

## Population and Employment Change in Indiana

Indiana has seen 22 years of uninterrupted annual population growth. Furthermore, since 1991,<sup>1</sup> the state has had positive net migration each year with the exception of 2002. While the state's population has grown consistently, this growth has not occurred evenly throughout this period. Most notably, Indiana's lowest population gains in recent years coincided with the recession of the early 2000s.

This last point hints at the primary driver of variation in population growth and migration in Indiana. This article will examine recent population trends in Indiana and the Midwest as well as consider the link between changes in employment and population growth in the state. This relationship could offer clues to Indiana's likely population trends in the near future as the current economic downturn plays out.

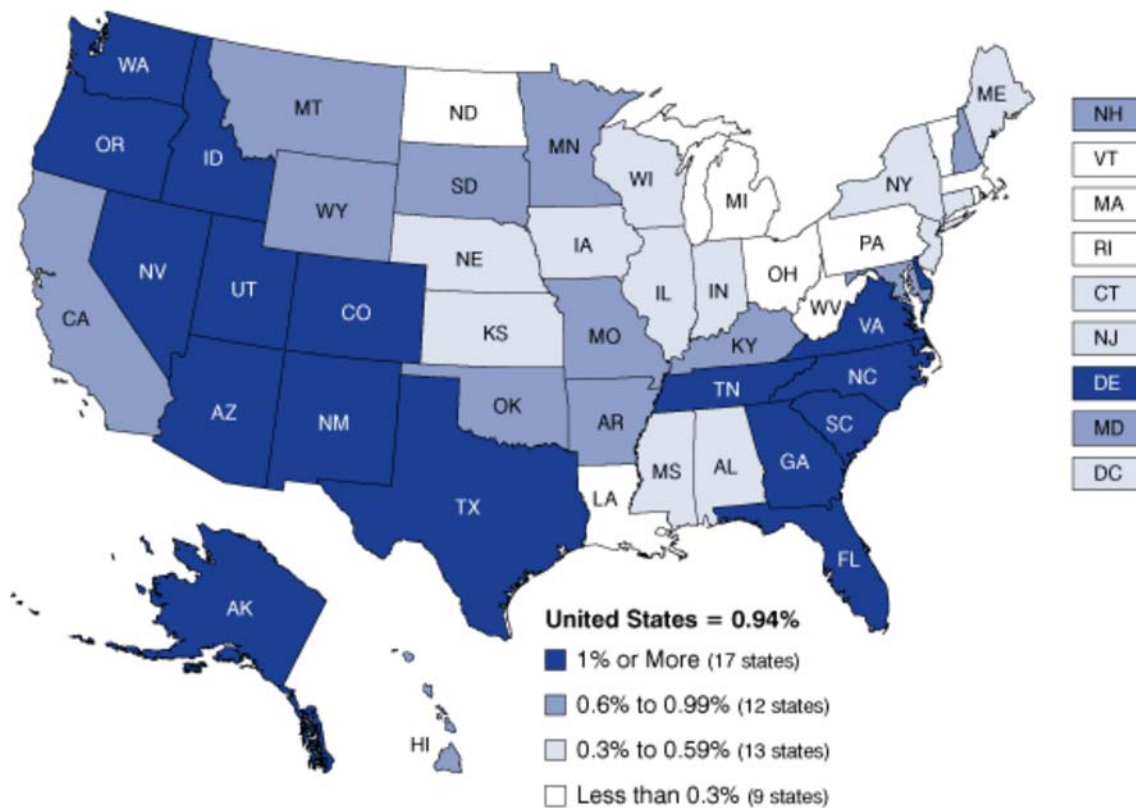
### Recent Population Trends

According to U.S. Census population estimates Indiana's population grew by 41,000 people between 2007 and 2008 to reach an estimated 6.4 million residents. This total makes Indiana the nation's 16th most populous state. In terms of the rate of growth, the 41,000 new residents represent a 0.65 percent increase over 2007, which exceeds the state's average annual rate of population growth between 2000 and 2008 of 0.57 percent.

**Figure 1** illustrates the familiar trend in population growth rates by state. Between 2000 and 2008, states in the South and the West have experienced the greatest population growth led by Nevada (3.2 percent average annual growth), Arizona (2.9 percent), Utah (2.5 percent) and Georgia (2.1 percent). Indiana's annual growth rate of 0.57 percent ranks 32nd nationally. While this mark is well below that of most Southern and Western states, Indiana's growth rate trails only South Dakota, Minnesota, Missouri and Wisconsin among Midwestern states.<sup>2</sup> Indiana has lagged Kentucky's growth rate over this period but has outpaced its Midwestern neighbors—with Illinois, Ohio and Michigan registering average annual growth rates of 0.46, 0.13 and 0.06, respectively.

### **Figure 1: Average Annual Percent of Population Change, 2000 to 2008**

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

Indiana has outpaced those neighbors by continuing to attract new residents at a time when other states in the region have experienced substantial out-migration. **Table 1** details the components of population change for Indiana and its bordering states. Indiana has added 53,000 residents, on net, through migration in this decade. Meanwhile, Michigan has seen a net out-migration of 316,000 people since 2000, which equates to a 3 percent loss in population from this component. Ohio and Illinois have experienced net out-migrations of 250,000 and 159,000 people, respectively. Conversely, Kentucky's net in-migration of 105,000 residents is nearly twice as great as Indiana's. Michigan, Ohio and Illinois have maintained their modest population growth through natural increase (births minus deaths) alone.

