inContext

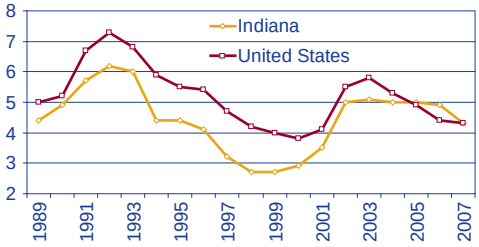
INDIANA'S WORKFORCE AND ECONOMY

JULY 2007

inside

May Unemployment Rates

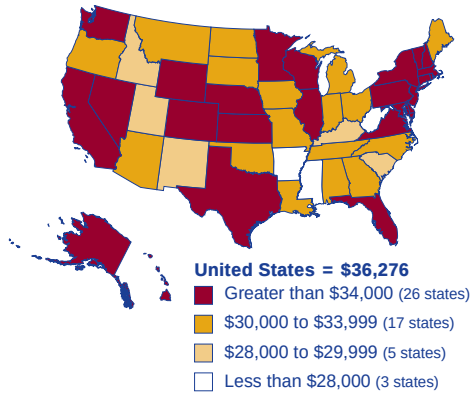
Indiana's May unemployment rate dropped by 0.6 percentage points from 2006 to 2007, leveling off with the nation's rate of 4.3 percent.



*not seasonally adjusted

Per Capita Personal Income

Indiana's 2006 per capita personal income was $32,526, up $1,353 since 2005.



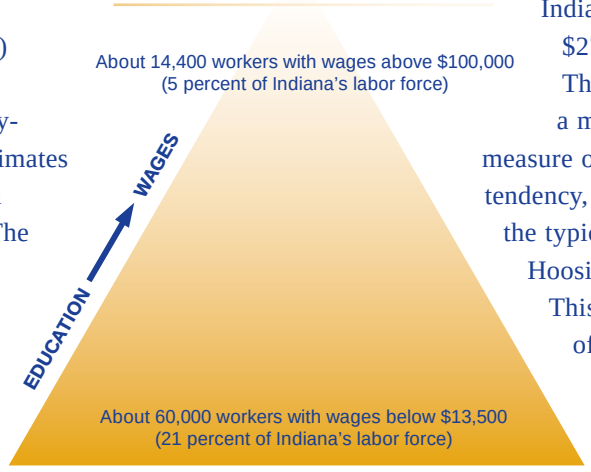
Source: IBRC, using U.S. Bureau of Economic Analysis data

The Wage Pyramid: Wage Variance in Indiana

No one is surprised that an experienced, successful attorney draws higher wages than a legal secretary or a law clerk. A store manager takes home a bigger paycheck than the employees working the front counter of a fast-food restaurant. Experience pays. Training and possessing skills in demand do too. Entry-level workers typically form the base of a wage pyramid. As the pyramid grows higher, it reflects the shrinking numbers of employees with more experience, training, skills and ultimately wages. The Indiana Department of Workforce Development (DWD) works to close wage and skill gaps with a mission to raise workers up one level. DWD's goals include raising Hoosier per capita income and the skills of our workforce (see **Figure 1**).

In collaboration with the Bureau of Labor Statistics, DWD operates the Occupational Employment Statistics (OES) program and produces survey-based wage estimates for 750 Indiana occupations.[1] The distribution of these wages can be examined to shed light on how wages vary within and across various occupational families or groups. The OES survey includes all industries and presents estimates in terms of wages that represent the arithmetic average, the 10th percentile, the first quartile, the median, the third quartile and the 90th percentile. Examination of the wages of those earning the least (the lowest 10 percent of wages) and the most (the highest 10 percent) provides a measure of the amount of wage variance. For more information about OES, or to search for state and local occupation or wage data, check out Hoosiers by the Numbers at www.hoosierdata.in.gov/nav.asp?id=8.

FIGURE 1: THE WAGE PYRAMID, 2005



Measuring the Wage Distribution

For all occupations in Indiana, the average wage is $34,080. However, a wage you hear more often is the median wage for Indiana, which was $27,670 in 2005.[2] The median is a more useful measure of central tendency, illustrating the typical wage for Hoosier workers. This is the wage of the "middle" worker—50 percent of workers earn

less than this amount, and 50 percent earn more. The 10th percentile wage for all occupations in Indiana is $14,710, reflecting that 10 percent of workers earn this amount or less. In contrast, the 90th percentile wage for all occupations in Indiana is $58,860. This tells us that only 10 percent of workers in Indiana earn wages of that amount or more.

"The 90/10 wage ratios are highest in legal occupations, where those earning the top 90 percent make nearly five times the wages of those earning the lowest 10 percent. Meanwhile, for food preparation and serving workers, top wages are less than twice as much as the lowest wages."

Overall, the Hoosier wage earner at the 90th percentile makes four times the income of the wage earner at the 10th percentile. The higher the 90/10 ratio (in this case 4.0), the greater the variance between wages paid at each end of the distribution. **Table 1** displays the ratio, or variance, between wages within each occupational group.

The 90/10 ratio and the level of variance among wages varies widely across occupational groups. For occupations in the legal sector, the wage earner at the 90th percentile earns $116,340, 481 percent of the $24,200 income the worker at the 10th percentile earns, with a ratio of 4.81. In contrast, the ratio of food preparation and serving-related occupations is 1.96. The largest contrast can be seen when we examine wages across occupational

TABLE 1: **Wage Pyramids Based on 90/10 Ratios by Occupational Groups, 2005**

Occupational Groups	Total Employment	Annual Mean	10th Percentile	Median	90th Percentile	90/10 Ratio	Number of Workers in the 10 Percent
All Occupational Groups	2,891,360	$34,080	$14,710	$27,670	$58,860	4.00	289,136
Legal	12,130	$58,300	$24,200	$44,530	$116,340	4.81	1,213
Sales and Related	285,420	$30,130	$13,060	$20,670	$59,090	4.52	28,542
Arts, Design, Entertainment, Sports and Media	29,640	$34,430	$13,540	$29,980	$59,530	4.40	2,964
Management	113,130	$77,380	$33,940	$67,350	$139,750	4.12	11,313
Education, Training and Library	163,970	$38,320	$16,740	$34,400	$64,560	3.86	16,397
Life, Physical and Social Science	18,960	$53,640	$26,320	$44,030	$100,060	3.80	1,896
Health Care Practitioners and Technical	151,500	$52,710	$23,480	$43,940	$85,910	3.66	15,150
Business and Financial Operations	89,140	$50,230	$24,740	$45,500	$81,760	3.30	8,914
Protective Service	54,170	$31,230	$15,470	$28,790	$50,770	3.28	5,417
Transportation and Material Moving	260,500	$28,950	$14,730	$25,810	$46,980	3.19	26,050
Computer and Mathematical	37,200	$54,940	$28,150	$52,120	$87,040	3.09	3,720
Construction and Extraction	140,000	$40,160	$21,940	$37,790	$62,850	2.86	14,000
Installation, Maintenance and Repair	132,820	$37,710	$20,340	$35,450	$57,610	2.83	13,282
Architecture and Engineering	47,710	$57,220	$31,440	$54,530	$88,080	2.80	4,771
Production	400,680	$31,430	$18,220	$28,660	$50,920	2.79	40,068
Community and Social Services	30,180	$33,880	$19,750	$31,120	$52,740	2.67	3,018
Office and Administrative Support	450,180	$27,710	$16,280	$25,540	$43,050	2.64	45,018
Farming, Fishing and Forestry	2,780	$25,490	$15,030	$22,380	$39,340	2.62	278
Building and Grounds Cleaning and Maintenance	92,550	$21,640	$13,760	$19,750	$32,750	2.38	9,255
Personal Care and Service	58,340	$19,660	$12,460	$17,810	$29,050	2.33	5,834
Health Care Support	64,340	$23,590	$16,170	$21,870	$33,290	2.06	6,434
Food Preparation and Serving Related	256,020	$16,460	$11,750	$15,170	$23,010	1.96	25,602

Note: Yellow highlighted occupations indicate the three occupational groups with the highest wage earners at the 90th percentile; blue highlighted cells indicate the three lowest wage earners at the 90th percentile
Source: Indiana's May 2005 Occupational Employment Survey

groups. For example, the ratio of the 10th percentile wage earners in food preparation occupations and the 90th percentile wage earners in management occupations is 11.9.

