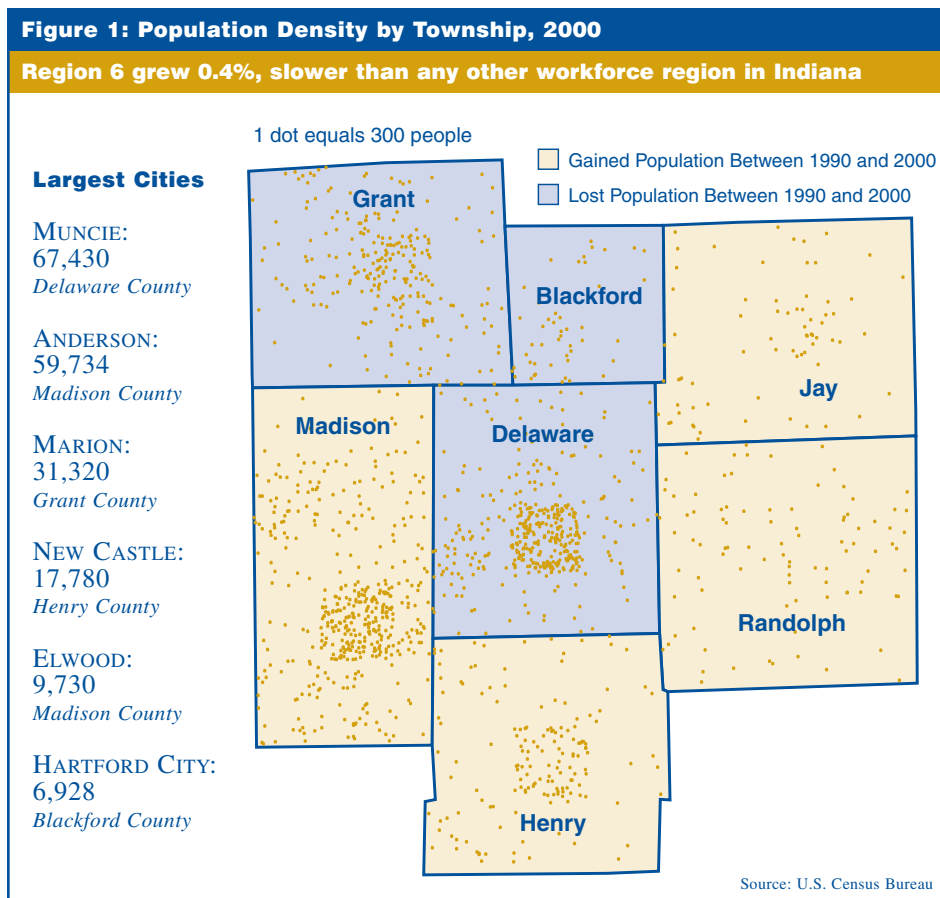
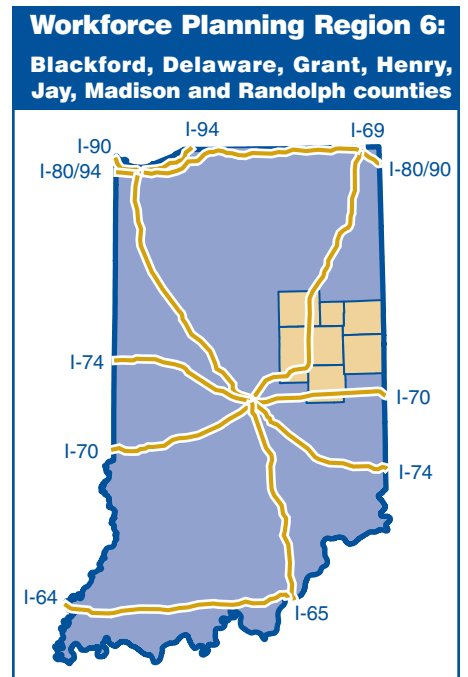
### Population

Region 6 had 437,293 residents in 2000. Madison County accounted for 30.5 percent of the area's population with 133,358 people. An additional 27.2 percent of the population resided in Delaware County (see Figure 1).