**Table 1: Components of Population Change for Indiana and its Neighbors, 2000 to 2008**

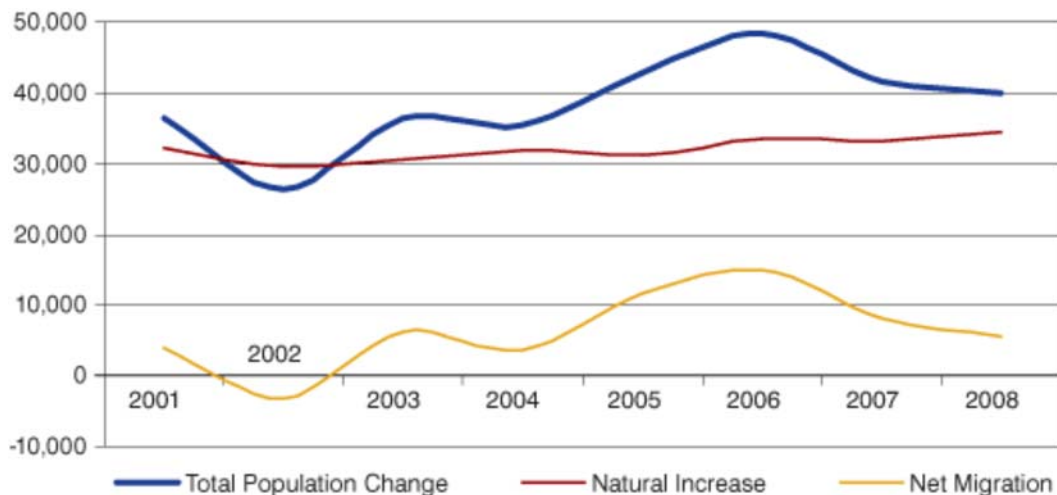
	Population, 2000	Net Migration, 2000-2008	Natural Increase, 2000-2008	Percent Population Change through Net Migration	Percent Population Change through Natural Increase
Indiana	6,080,522	53,231	264,562	0.9%	4.4%
Illinois	12,419,660	-159,182	644,967	-1.3%	5.2%
Kentucky	4,042,284	105,235	130,645	2.6%	3.2%

Michigan	9,938,492	-315,621	366,566	-3.2%	3.7%
Ohio	11,353,160	-249,542	353,444	-2.2%	3.1%

Source: U.S. Census Bureau

While Indiana has registered positive net migration this decade, its population growth has been spurred primarily by natural increase as well. **Figure 2** shows that Indiana's annual population growth has ranged from as low as 26,000 in 2002 to as high as 48,000 in 2006. However, natural increase has been relatively stable over this period and has accounted for as much as 113 percent of the state's annual population growth (2002) and as little as 69 percent (2006). Annual net migration, on the other hand, has fluctuated between -3,300 and 15,000. So, while natural increase has had the dominant influence on population change in the state, it is migration that drives variation in Indiana's population growth. As we will see, migration trends in Indiana, like in many other states, have been closely related to shifts in employment.

**Figure 2: Indiana's Annual Population Growth with Components of Change, 2000 to 2008**

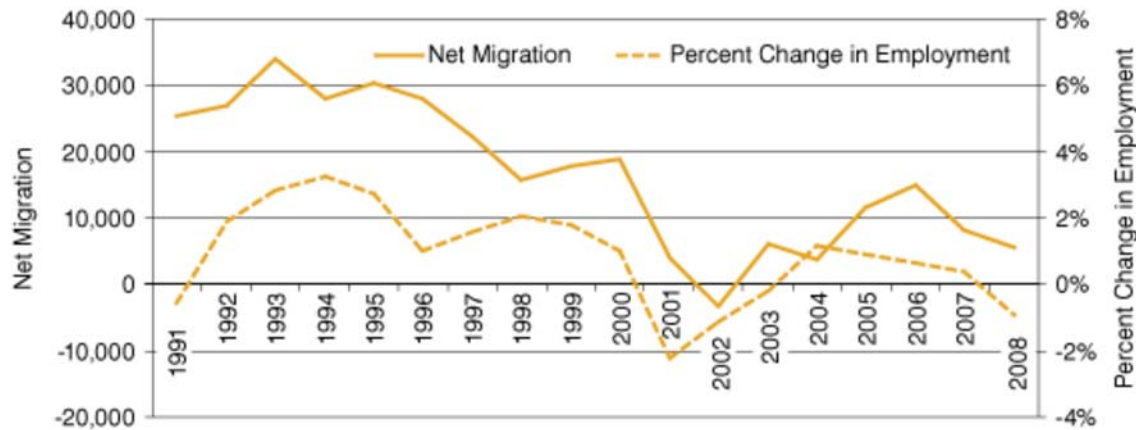


Source: IBRC, using U.S. Census Bureau data

## Employment Change and Migration

**Figure 3** traces Indiana's annual net migration between 1991 and 2008 along with the annual percent change in the state's total nonfarm employment. Over this period, the two variables tended to move together with shifts in the rate of employment change generally signaling a similar shift in the level of net migration. For instance, Indiana's greatest employment boom in recent years occurred between 1993 and 1995 when jobs increased by roughly 3 percent a year. In total, Indiana added 230,000 jobs over this period. These are also the top years for in-migration with an average annual net movement into the state of 31,000 residents. The state continued to add jobs throughout the decade but at a more modest pace. These lower rates of employment growth were accompanied by lower levels of net in-migration.