Recent Trends and a National Comparison

The 90/10 ratio has been used as a measure of income variance by the Bureau of Labor Statistics (BLS) since 1967. The BLS measure is based on the Current Population Survey (CPS) and is broken out by gender. Changes in data collection over the years make it difficult to compare data before 1992. According to the CPS figures, the ratio of the male worker at the 90th percentile to the 10th percentile was 5.77 in 2001, compared to 4.62 for female workers. For men, this ratio has increased 9 percent since 1995, when the ratio was 5.31. The ratio among women has increased by 4 percent, up from 4.46 in 1995.[3]

While the CPS survey provides a good source of data to calculate the 90/10 ratio on a national scale, the smaller sample size at the state level makes a similar ratio difficult to replicate for Indiana. To accurately compare how Hoosier wage variance might compare to the nation, we compared the 90/10 ratio with national and statewide OES data. The OES program is also based on a survey, and the results for wage earners who make over $150,000 are footnoted and aggregated, but the actual wage figure amount is not documented. This is consistent for the state and national data, so the comparison is valid. It

TABLE 2: **INDIANA AND NATIONAL 90/10 RATIOS BY OCCUPATION, 2001 TO 2005**

	Indiana						United States					
Occupation	2001	2002	2003	2004	2005	Percent Change Since 2001	2001	2002	2003	2004	2005	Percent Change Since 2001
All Occupations	3.91	3.94	3.96	3.96	4.00	2.2%	4.47	4.49	4.54	4.60	4.65	3.9%
Life, Physical, and Social Science	3.08	3.20	3.23	3.83	3.80	23.5%	3.53	3.56	3.61	3.58	3.56	0.8%
Arts, Design, Entertainment, Sports, and Media	3.81	3.95	4.29	4.33	4.40	15.4%	4.73	4.64	4.70	4.67	4.68	-1.1%
Computer and Mathematical	2.68	2.83	2.90	3.06	3.09	15.3%	3.05	3.02	3.02	3.05	3.08	0.9%
Business and Financial Operations	2.97	3.08	3.13	3.25	3.30	11.2%	3.14	3.15	3.13	3.11	3.09	-1.6%
Protective Service	2.95	2.94	2.97	3.41	3.28	11.1%	3.82	3.81	3.84	3.86	3.90	2.3%
Health Care Support	1.91	1.90	1.91	1.95	2.06	7.7%	2.24	2.22	2.22	2.23	2.24	-0.1%
Sales and Related	4.22	4.24	4.30	4.36	4.52	7.1%	4.42	4.47	4.54	4.65	4.72	6.7%
Architecture and Engineering	2.64	2.72	2.71	2.83	2.80	6.0%	2.98	2.99	2.98	2.99	3.04	2.2%
Office and Administrative Support	2.52	2.50	2.55	2.60	2.64	5.0%	2.72	2.71	2.72	2.73	2.77	2.0%
Community and Social Services	2.55	2.54	2.51	2.54	2.67	4.9%	2.98	2.98	2.97	2.97	2.94	-1.2%
Management	3.93	4.02	4.08	4.10	4.12	4.7%	4.56	4.54	4.40	4.13	5.50	20.8%
Building and Grounds Cleaning and Maintenance	2.30	2.29	2.34	2.40	2.38	3.6%	2.46	2.46	2.49	2.52	2.49	1.2%
Food Preparation and Serving Related	1.89	1.91	1.92	1.96	1.96	3.6%	2.03	2.06	2.11	2.18	2.19	7.9%
Transportation and Material Moving	3.11	3.12	3.10	3.15	3.19	2.7%	3.20	3.16	3.15	3.14	3.15	-1.5%
Education, Training and Library	3.80	3.79	3.78	3.88	3.86	1.6%	4.16	4.15	4.12	4.07	4.03	-3.1%
Farming, Fishing and Forestry	2.60	2.03	1.96	1.98	2.62	0.6%	2.47	2.45	2.46	2.45	2.44	-0.9%
Construction and Extraction	2.85	2.85	2.86	2.92	2.86	0.6%	3.15	3.18	3.17	3.20	3.19	1.2%
Health Care Practitioners and Technical	3.69	3.66	3.80	3.77	3.66	-0.8%	3.82	3.81	3.81	3.83	3.94	3.3%
Installation, Maintenance and Repair	2.86	2.86	2.87	2.86	2.83	-0.9%	2.99	2.99	2.99	2.96	2.97	-0.6%
Production	2.84	2.89	2.84	2.77	2.79	-1.7%	3.01	3.01	3.01	3.00	3.01	0.1%
Legal	5.15	5.37	5.71	4.87	4.81	-6.7%	5.56	5.39	5.24	5.03	4.92	-11.6%
Personal Care and Service	2.54	2.54	2.53	2.56	2.33	-8.0%	2.81	2.79	2.79	2.81	2.76	-2.1%

Source: Occupational Employment Survey

TABLE 3: **MEDIAN WAGES BY EDUCATIONAL REQUIREMENTS, 2005**

Median Wage	Educational Requirement
$57,409	Bachelor's Degree or More
$39,185	All Occupations
$30,785	Associate's Degree or Less

Source: Indiana's May 2005 Occupational Employment Survey, Long-Term Occupational Projections

also may explain why the OES 90/10 ratio is significantly less than the CPS wage ratio. It might also serve to give a clearer picture of the variance in wages for typical workers, as the extremely high wage earners are taken out of the OES wage distribution. According to OES data, the national ratio was 4.65 in 2005, compared to 4.0 in Indiana. Wage variance is greater at the national level, and we can also see that the growth in variance of income has been stronger for the U.S. than in Indiana. The 90/10 ratio has increased by 3.9 percent across the nation since 2001, yet in Indiana it has only increased by 2.2 percent (see **Table 2**). The differences within each occupational group are striking. In Indiana, the wage ratio has increased the most in life, physical and social science occupations, computer and mathematical occupations, and art and media occupations. Wages in these industries have changed greatly, and the wage earners in the 90th percentile are seeing increasingly higher wages. At the national level, most of the increase in the wage ratio seems to be a result of extreme growth in the variance among wages in management occupations.

Learn More ➡ Earn More

Remember the highly paid managers discussed earlier, in contrast to the workers in food service occupations? How many Hoosiers earn wages at these two extremes? Ten percent or approximately 11,300 managers earn over $139,750, while twice as many food preparation workers (approximately 25,600) earn less than $11,750. **Table 1** includes an estimate of how many Hoosiers make the highest wages, in contrast to how many make the lowest wages. The wages are highly dependent upon not only the job title itself, but the occupational group displayed here. The three occupational groups with the highest wage earners at the 90th percentile employ approximately 14,400 workers at wages greater than $100,000. These wage earners include Indiana's chief executive officers, scientists and lawyers. In contrast, the three occupational groupings with the lowest wages employ approximately 59,978 Hoosiers at wages under $13,500. These low wage earners include many growing service sector occupations such as restaurant workers, retail sales associates and other personal care workers. In total, only 128 out of more than 750 specific occupations (2005 OES) have 90th percentile wages above $80,000. This equates to approximately 71,800 Hoosier workers and accounts for 2 percent of total 2005 Indiana OES employment (2,891,360).

Highly specialized occupations pay higher wages as the economy influences which skills are in demand. This analysis illustrates once again that education (and/or skill development) pays. Higher education leads to higher wages. The economy has always rewarded those in the workforce with higher levels of education and/or specialized skills. In the 21st century knowledge-based economy, the disparity in wages grows as the skills we require of our workforce continue to evolve (see **Table 3**).

To ensure higher wages for all Hoosiers, the focus at DWD continues to be on increasing the educational levels of our workforce.

Several DWD initiatives are working to close the income gap, and ensure higher wages for all Hoosiers. The state is promoting programs in science, technology, engineering and mathematics (STEM). The STEM initiative in Indiana includes planning grants to help high schools prepare their students for postsecondary success in STEM study and work. An educated workforce needs quality job opportunities, so DWD and the Indiana Economic Development Corporation strive to bring quality jobs, businesses and training opportunities. Current initiatives focus on high growth industries such as advanced manufacturing, logistics and life sciences. With increased education and job growth, Indiana can hope to see higher wages—without higher levels of wage variance.

"Highly specialized occupations pay higher wages as the economy influences which skills are in demand. This analysis illustrates once again that education (and/or skill development) pays. Higher education leads to higher wages."

Notes

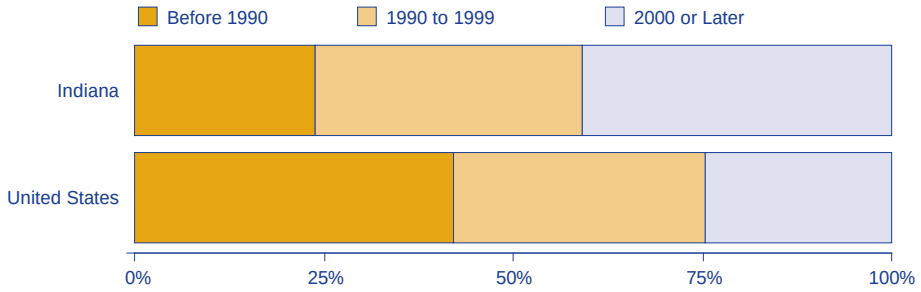
1. The OES data used for this article includes workers regardless of full-time or part-time classification.
2. May 2005 OES Estimate
3. U.S. Census Bureau, Historical Income Tables: www.census.gov/hhes/www/income/histinc/ie2.html

—Allison Leeuw, Research and Analysis Department, Advanced Economic and Market Analysis Group, Indiana Department of Workforce Development

Indiana's Changing Latino Population

The United States has long been a destination for people in search of economic opportunity. Certainly, education is a key determinant of economic prosperity and social mobility, and English language proficiency is generally a critical step toward educational attainment. These issues are especially prominent today as language proficiency has been central to the debate on immigration, particularly as it pertains to those coming from Latin America. So, how does Indiana's Latino population fare in terms of English language ability and educational attainment? More importantly, how does the passage of time and generations impact these indicators?