Region 6 grew just 0.4 percent (1,930 people) between 1990 and 2000. This was slower than any other workforce region in the state, trailing eleventh ranked Region 5 by 3.1 percent. Blackford, Delaware and Grant counties each had a slight population loss, while Madison County experienced the largest growth at 2.1 percent.

### Industrial Mix and Jobs

According to labor market analysts at the Indiana Department of Workforce Development, well known employers in Region 6 include: 3-M, Borg-Warner, New Venture Gear, Burlington



Trucking, Ball Memorial Hospital, Ball State University, Weaver Popcorn, Thomson Consumer Electronics, DaimlerChrysler, New Castle Chassis, Indiana Glass, Red Gold, Guide, Delphi Automotive, Delco Remy America/Delco Remy International, St. John's Medical Center, Union City Body, and Anchor Glass Container Corporation.

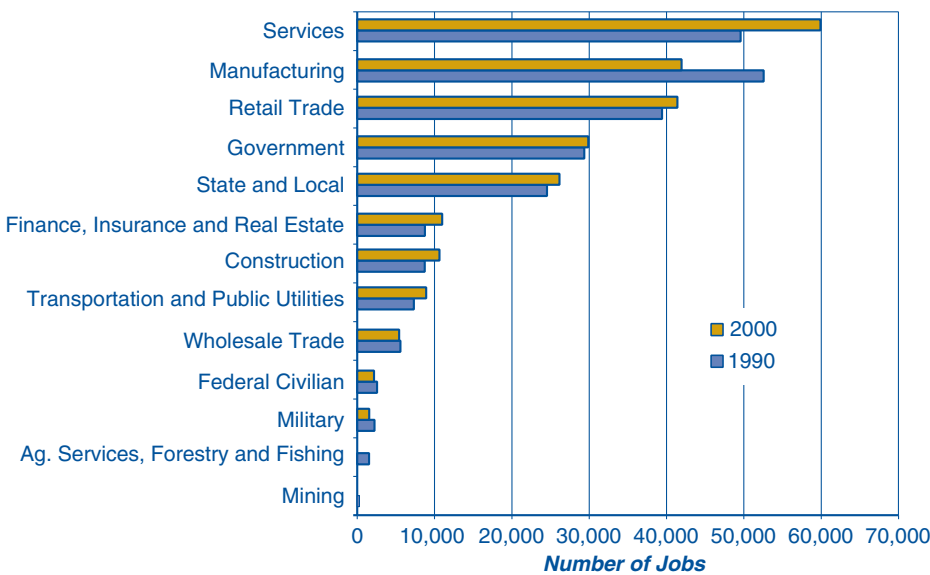
Employment in Region 6 grew 4.4 percent during the 1990s. Henry County had the largest percent gain of 15.3 percent (2,646 jobs), while Delaware County had the greatest numeric increase of 6,521 jobs (10.4 percent). Employment actually declined in Grant (329 jobs), Madison (784 jobs) and Randolph counties (146 jobs).

Figure 2 shows the change in industry employment between 1990 and 2000. The finance, insurance and real estate sector had the largest percent



**Figure 2: Changes in Regional Industry Employment, 1990-2000**

The services industry accounts for 28.2% of non-farm employment



Source: U.S. Bureau of Economic Analysis

growth at 25.5 percent (2,231 jobs). The largest numeric increase was 10,317 jobs in the services industry (20.8 percent). The services industry also made up the largest segment of the workforce within the region, accounting for 28.2 percent of non-farm employment and 59,897 jobs.

In the five years between August 1997 and August 2002, the service industry grew a mere 0.6 percent (100 jobs) in the Muncie MSA but still accounted for 28.5 percent of all non-farm employment in 2002.

Manufacturing jobs declined by 2,200 in the MSA and dropped to 15.9 percent of non-farm employment.

Government employment experienced the most rapid growth in the MSA at 23.4 percent (1,800 jobs) during that time period.

### Income and Wages

Personal income per capita in the region was \$23,945 in 2000. This was almost \$3,000 less than the state average of \$26,933. Of the 12 workforce development regions, Region 6 ranked eleventh, ahead of Region 7, which is located in primarily rural west central Indiana.