**Figure 3: Indiana's Annual Percent Change in Employment and Net Migration, 1991 to 2008**

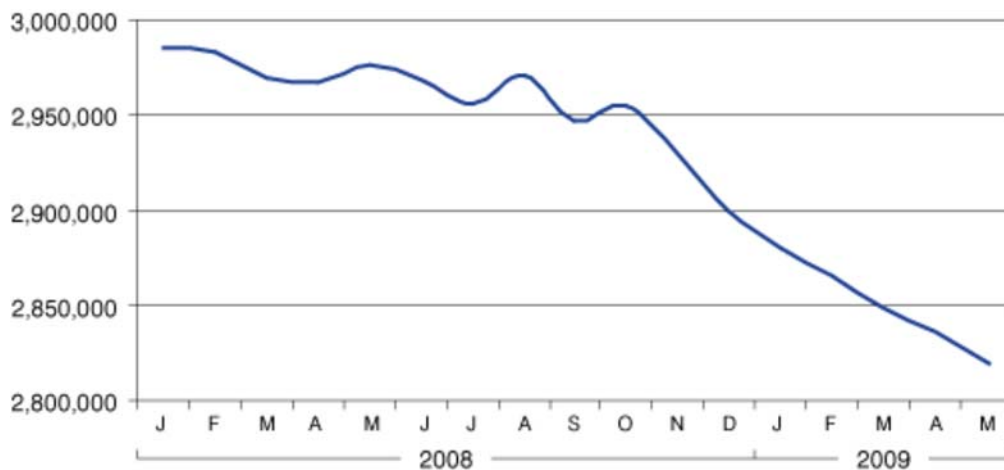


Sources: U.S. Census Bureau, Moody's Economy.com, Bureau of Labor Statistics

The recession beginning circa 2001 provides another example of this relationship in Indiana. Significant employment losses in 2001 and 2002 coincided with declines in net migration culminating in Indiana's only net out-migration over this period in 2002. Not until employment began to recover in 2004 did Indiana see consecutive years of increased net in-migration.

This fairly strong association between changes in employment and migration is important to understand given the current economic downturn. Indiana, like much of the nation, has seen heavy job losses in recent months (see **Figure 4**). In fact, between May 2008 and May 2009, Indiana lost 156,000 jobs, which exceeds the state's greatest decline during the previous recession (132,600 jobs lost between May 2000 and July 2003).

**Figure 4: Indiana's Total Nonfarm Employment, January 2008 to May 2009 (Seasonally Adjusted)**



Source: IBRC, using Bureau of Labor Statistics data

If the relationship between employment change and migration holds, it is likely that Indiana will see lower levels of net migration, leading to lower rates of population growth in the near term. There is reason for optimism, however, as Indiana rebounded from the last two recessions to post employment growth and attract new residents. Indiana recovered from the recession of the early 2000s in a way that neighboring Michigan, Ohio and Illinois were unable to do. Given these recent trends, there is reason to believe that after the current economic downturn plays out; Indiana can remain a state that is attractive to employers and prospective residents.

## Notes

1. 1991 marks the first year that the U.S. Census Bureau tracked net migration as part of its annual population estimates program.
2. The U.S. Census Bureau defines the Midwest as consisting of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin.

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## Commuting Brings Money In or Takes Money Out

Adjustment for residence: it's one tiny line in the personal income calculation that converts earnings by place of work to data by place of residence.<sup>1</sup> However, these data are also valuable when it comes to answering other questions, such as the impact of local commuting on county income. In this article, we will focus on Indiana counties and explore the 2007 data from the Bureau of Economic Analysis;<sup>2</sup> but first, some definitions are in order:

- **Gross earnings inflow:** the money earned by residents who work outside of the county.
- **Gross earnings outflow:** the money earned at jobs within the county by people living outside the county
- **Net Residence Adjustment:** the gross earnings inflow minus gross earnings outflow. A positive net residential adjustment indicates that those residents who live in the county but work elsewhere earn more (as a group) than those people who commute into the county for work.

### Gross Earnings Inflow

**Table 1** shows the largest inflows occurred in Hamilton and Lake counties, thanks to the large number of residents working in Indianapolis and Chicago, respectively.

**Table 1: Largest Gross Earnings Inflows in 2007**

Rank	County	Inflow (in thousands)
1	Hamilton	\$5,041,685
2	Lake	\$3,509,708
3	Marion	\$2,782,179
4	Porter	\$2,490,938
5	Hendricks	\$2,161,222
6	Johnson	\$2,095,408
7	Morgan	\$1,275,193
8	Clark	\$1,238,334
9	Hancock	\$1,224,427
10	Floyd	\$1,179,451

Source: IBRC, using data from the Bureau of Economic Analysis

If we look at inflow as a percent of earnings by place of residence, a different picture emerges, with only Morgan County appearing among the top 10 in both Table 1 and Table 2. Here we see just how much many smaller counties benefit from their proximity to jobs in a larger metropolitan region. For example, each county in **Table 2** is part of a defined metropolitan statistical area, with the exception of Union and Switzerland counties (which are adjacent to the Cincinnati-Middletown metro).