FIGURE 1: **Foreign-Born Latino Population by Year of Entry, 2005**



Source: IBRC, using American Community Survey data

Overview of Indiana's Latino Population

Like much of the country, Indiana's Latino population is growing. According to the U.S. Census Bureau, Indiana's 277,558 Latino residents in 2005 represented the state's second largest minority group and accounted for 4.5 percent of the state's total population. Furthermore, census population estimates indicate that the Hoosier Latino population grew by 31 percent between 2000 and 2005 alone. That said, Indiana accounts for only 0.7 percent of the total U.S. Latino population.

While some of this growth is the product of natural increase (more births than deaths) most can be attributed to migration. For instance, 41 percent of Indiana's Latino population is foreign-born, which is comparable to the national rate of 40 percent. As **Figure 1** indicates, however, the share of recent arrivals among Indiana's Latino population is considerably higher than the nation as a whole. Remarkably, 41 percent of the state's Latino immigrants entered the country between 2000 and 2005—compared to just 25 percent nationally. This trend can be attributed to the fact that states like California, Texas and Florida have much more established Latino populations.

TABLE 1: **English Language Ability and Language Spoken at Home for Indiana's Latino Population Five Years and Older, 2005**

Ability to Speak English	Entire Latino Population	Latino Population Born in the United States	Foreign-Born Latino Population
English only	33.0%	54.9%	5.9%
Very well	31.1%	35.7%	25.2%
Well	15.0%	6.1%	26.2%
Not well	13.3%	2.9%	26.4%
Not at all	7.5%	0.4%	16.3%
Language Spoken at Home			
English	33.2%	54.9%	5.9%
Spanish	66.5%	44.7%	93.7%

Source: American Community Survey

Language

Table 1 highlights several perspectives on the Indiana Latino population's English language skills. For instance, 33 percent of Hoosier Latinos speak only English while an additional 46 percent report speaking English either "well" or "very well." In contrast, of this state's foreign-born Latino population, nearly 43 percent do not have a solid grasp of English. Also, regardless of the native country, Spanish remains important to many, as shown by the language spoken at home statistics.

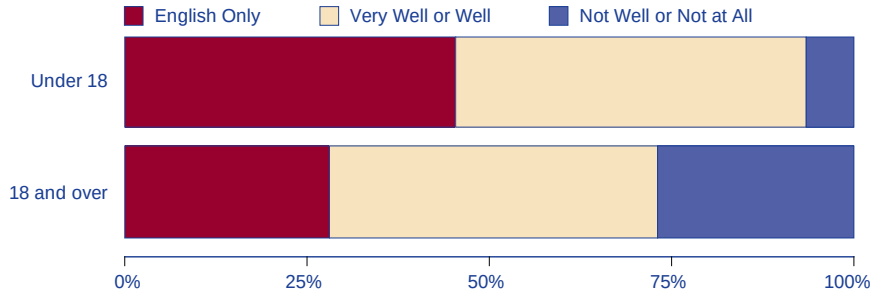
The most important trend that these figures demonstrate, however, is what occurs when immigrants raise families in this country. In Indiana, the percentage of residents who either speak English only or speak the language "very well" jumps from 31 percent for foreign-born Latinos to 91 percent of those born in the United States. Furthermore, over half of the Latinos born in the United States speak English in the home.

The integrating effects of generational advancement are further shown when looking at English language ability by age. As **Figure 2**

shows, 94 percent of Indiana Latinos between the ages of 5 and 17 (nearly one-quarter of the total population) speak English at least "well" compared to 73 percent for the population 18 and over.

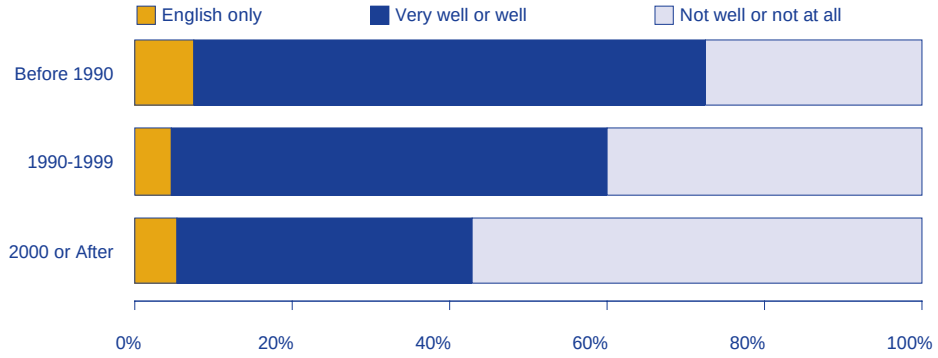
Another important factor in gaining English proficiency, not surprisingly, is the amount of time spent in this country. **Figure 3** highlights the English language ability of Indiana's entire foreign-born Latino population based on the year of entry into the United States. Among the most recent Latino immigrants to enter this country and live in Indiana, 57 percent either speak English "not well" or "not at all." This picture is quite different for the state's foreign-born population that entered the country prior to 2000; of those entering the country in the 1990s, 60 percent speak English at least "well." That number jumps to 72 percent for those who entered the United States before 1990.

FIGURE 2: **Ability to Speak English by Age for Indiana's Latino Population,* 2005**



*Five years and older
Source: IBRC, using American Community Survey data

FIGURE 3: **Speaking English—Differences by Year of Entry Significant for Foreign-Born Latinos* in Indiana, 2005**

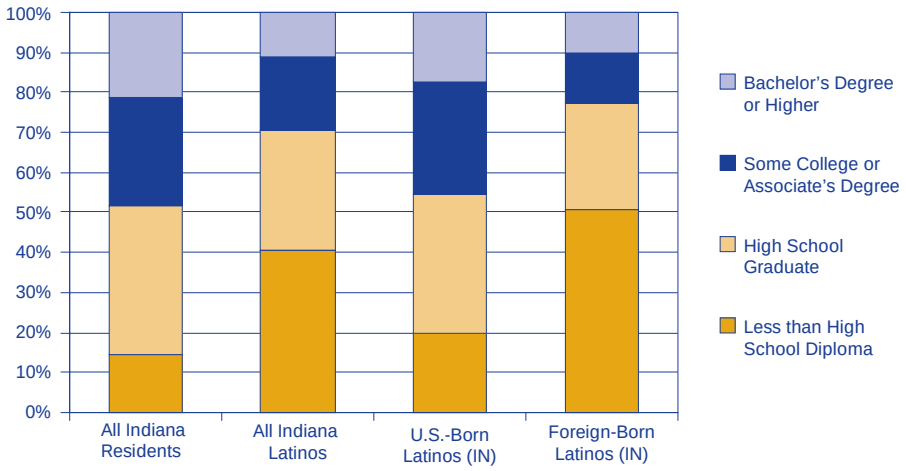


*Population five years and older
Source: IBRC, using American Community Survey data

Education

Forty percent of Indiana's Latino population age 25 or above has less than a high school education compared to just 15 percent for the state's entire population. As with language, however, these figures are greatly influenced by the recent influx of Latino immigrants. **Figure 4** shows that the educational attainment profile of Indiana's U.S.-born Latino population is quite similar to the state's total population. For instance, 80 percent of Indiana Latinos born in the United States have a high school diploma or higher compared to 85 percent for the state as a whole. Additionally, nearly 46 percent of U.S.-born Latinos have pursued higher education.

FIGURE 4: **Indiana Educational Attainment Levels of Population 25 and Older, 2005**



Source: IBRC, using American Community Survey data

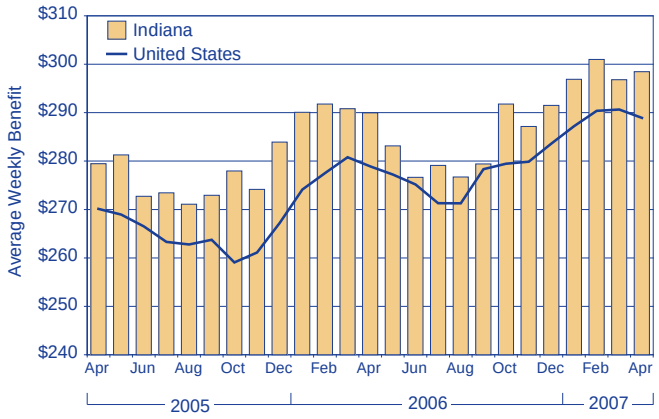
Conclusion

These census figures suggest that Indiana's Latino population is following a pattern similar to that of earlier immigrant populations—that is, the initial social and workforce challenges faced by first generation migrants are often overcome with the passage of time and subsequent generations.