As seen in Table 1, the average quarterly wage per job in Region 6 for the fourth quarter of 2001 was \$744 less than in Indiana overall. With the exception of manufacturing, wages for each industry were lower than in the state. The largest difference occurred in the fast-growing finance, insurance and real estate sector where the average quarterly wage per job was \$2,870 lower than in the state.

—Rachel Justis, Research Associate, Indiana Business Research Center, Kelley School of Business, Indiana University

**Table 1: Average Employment and Earnings for Fourth Quarter 2001**

Industry	Employment		% of Employment		Avg. Quarterly Wage/Job	
	Region 6	Indiana	Region 6	Indiana	Region 6	Indiana
Total Nonfarm	8,021	2,865,107	100%	100%	\$7,460	\$8,204
Agriculture, Forestry & Fishing	81	27,389	0.5%	1.0%	\$6,011	\$6,114
Mining*	D	6,619	0.0%	0.2%	n/a	\$13,110
Construction	778	149,019	3.7%	5.2%	\$8,430	\$9,993
Manufacturing	519	617,829	21.0%	21.6%	\$11,639	\$10,961
Transportation and Public Utilities	373	159,689	4.9%	5.6%	\$7,913	\$9,486
Wholesale Trade	432	138,350	2.6%	4.8%	\$8,571	\$10,814
Retail Trade	2,053	560,782	20.7%	19.6%	\$3,724	\$ 4,218
Finance, Insurance & Real Estate	798	138,736	3.7%	4.8%	\$7,550	\$10,420
Services	2,559	941,016	35.2%	32.8%	\$6,943	\$7,619
Public Administration	223	125,070	5.3%	4.4%	\$7,006	\$7,951

\*Data for mining establishments were nondisclosable in Region 6.  
Source: Indiana Business Research Center, Indiana Industry Employment and Wages, based on ES-202 data from the Indiana Department of Workforce Development

## Tracking How Indiana Does Business

More than 100,000 businesses in Indiana will receive economic census forms this December. This census, taken every five years by the federal government, is one of the most important measurements of our economy, both nationally and locally. The census provides the foundation for many key economic indicators, such as gross domestic product and gross state product. Economic policy makers in federal, state and local governments use the data to project trends, plan for development and assess the impact of changes in their economies. Businesses can study their own industries and look for new business markets.



Early in the 19th century, Congress responded to a rapid increase in industrial activity and ordered census takers—in those days federal

marshals—to “take an account of the several manufacturers within their several districts, territories and divisions” as part of the population census in 1810. As the marshals traveled from house to house counting the population, they asked questions on 25 categories of manufactured products and more than 200 kinds of goods. Today, the economic census covers five million businesses nationwide and more than 100,000 in Indiana (specifically, those with paid employees).

For the first time, information will be collected on emerging sectors of the economy. The electronic commerce sales of practically every industry will be measured, including the sales,

receipts and revenue from any transaction completed over an Internet, Extranet, Electronic Data Interchange (EDI) network, electronic mail, or other type of online system. Now, such measures exist only nationally and for very few sectors.

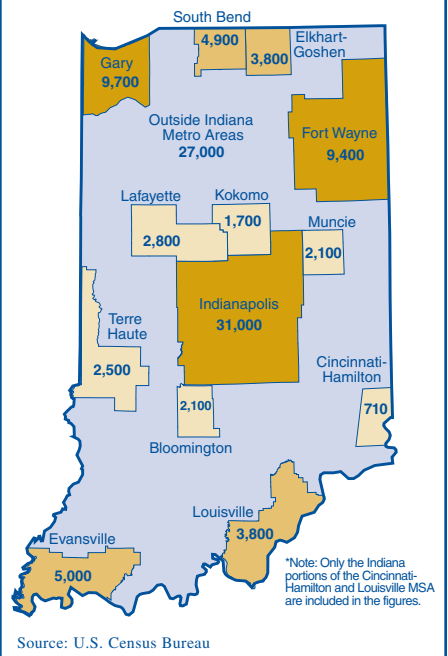
Newly added coverage of leased employment will fill a gap where only permanent employees had been counted. Leased employees are those whose payroll is filed with the IRS by an employee leasing company, not by the company where the work is performed. And the results of the 2002 Economic Census will yield data on supply chain relationships among the manufacturers of goods, those who store and distribute goods, those who transport goods, and those who sell and bill for goods. Questions from this census will identify whether certain functions of the business are outsourced to other companies.