**Table 2: Inflow as a Percent of Earnings by Place of Residence, 2007**

Rank	County	Inflow	Percent
1	Franklin	349,469	71.5
2	Morgan	1,275,193	70.5
3	Ohio	88,850	67.8
4	Brown	242,768	66.7
5	Union	109,499	65.8
6	Warrick	1,007,459	64.0
7	Tipton	255,899	61.7
8	Newton	187,666	60.9
9	Switzerland	120,806	60.1
10	Harrison	511,517	59.5

Note: Earnings by place of residence were adjusted for contributions to government social insurance (see [Endnote 3](#)).

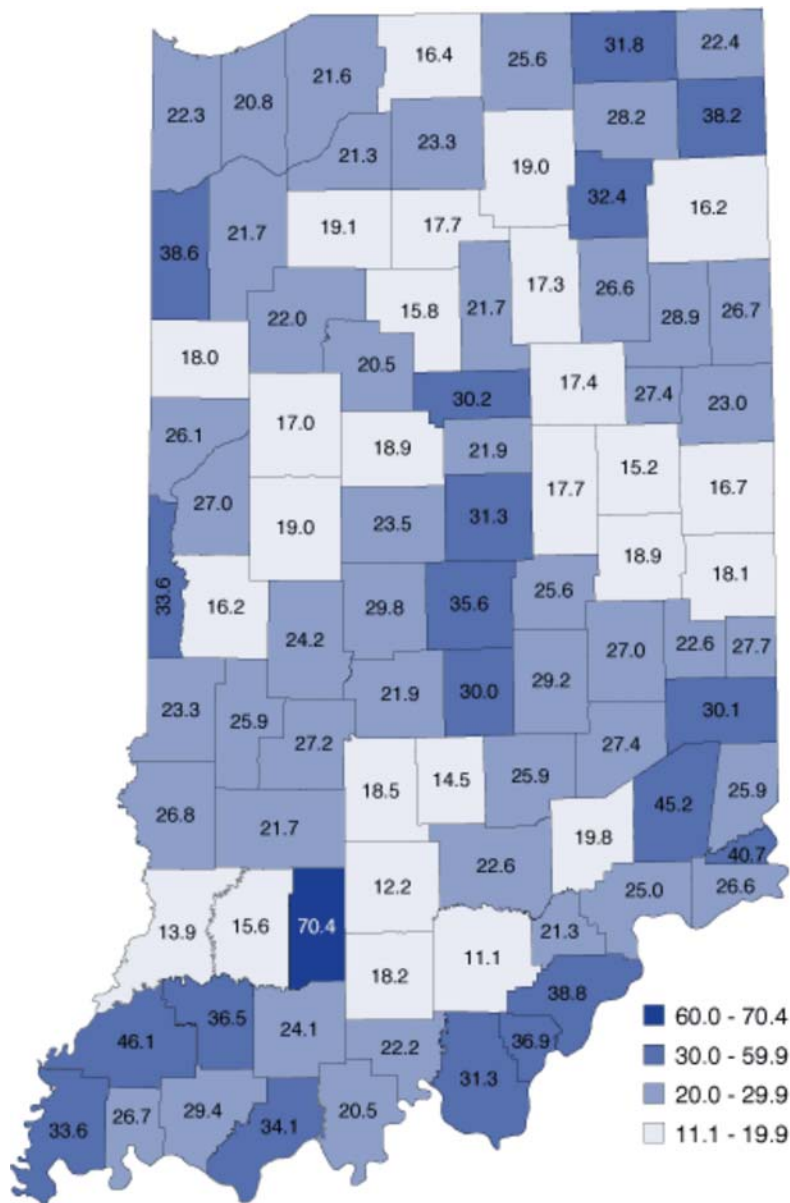
Source: IBRC, using data from the Bureau of Economic Analysis

## Gross Earnings Outflow

Marion County had the largest outflows at nearly \$13.6 billion. This is partially due to the sheer size of the Indianapolis economy. Lake County came in second on this measure at \$2.4 billion.

When looking at percentages, Martin County is seen as an outlier, with 70 percent of its earnings by place of work leaving the county. This is not surprising given that Martin County's largest employer, the Crane Navel Base, employs large numbers of workers from surrounding counties. The next highest outflow rate is 46 percent in Gibson County, home to Princeton's Toyota manufacturing plant. **Figure 1** shows the outflow percentages for all 92 counties. Large outflows indicate that changes in the county's employment environment will likely have bigger ripple effects in the broader region than might otherwise be the case.

**Figure 1: Outflow as a Percent of Earnings by Place of Work, 2007**



Source: IBRC, using data from the Bureau of Economic Analysis

### Considering the "Net"

When considering inflows and outflows together, Hamilton and Porter counties had the most to gain from commuting, with positive net flows reaching nearly \$2.8 billion and \$1.8 billion, respectively. However, as a percent of earnings by place of residence, Morgan, Brown and Franklin counties all hovered near the 60 percent mark, as shown in **Table 3**, meaning that approximately 60 percent of all the money earned by their residents came from outside the counties themselves.