—Matt Kinghorn, Economic Research Analyst, Indiana Business Research Center, Kelley School of Business, Indiana University

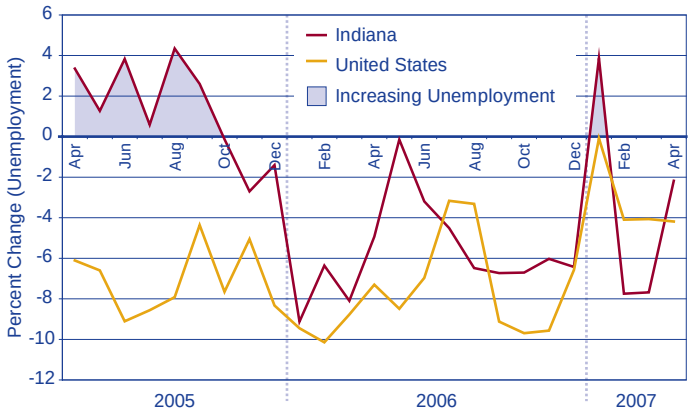
Monthly Metrics: Indiana's Economic Dashboard

Average Benefits Paid for Unemployment Insurance Claims



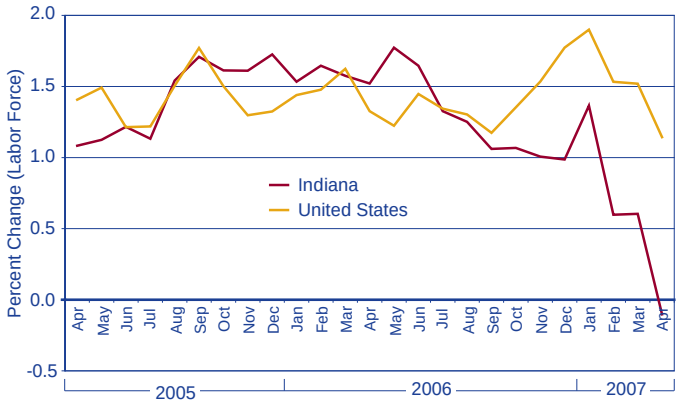
Source: IBRC, using U.S. Department of Labor data

Percent Change in Persons Unemployed from the Previous Year*



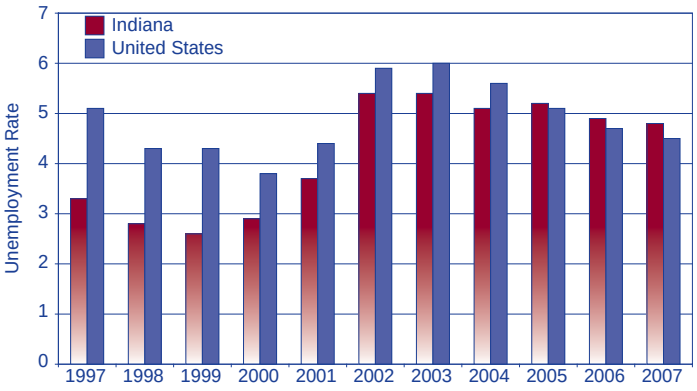
*seasonally adjusted
Source: IBRC, using Bureau of Labor Statistics data

Percent Change in Labor Force from Previous Year*



*seasonally adjusted
Source: IBRC, using Bureau of Labor Statistics data

April Unemployment Rates



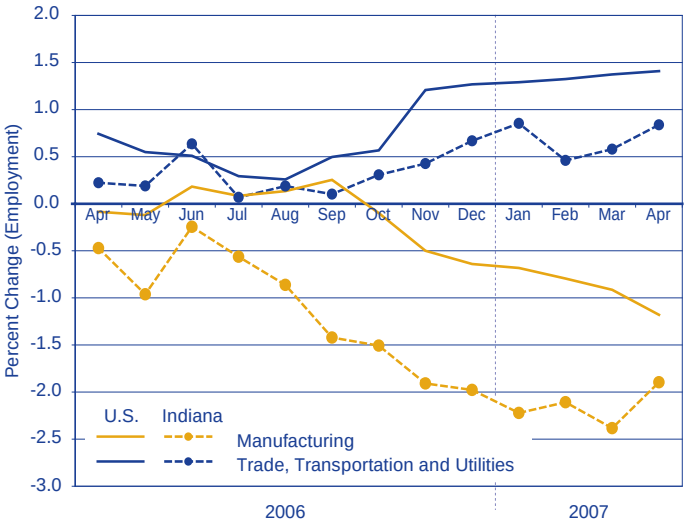
*seasonally adjusted
Source: IBRC, using Bureau of Labor Statistics data

Change in Employment by Industry Super-Sector, 2006 to 2007*

Industry	Indiana		United States
	Change in Jobs	Percent Change	Percent Change
Total Nonfarm	6,600	0.2	2.0
Educational and Health Services	5,200	1.4	3.3
Trade, Transportation and Utilities	4,900	0.8	1.4
Professional and Business Services	1,000	0.4	3.8
Government	1,500	0.4	1.4
Other Services	200	0.2	1.4
Financial Activities	200	0.1	1.5
Leisure and Hospitality	200	0.1	3.7
Natural Resources and Mining	0	0.0	7.0
Information	-100	-0.2	0.5
Manufacturing	-10,800	-1.9	-1.2

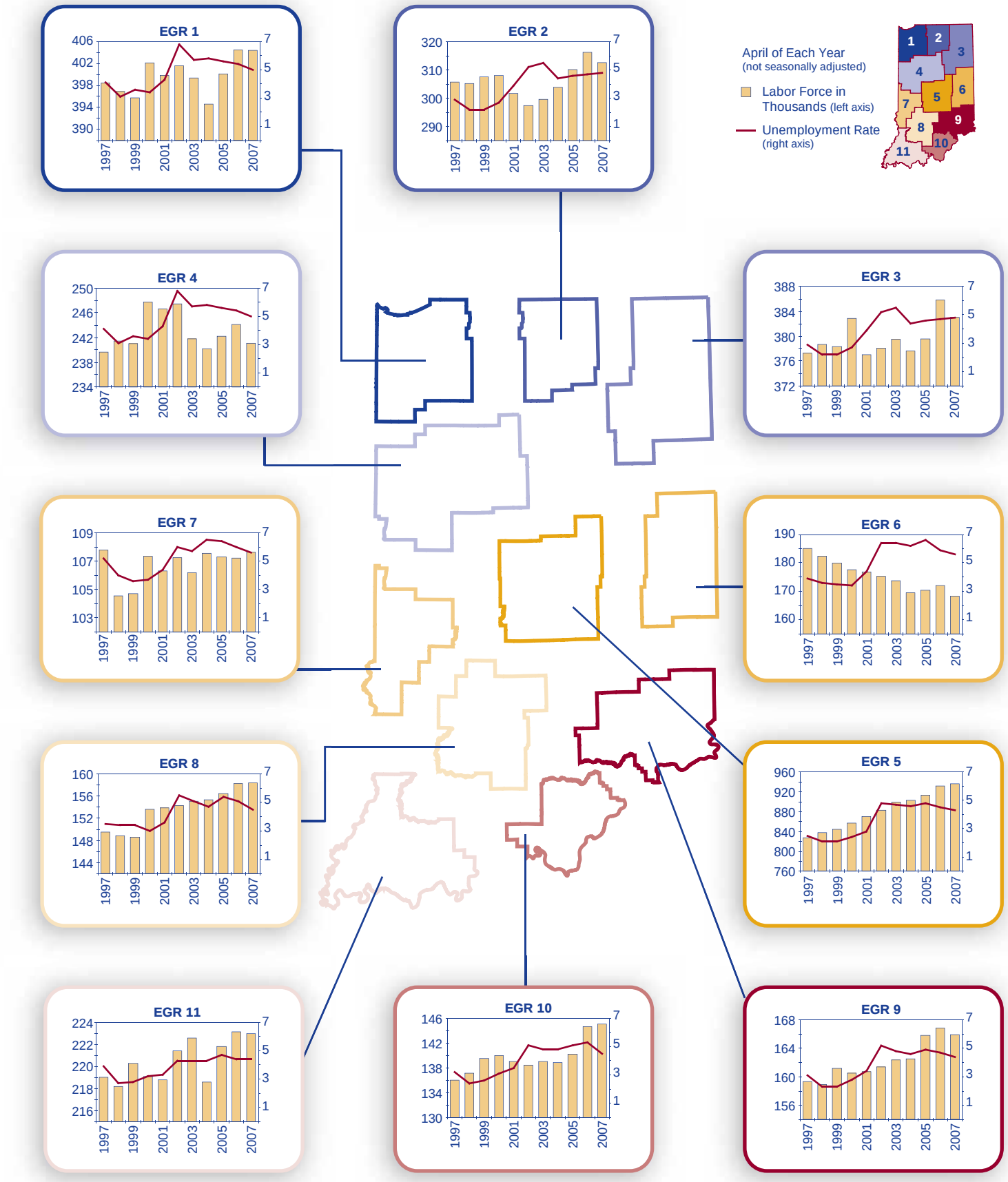
*April of each year, seasonally adjusted
Source: IBRC, using Bureau of Labor Statistics data

Over-the-Year Percent Change in Employment by Super-Sector*



*seasonally adjusted
Source: IBRC, using Bureau of Labor Statistics and Indiana Department of Workforce Development data

Regional Labor Force and Unemployment Rates



What's Driving Population Growth in Indiana Counties and Regions?