Data covering calendar year 2002 will be collected and processed during 2003, and the first data will be released beginning in early 2004. Ultimately, the Economic Census will yield over 1,600 data products, with information on more than 1,000 industries and over 50,000 geographic areas. How will businesses, governments and economic developers use the results?

- Gauge the competition
- Calculate market share
- Business to business
- Site location
- Design sales territories and set sales quotas
- Enhance business opportunity presentations to banks or venture capitalists

**Figure 1: Economic Census Forms**

**110,000 forms sent to Indiana**



- Maintain local tax base
- Disaster Response

Indiana has always had one of the highest response rates to this census. For the first time all businesses, regardless of size, will be given the option of filling out their forms electronically. It is important for Hoosier businesses to participate fully, accurately and quickly when they get the call to respond to this census. The U.S. Census Bureau provides comprehensive assistance on the web ([www.census.gov/econhelp](http://www.census.gov/econhelp)) and via a toll-free helpline (1-800-233-6136) that will be answered by Census Bureau employees during business hours (8 a.m. to 8 p.m., EST, Monday through Friday).

—Carol O. Rogers, Associate Director, Indiana Business Research Center, Kelley School of Business, Indiana University



# IN CONTEXT

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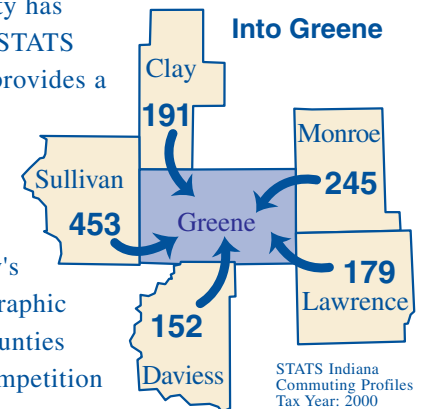


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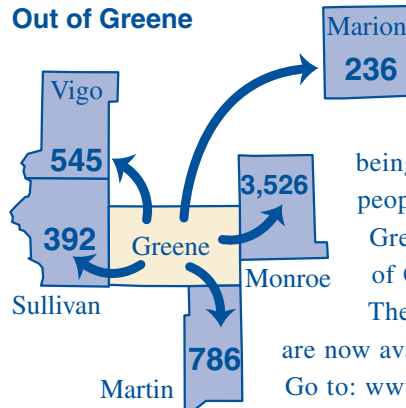
## Mining for Data

Indiana's economic development community has access to a significant information resource, STATS Indiana. A data integration service, this site provides a value-added approach to demographic and economic data for every county in Indiana, such as labor force, employment by industry, Census 2000 and other key indicators. Ranks and percentages provide insight into a county's (or region's) place in the economic or demographic scheme of things. And with the new USA Counties IN Profile, developers can check out their competition nationwide.



Commuting patterns for Indiana counties are tabulated annually by staff at the Indiana Business Research Center. Data is based on the IT-40 income tax returns collected by the Indiana Department of Revenue. STATS Indiana Commuting

### Out of Greene



Profiles provide an in-depth look at the number of people going into or out of each county for work. The latest addition to these profiles is maps, with the example being Greene County, Indiana. More than 1,700 people come from another county to work in Greene County, while more than 5,500 residents of Greene County go outside the county to work. The maps show this flow of workers. Such maps are now available for each county in the state.

Go to: [www.stats.indiana.edu/commframe.html](http://www.stats.indiana.edu/commframe.html).

For all the latest state and county figures and complete time series data sets related to the Indiana economy, visit the following Internet sites:

[www.ibrc.indiana.edu/incontext](http://www.ibrc.indiana.edu/incontext)

[www.stats.indiana.edu](http://www.stats.indiana.edu)

[www.indianacommerce.com](http://www.indianacommerce.com)

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