**Table 3: Counties with Highest Net Flow as a Percent of Earnings by Place of Residence, 2007**

Rank	County	Net Flow (in thousands)	Percent
1	Morgan	\$1,125,186	62.2



2	Brown	\$222,287	61.1
3	Franklin	\$289,621	59.3
4	Union	\$87,679	52.7
5	Tipton	\$211,564	51.0
6	Warrick	\$771,688	49.0
7	Washington	\$272,008	48.1
8	Crawford	\$87,129	47.9
9	Starke	\$168,267	46.0
10	Parke	\$134,107	45.7

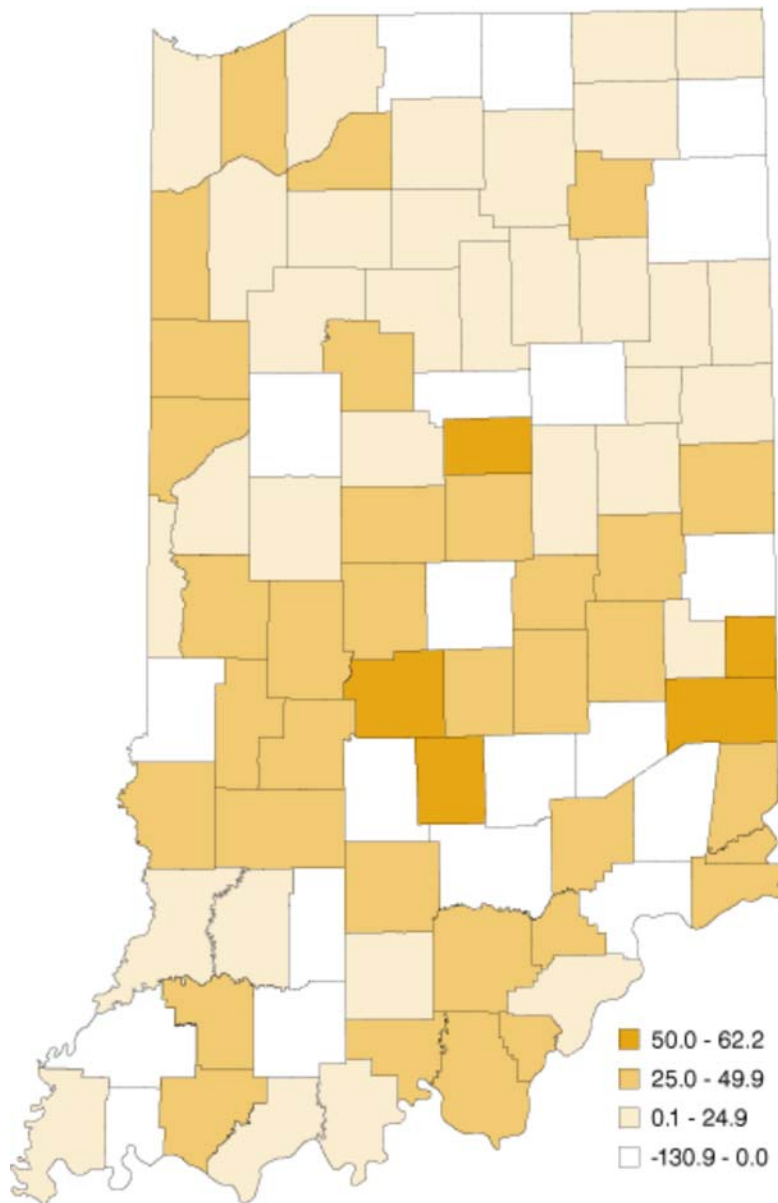
Note: Earnings by place of residence were adjusted for contributions to government social insurance (see [Endnote 3](#)).