Indiana has just over 233,000 more residents than it did at the time of Census 2000, according to county-level population estimates for 2006. Sixty-two counties grew, while 30 declined (see **Figure 1**). Not suprisingly, growth was concentrated in suburban fringe counties.

Of course, there are essentially two ways for a population to grow:

1. Natural Increase: the number of babies born surpass the number of deaths
2. In-Migration: more people move into an area than move out of it

So that leads to the question, "Why are counties growing?" Natural increase drove the population gain in 40 counties, while in-migration contributed the most to population growth for 22 counties (see **Figure 2**). Of all 62 counties with population gains, 39 (or 63 percent) experienced both in-migration and natural increase.

It is also worth remembering that the migration situation changes a bit when we break migration down into internal (or domestic) migration and international migration (see **Figure 3**). At the county-level, 41 counties experienced total in-migration (when domestic and international migration are added together).

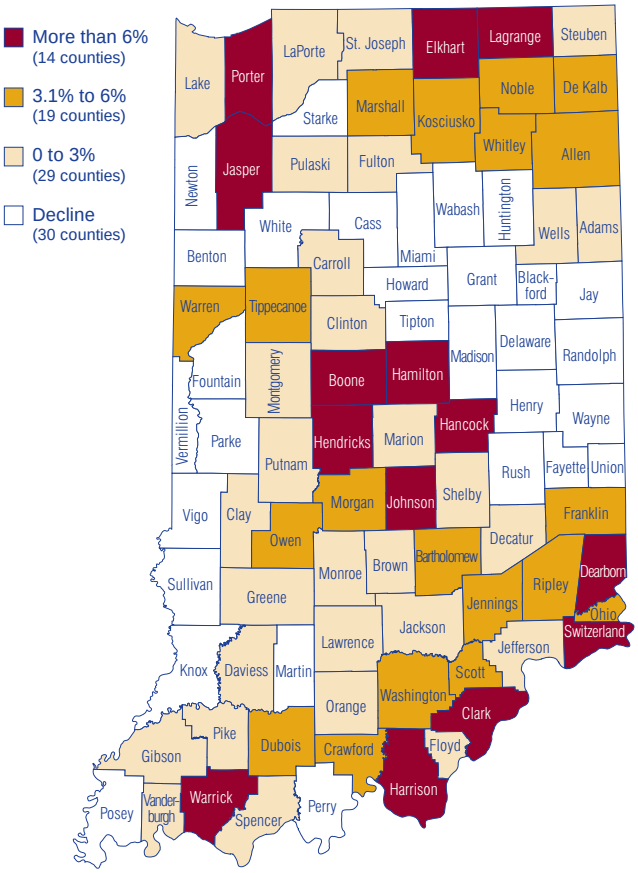
Taken separately, 83 of Indiana's 92 counties had positive international migration, while only 35 counties had positive domestic migration between 2000 and 2006. Thus, many counties are gaining residents from around the world even if they are not gaining residents from across the United States.

Regional Growth

Table 1 looks at Indiana's population change by economic growth region (EGR). Only two regions (EGR 6 in east-central Indiana and EGR 7 in west-central Indiana) lost population between 2000 and 2006. The others added between 4,500 (EGR 8) to more than 137,000 residents (EGR 5).

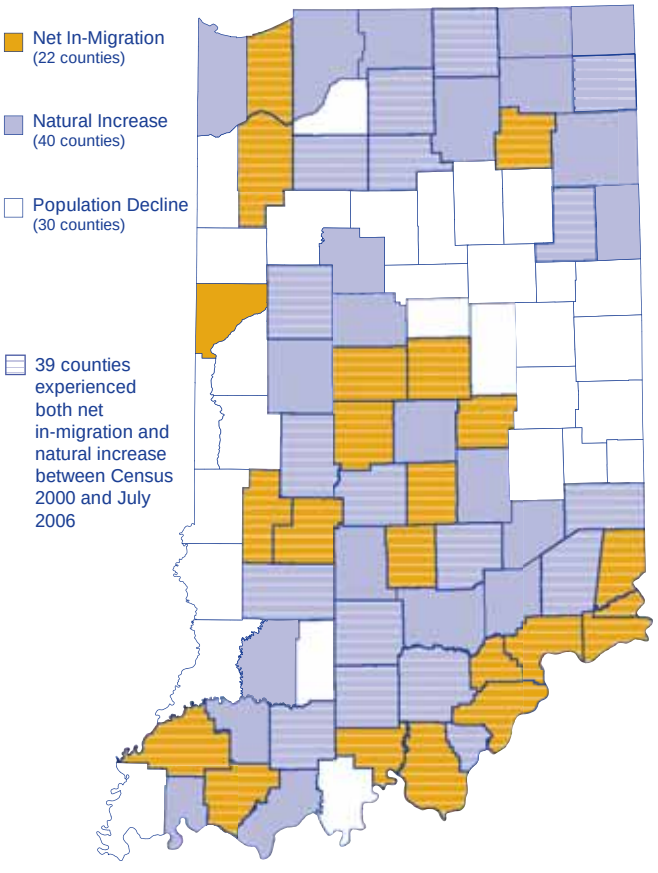
Five of the nine growing EGRs experienced both in-migration and natural increase. However, natural increase drove the population growth in all the EGRs, with the exception of EGR 10 (where migration outpaced

FIGURE 1: **PERCENT CHANGE IN POPULATION, APRIL 2000 TO JULY 2006**



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

FIGURE 2: **WHAT'S DRIVING COUNTY POPULATION GAIN?, APRIL 2000 TO JULY 2006**



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

natural increase by roughly 3,200). In fact, in that region, which includes the Louisville suburbs, migration accounted for 65 percent of the total population change—the largest percentage for any EGR. Even more astonishing, 90 percent of the total migration into EGR 10 was domestic migration and not international migration (for comparison, that same figure ranged from 6 percent in EGR 1 to 66 percent in EGR 5).

All of the EGRs had positive international migration, ranging from 850 people in EGR 10 to almost 21,000 in EGR 5. However, only five EGRs had positive domestic migration, including EGRs 1, 5, 9, 10 and 11 (that is, the regions around Indianapolis, Gary, Columbus/Cincinnati, Louisville and Evansville). Domestic migration growth ranged from 201 (3 percent of total change) in the Evansville region to nearly 40,000 (29 percent of total change) in the region surrounding Indianapolis.

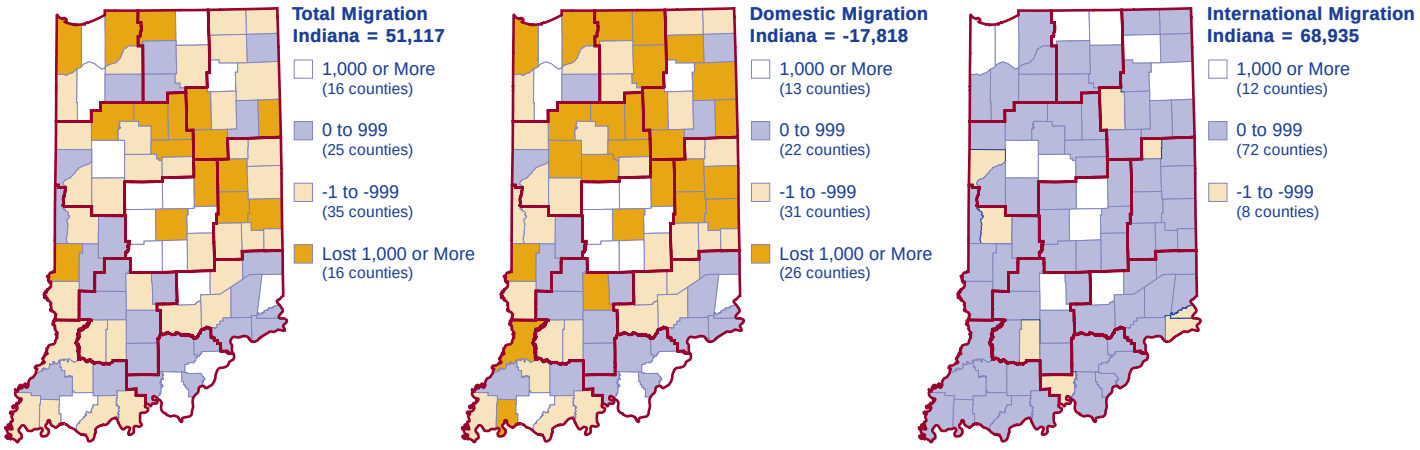
—Rachel Justis, Managing Editor, Indiana Business Research Center, Kelley School of Business, Indiana University

TABLE 1: **POPULATION CHANGE BY ECONOMIC GROWTH REGION, APRIL 2000 TO JULY 2006**

Economic Growth Region	Total Population Change*	Natural Increase			Net Migration		
		Total	Births	Deaths	Total	Net International Migration	Net Internal Migration
5	137,072	77,238	162,335	85,097	60,913	20,931	39,982
1	24,917	20,967	69,616	48,649	6,542	6,130	412
2	21,195	24,783	56,529	31,746	-1,880	12,146	-14,026
3	19,092	28,661	67,477	38,816	-7,267	7,248	-14,515
10	13,488	5,568	21,401	15,833	8,755	850	7,905
9	13,192	9,354	26,440	17,086	4,767	2,595	2,172
11	7,431	6,603	33,055	26,452	2,142	1,941	201
4	4,819	13,116	39,988	26,872	-6,868	10,122	-16,990
8	4,537	5,662	21,695	16,033	-247	4,329	-4,576
7	-1,997	1,781	16,714	14,933	-3,085	1,081	-4,166
6	-10,743	2,995	26,256	23,261	-12,655	1,562	-14,217

*Total population change includes residual
Source: IBRC, using U.S. Census Bureau data

FIGURE 3: **TOTAL, DOMESTIC AND INTERNATIONAL MIGRATION, APRIL 2000 TO JULY 2006**



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

Plastics are Big Business in Indiana

The world's first entirely synthetic material turned 100 this year. In 1907, Leo Baekeland developed a phenol-formaldehyde polymer resin. "Although scientists had long tinkered with different types of plastics, so-called because of their malleability, his was the first fully synthetic material ever made."[1]

A century later, plastics are increasingly used as a substitute for rubber. The plastics industry produces finished products, such as packaging materials, piping, bags, bottles, bowls, cups, dinnerware, polystyrene foam products, urethane foam products, siding material and resilient floor coverings, along with plate, sheet and rod plastic used as "inputs" for additional manufacturing. Plastics product manufacturing is primarily engaged in processing new or recycled plastics resins into products using compression molding, extrusion molding, injections molding, blow molding and casting.

Plastics product manufacturing in Indiana grew 22 percent between 1990 and 2006. Meanwhile, the U.S. growth was 3.1 percent according to Current Employment Statistics.

In 2005, manufacturing in Indiana was 19.9 percent of total employment while manufacturing in the United States was 10.8 percent of total employment. In Indiana, 6.2 percent of manufacturing employment is in plastics product manufacturing, compared to just 4.5 percent in the United States overall.

Location quotients are ratios that allow an area's distribution of employment by industry to be compared to a reference or base area's distribution. If a location quotient is equal to 1, then the industry has the same share of its area employment as it does in the reference area. A location quotient greater than 1 indicates an industry with a greater share of the local area employment than is the case in the reference area. Indiana's manufacturing location quotient was 1.8, while the plastics industry in Indiana has a location quotient of 1.4.

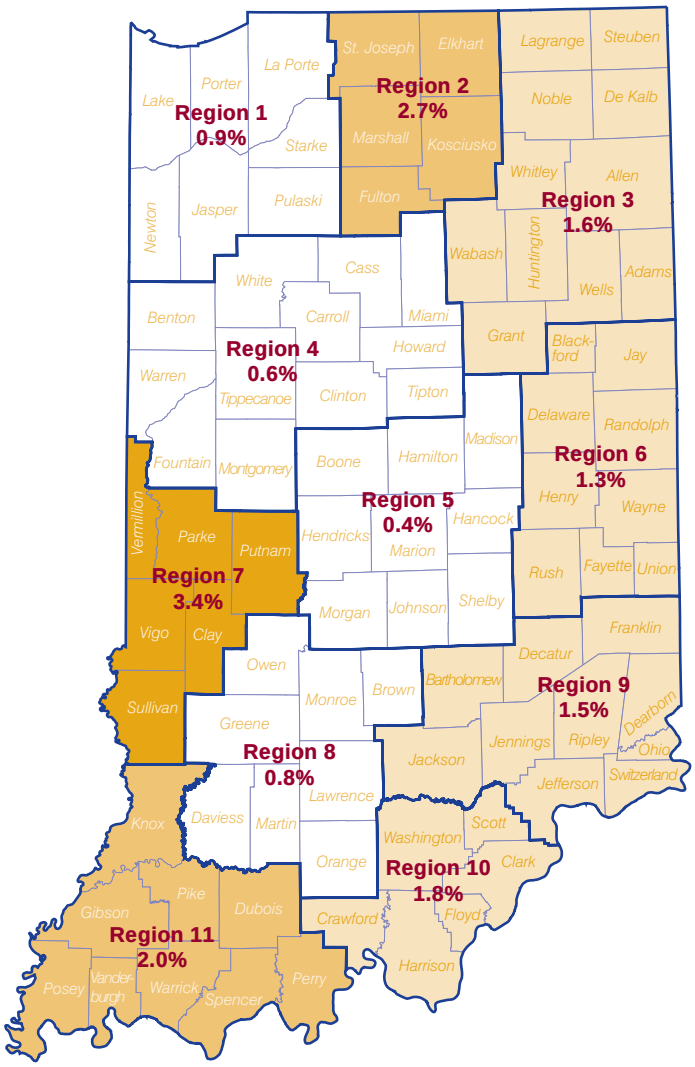
Plastics product manufacturing varies throughout the state from a low of 2 percent of manufacturing employment (0.6 percent of total employment) in Economic Growth Region (EGR) 4 to a

TABLE 1: **PLASTICS MANUFACTURING EMPLOYMENT ANNUAL AVERAGE, 2006**

EGR	Plastics Manufacturing Employment	Percent of Region's Manufacturing Employment
7	2,864	18.6
10	1,879	9.2
11	4,079	9.1
2	8,528	8.0
3	5,595	6.4
6	1,652	6.3
1	2,920	5.8
9	2,035	5.3
8	923	5.2
5	3,705	3.6
4	1,113	2.0

Source: Bureau of Labor Statistics

FIGURE 1: **PLASTICS EMPLOYMENT AS A PERCENT OF TOTAL REGIONAL COVERED EMPLOYMENT, 2006**



Source: Bureau of Labor Statistics

high of 18.6 percent of manufacturing employment (3.4 percent of total employment) in EGR 7 (see **Table 1** and **Figure 1**). Southwest Indiana, northwest Kentucky and southeast Illinois area has called itself the "plastics valley" for years. EGR 11 does rank third in plastics employment as a percent of manufacturing employment for the Indiana regions, corroborating this assertion.

Plastics companies vary in size from less than five employees to over 1,000 employees. Eight plastics manufacturing companies in the state employ over 500 workers and EGR 11 has three of them.[2]

As for wages, manufacturing employment in general is known for having higher wages than other industries. Plastics products manufacturing wages were higher than average wages in all areas except EGR 2 and EGR 9 (see **Figure 2**). However, only in EGR 11 was the plastics product manufacturing wage average higher than the manufacturing wage.

Many other manufacturing activities use plastics to make everything from footwear to furniture to automobiles. Typically, the production process of these products involves more than one material, so they are not classified in plastics products manufacturing sector because the core technologies for these activities are diverse.