Source: IBRC, using data from the Bureau of Economic Analysis

**Figure 2** shows the distribution for all 92 counties.

### **Figure 2: Net Flow as a Percent of Earnings by Place of Residence, 2007**

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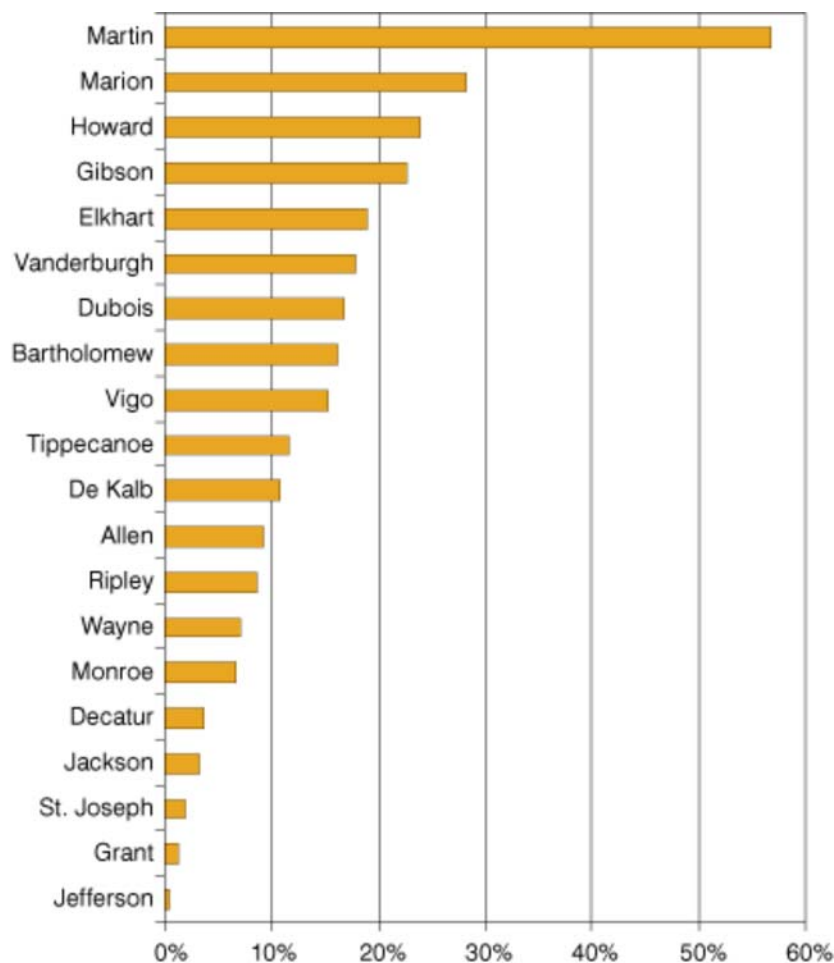


Note: Earnings by place of residence were adjusted for contributions to government social insurance (see [Endnote 3](#)).

Source: IBRC, using data from the Bureau of Economic Analysis

Twenty counties had negative net flows, indicating that more money flows out to other places than is brought back to the county by residents working elsewhere (see **Figure 3**). Of all the money earned from jobs within the county, Martin, Marion, Howard and Gibson counties each had more than 20 percent flow out to other places (after factoring in the money flowing in by residents working elsewhere).

### **Figure 3: Net Flow of Earnings Leaving the County as a Percent of Earnings by Place of Work, 2007**



Source: IBRC, using data from the Bureau of Economic Analysis

## Conclusion

About 772,000 Hoosiers commute outside of their county of residence for work.<sup>4</sup> The implications of this activity go far beyond traffic patterns or the amount of time people spend getting to work. These data on the flow of commuter earnings help us parse out some of the economic impacts of this activity. Furthermore, as the recession continues, it is likely people will need to find work further from home, resulting in earning flow changes in many counties, making this an indicator worth revisiting.

## Notes

1. Personal income is calculated as Earnings by place of work minus Contributions for government social insurance plus Adjustment for residence; Dividends, interest and rent; and Personal current transfer receipts. The adjustment for residence data are inferred through journey-to-work data available from the decennial census, though several additional data sources are used to produce the annual intercensal estimates.
2. These county-level data are found in Table CA91 (Gross Commuters' Earnings Flows) at [www.bea.gov/regional/reis/](http://www.bea.gov/regional/reis/).
3. As part of the broader calculation of personal income, earnings by place of residence is calculated as earnings by place of work minus contributions for government social

insurance plus gross earnings inflow minus gross earnings outflow. However, when calculating inflow as a percent of earnings, excluding the government social insurance contributions from the denominator alone artificially increases the resulting percent by a small margin. Therefore, for the purposes of this article, the earnings by place of residence have been adjusted to include the contributions for government social insurance for a more accurate calculation of the percentages.

4. This is according to the annual commuting trends based on IT-40 tax returns for 2007. The number of Indiana tax filers who worked outside their county of residence increased 3.7 percent between 2005 and 2007, similar to the increase in those who live and work in the same county (3.6 percent). More data are available at [www.stats.indiana.edu/topic/commuting.asp](http://www.stats.indiana.edu/topic/commuting.asp).

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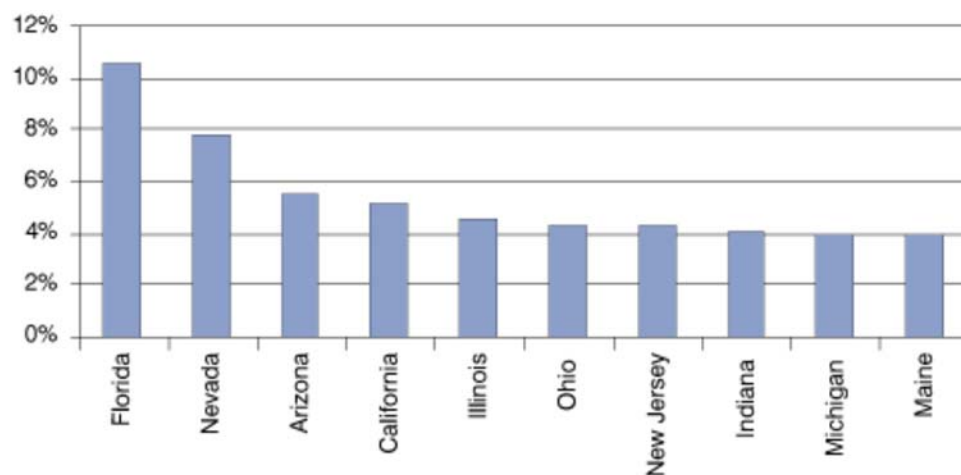
## Breaking Down the Housing Market

Foreclosures are up and housing prices are down. In all of this turmoil, how is Indiana being affected? Is Indiana's experience similar to what is happening around the country? This brief article focuses on those two issues, in context with the nation and the Midwest.<sup>1</sup>

Like the nation, Indiana has seen continuing increases in the number of mortgage loans in the foreclosure process. Based on fourth quarter data (2006, 2007 and 2008) from the Mortgage Bankers Association's National Delinquency Surveys, the United States saw an increase in the percentage of all loans in the foreclosure process, moving from 1.2 percent to 3.3 percent. The five-state Midwest region<sup>1</sup> also experienced a shift from 2.4 percent to 3.8 percent, while Indiana saw a steady increase in their foreclosure inventory moving from 3.0 percent to 3.8 percent.