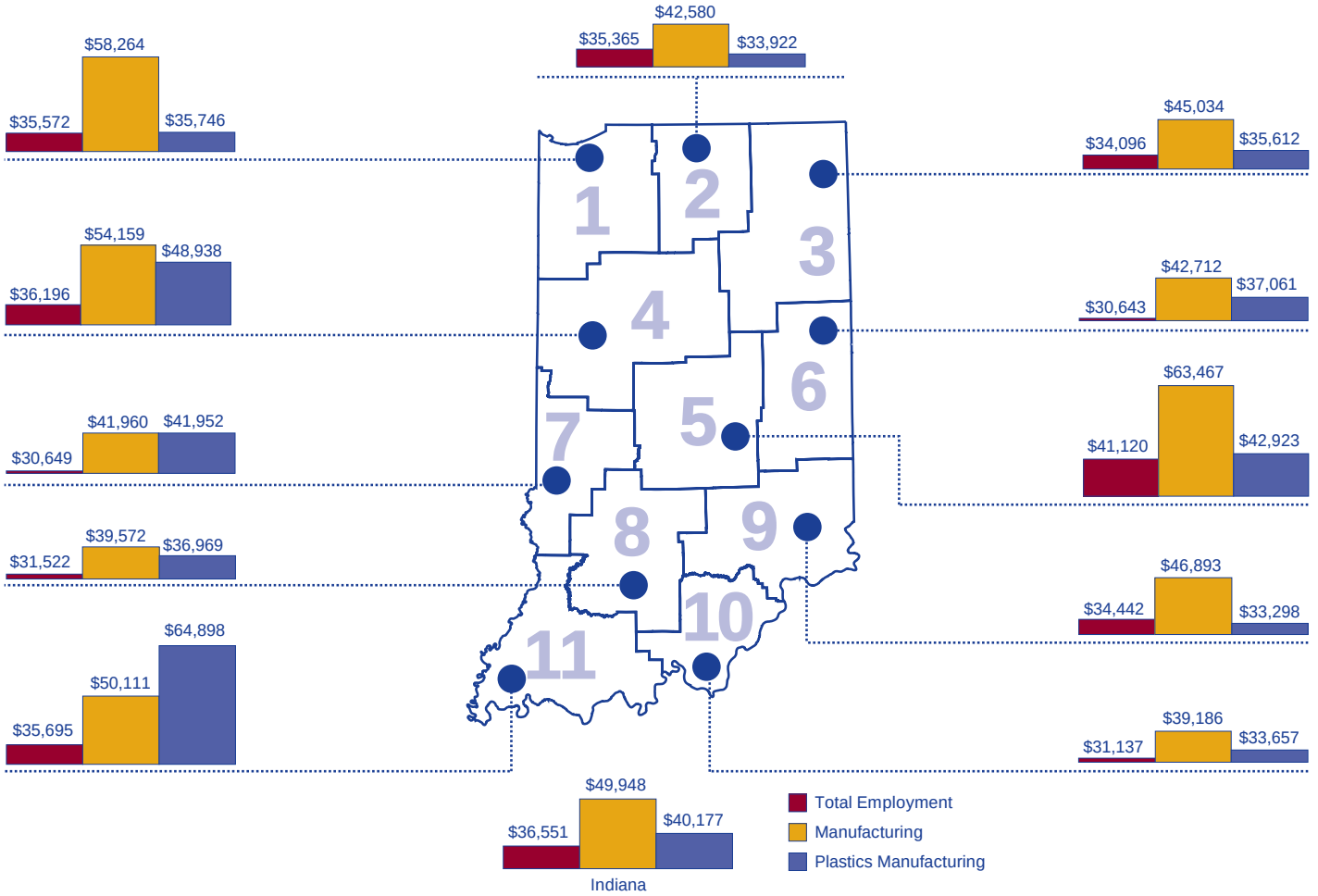
"Plastics." That was the simple career advice offered to Dustin Hoffman's character in the 1967 film, *The Graduate*, and this analysis suggests that plastics remain an important part of the economy.

Notes

1. Raphael G. Satter, "Happy Birthday! Plastic turns 100," *Evansville Courier and Press*, May 23, 2007.
2. Info USA, Hoosiers by the Numbers website.

—Cathy Boatman, Research and Analysis Department, Advanced Economic and Market Analysis Group, Indiana Department of Workforce Development

FIGURE 2: **PLASTICS PRODUCTS MANUFACTURING AVERAGE ANNUAL WAGES, 2006**



Source: Bureau of Labor Statistics

The Louisville-Elizabethtown-Scottsburg CSA

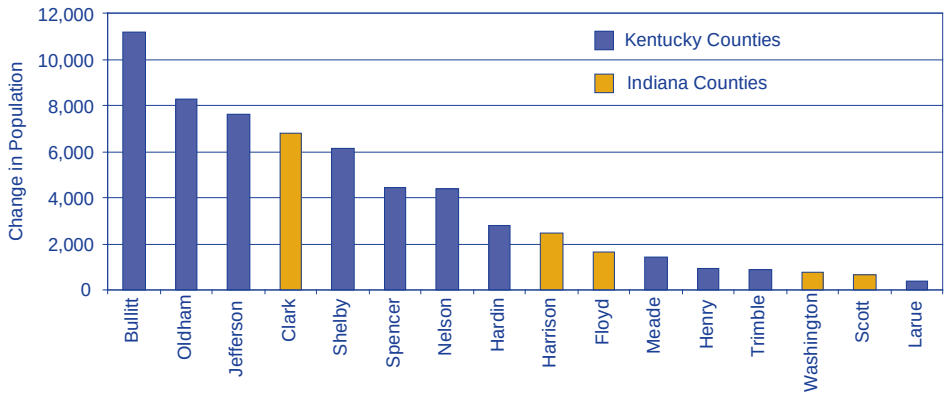
This article is the last in a series of seven highlighting each of Indiana's combined statistical areas (CSAs). CSAs are groupings of predefined metropolitan (metro) and/or micropolitan (micro) areas that, as the title suggests, combine these areas to "represent larger regions and reflect broader social and economic interactions."[1]

The Area

There are 16 counties in the Louisville-Elizabethtown-Scottsburg CSA, five of which are within Indiana's borders: Clark, Floyd, Harrison, Scott and Washington counties. The other 11 are in neighboring Kentucky: Bullitt, Hardin, Henry, Jefferson, Larue, Meade, Nelson, Oldham, Shelby, Spencer and Trimble counties. The CSA's 1.4 million residents ranked it 31st among the 121 CSAs in the nation and fourth among Indiana's seven CSAs. Indiana's five counties contributed about 265,000 people to the population, or 19.5 percent.

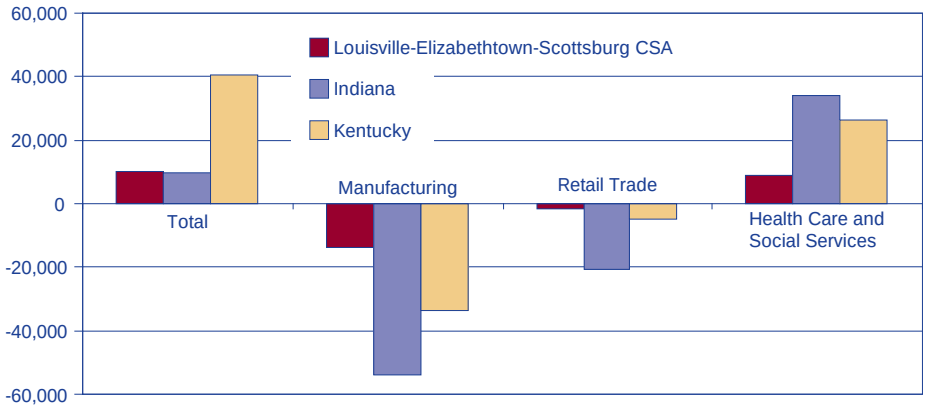
Since 2000, the Louisville-Elizabethtown-Scottsburg CSA has added more than 60,800 people, and the Indiana portion of the CSA made up about 20 percent of that growth. Impressively, none of the 16 counties lost population from 2000 to 2006 (see **Figure 1**).

FIGURE 1: **Change in Population in the Louisville-Elizabethtown-Scottsburg CSA, 2000 to 2006**



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

FIGURE 2: **Change in Jobs in the CSA and Respective States, 2001:2 to 2006:2**



Source: IBRC, using Bureau of Labor Statistics data

Jobs

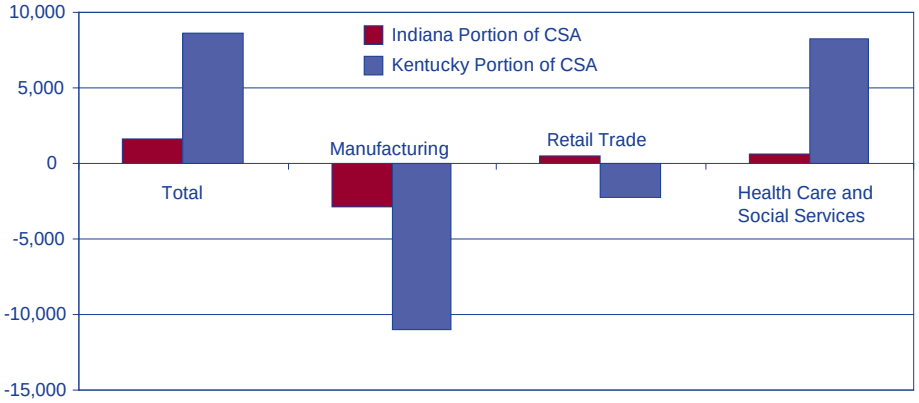
The three largest industry sectors in the Louisville-Elizabethtown-Scottsburg CSA are manufacturing, retail trade, and health care and social services, with each making up more than 11 percent of total jobs in the area. Of the three, only health care and social services saw a gain in jobs from the second quarter of 2001 to 2006, adding more than 8,800 jobs over that time span (an increase of 14.1 percent). Meanwhile, manufacturing and retail trade saw combined losses of more than 15,600. The same directional trends are visible at the state level as well—in both Indiana and Kentucky (see **Figure 2**).