Note that in 2006, Indiana already had a higher proportion of foreclosures and by 2008 was still higher than the nation's 3.3 percent, but now was matched by the Midwest. First quarter 2009 results reveal that four Midwestern states claim spots in the nation's top 10 highest foreclosure inventories (see **Figure 1**). The Midwest held about 14 percent of all of the U.S. mortgage loans but 16 percent of all loans in the foreclosure inventory.

**Figure 1: Percent of State's Mortgage Loans in Foreclosure, 2009:1**



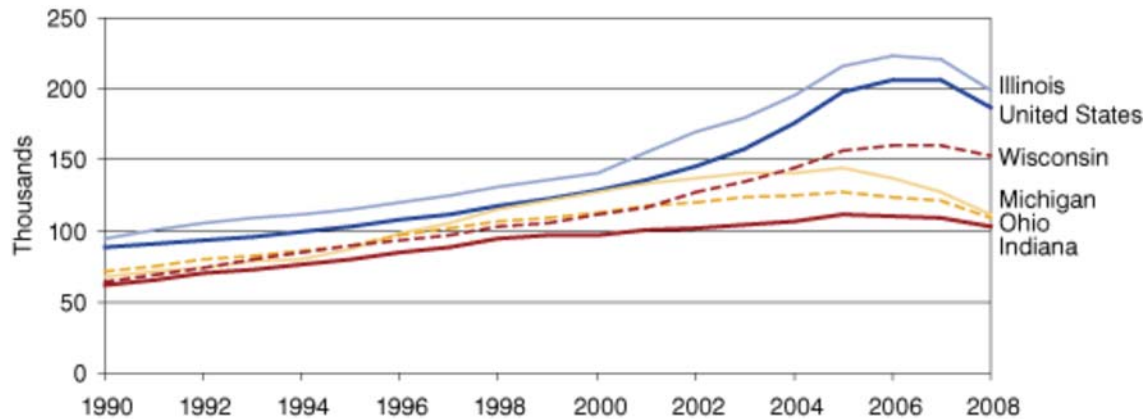
Source: IBRC, using data from the Mortgage Bankers Association National Delinquency Survey

## The Rise and Fall of Home Prices

The median sale price for an Indiana single-family home has trailed both neighboring states and the nation overall since 1990 (see **Figure 2**). Much of the United States, including Indiana, experienced home value appreciation from 1990 to 2005. The average of the median home sale prices in the United States had an average annual growth rate of 5.4

percent. In the Midwest, Indiana and Ohio experienced a 3.9 percent average annual growth during the 15-year span, significantly lower than the national average. While the nation saw prices peak in 2006, Indiana's home prices peaked in 2005. Since its peak, the United States experienced an average annual decline of 4.9 percent in prices, and most of the Midwest region had even higher rates of reduction. Indiana home prices didn't match the escalation of the nation, nor have Indiana home values declined as dramatically—2.4 percent annually since 2005.

**Figure 2: Median Sales Price for Single-Family Homes in the Midwest, 1990 to 2008**



Source: Moody's Economy.com

Looking within Indiana, Hamilton, Porter, Hendricks and Hancock counties consistently had the highest median home sale prices between 1990 and 2008, with Monroe and Floyd joining by 2005. Home price growth rates vary throughout Indiana, with higher rates outside of Chicago and Louisville and lower growth in the Indianapolis region (see **Figure 3**).<sup>5</sup>

**Figure 3: Average Annual Home Price Growth Rate by County, 1990 to 2008**



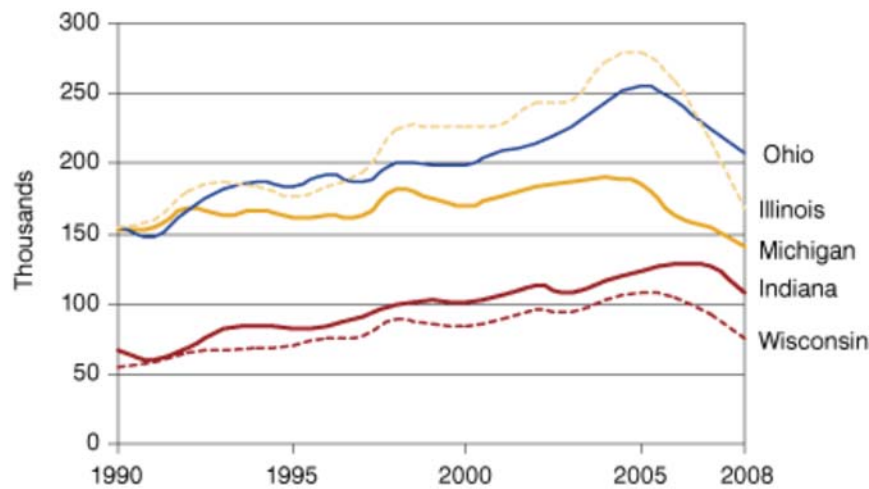
Source: IBRC, using data from Moody's Economy.com