So which side of the border was responsible for most of the changes in the CSA? Keep in mind that the Kentucky portion of the CSA made up about 84 percent of jobs in the CSA in both 2001 and 2006. Therefore, it is reasonable to expect both losses and gains to be magnified for Kentucky relative to Indiana. This holds true for overall job change, manufacturing, and health care and social services; but a

closer look reveals that the Indiana portion of the CSA actually added jobs in the retail sector from 2001 to 2006 while the Kentucky portion experienced losses (see **Figure 3**).

Despite losses in two of the three major industry sectors, the Louisville-Elizabethtown-Scottsburg CSA saw an overall increase in jobs of 1.6 percent over the five-year span. Compare this to a 0.3 percent change for the state of Indiana overall and 2.3 percent for Kentucky. Two industries besides the health care and social services industry had increases of at least 5,000 jobs: the finance and insurance industry (5,923 jobs for a 20.4 percent increase) and administrative, support and waste management (5,310 jobs for an increase of 15.2 percent).

FIGURE 3: **CHANGE IN JOBS WITHIN THE LOUISVILLE-ELIZABETHTOWN-SCOTTSBURG CSA, 2001:2 TO 2006:2**



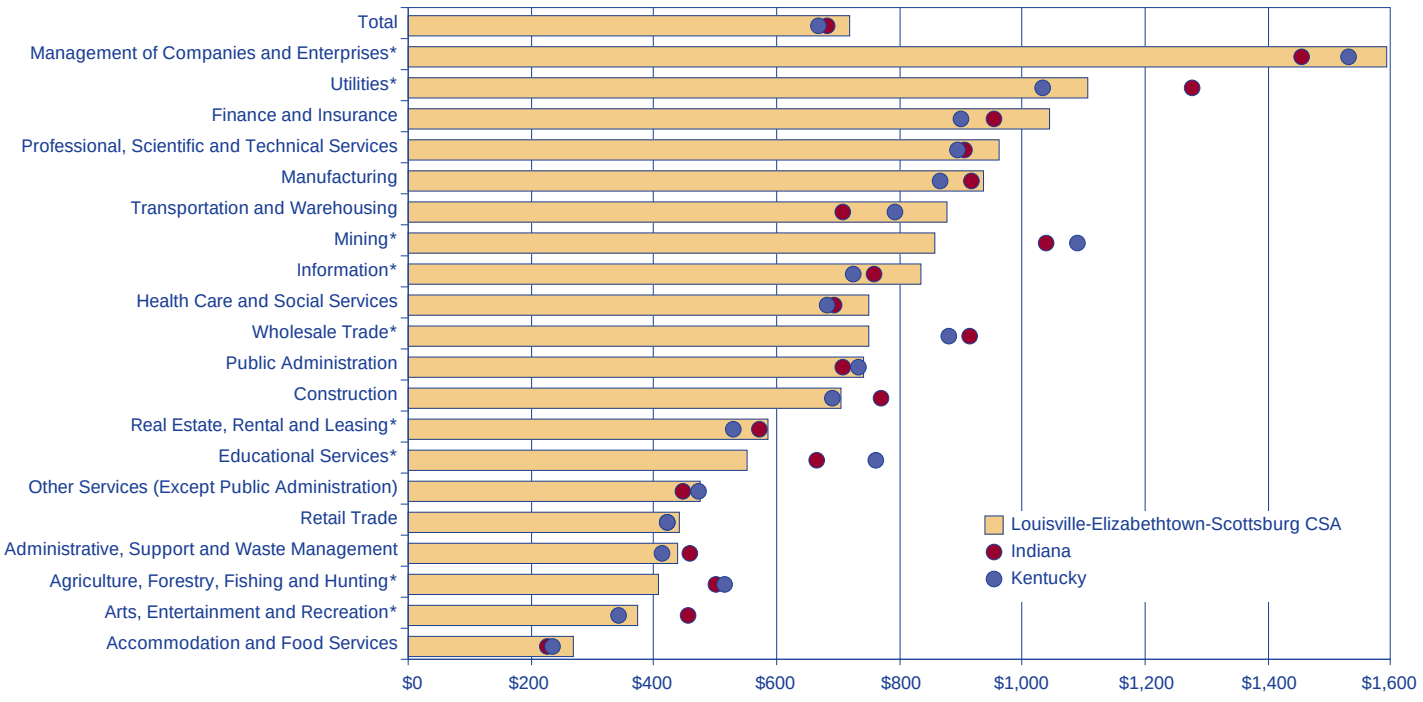
Source: Bureau of Labor Statistics

Wages

Workers in the CSA were paid higher wages across all industry sectors than the average Hoosier or Kentuckian, averaging $719 per week, $684 per week and $672 per week, respectively (see **Figure 4**). CSA wages increased $112 per week from 2001 to 2006. Management of companies and enterprises paid more than any other major industry in the CSA, Indiana and Kentucky. The Louisville-Elizabethtown-Scottsburg CSA paid workers in this industry an average of $1,592 per week—up $396 from five years prior.

The utilities industry in the CSA took a hit over the past five years, bringing wages down closer to the state averages for Indiana and Kentucky. In 2001, the CSA paid an average of $1,534 per week, but that dropped by $428 for 2006. While both Indiana and Kentucky increased wages in the utilities industry,

FIGURE 4: **AVERAGE WEEKLY WAGES, 2006:2**



*Industry made up less than 2 percent of jobs in the CSA in 2006:2.
Source: IBRC, using Bureau of Labor Statistics data

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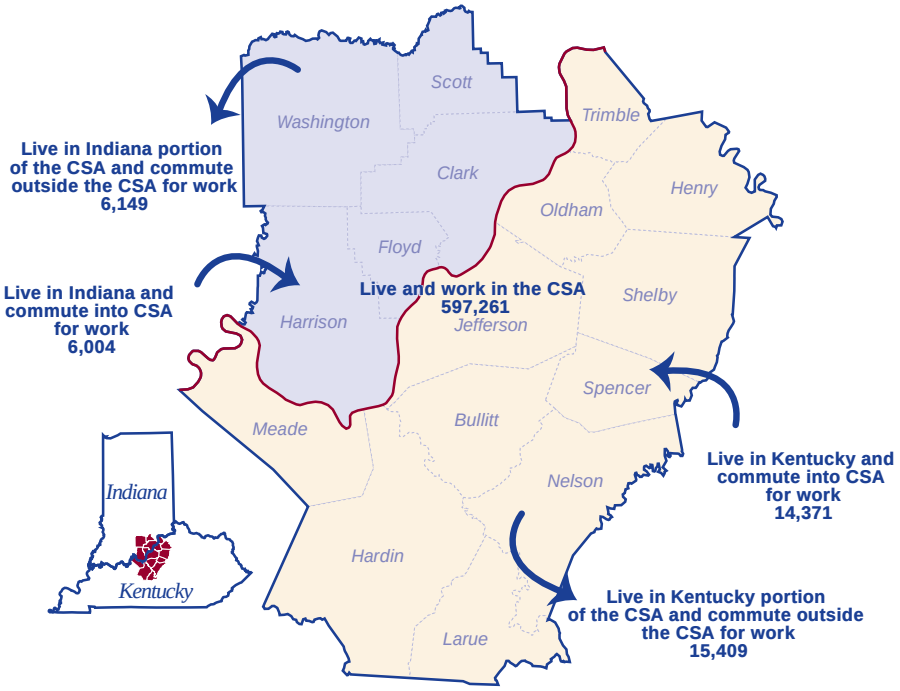
FIGURE 5: **Commuting Patterns in the Louisville-Elizabethtown-Scottsburg CSA, 2000**



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

the three areas are now more comparable in the amount paid: The CSA, at $1,106 per week on average, hovers between the Indiana ($1,280 per week) and Kentucky ($1,037 per week) state averages. That said, the utilities industry makes up a small 0.1 percent of jobs in the area, so let's take a closer look at some of the larger industry sectors.

Of the industries that made up at least 2 percent of jobs in the area, finance and insurance paid the most, averaging $1,043 per week. At the other end of the spectrum, accommodation and food services paid the least, with workers bringing home an average of $268 per week—a figure only $26 higher than five years earlier.

Commuting

There were about 597,000 workers living and working in the Louisville-Elizabethtown-Scottsburg CSA according to Census 2000 data. Of those, about three-quarters lived and worked in the same county. Kentucky (not including counties in the CSA) contributed more workers than Indiana to the area, supplying nearly 14,400 workers to the area compared to Indiana's 6,000 (see **Figure 5**). Meanwhile, 21,558 workers left the CSA to work elsewhere.

Notes

1. U.S. Office of Management and Budget, available at www.whitehouse.gov/omb/.

—Molly Manns, Associate Editor, Indiana Business Research Center, Kelley School of Business, Indiana University