### Housing More Affordable, But Fewer Transactions

The year 2005 marked not only a turning point for sale prices in the Midwest as a whole, but also corresponded with a decrease in the volume of home sales. Conventional wisdom would indicate that as a house becomes less expensive, the demand for it would increase. The convergence of the housing bust, the financial crisis and rising unemployment has

limited demand even though realtors would call this a "buyers market." **Figure 4** shows a steady increase in the number of existing single-family homes sold up to 2006, which are followed by continued declines in the volume of transactions.

**Figure 4: Existing House Sales (Seasonally Adjusted), 1990 to 2008**



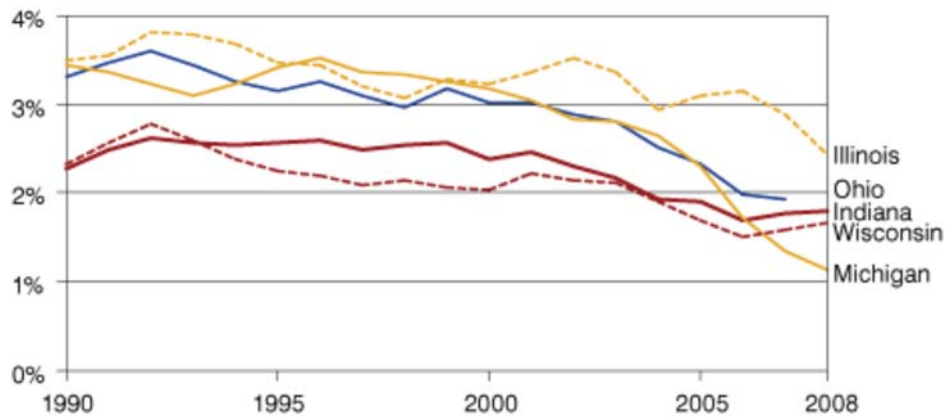
Source: Moody's Economy.com

### Fewer Starts

The number of housing starts within the current year can serve as an early warning sign of significant changes in the housing market and the overall economy.<sup>6</sup> Indiana and the Midwest experienced housing start peaks in 2003, while the nationwide peak didn't hit until 2005. From 1990 to 2003, the number of housing starts rose in the Midwest (although not at the same pace as the U.S. average) and since 2003 have fallen. Contributing to the decline in the number of Midwest housing starts were demographic shifts. As people moved south and west, the Midwest's share of all U.S. housing starts dropped from 14.9 percent in 1990 to 13.3 percent in 2003 and to 9 percent by 2008. In 1990, Indiana held 2.3 percent of all U.S. housing starts (see **Figure 5**), dropping to 1.8 percent by 2008. However, Indiana also experienced the smallest percentage decrease in housing starts in the Midwest (see **Figure 6**). We could say that because Indiana didn't experience the same dramatic gains in home values and housing starts as other parts of the country, it now doesn't suffer the same dramatic losses. That is perhaps small comfort to those in the business of building and selling homes.

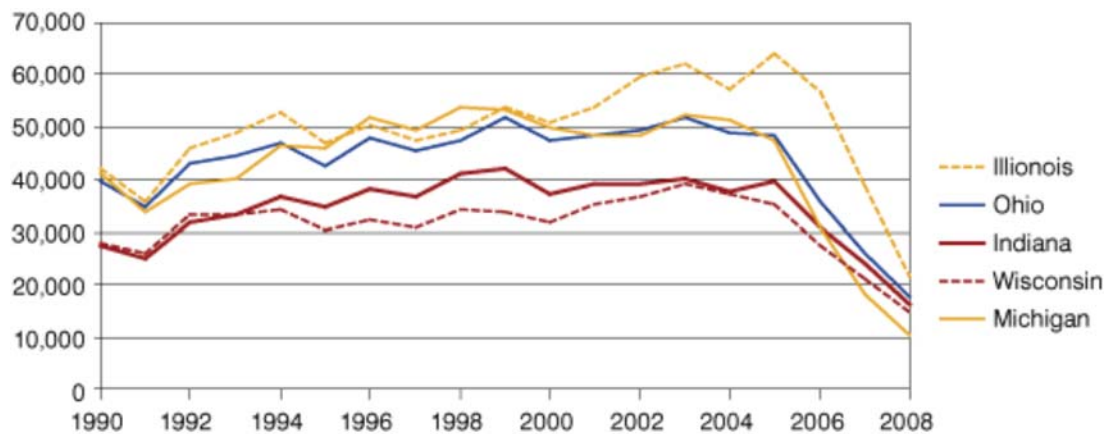
**Figure 5: Housing Starts as a Percent of U.S. Total, 1990 to 2008**





Source: IBRC, using data from Moody's Economy.com

**Figure 6: Housing Starts in the Midwest, 1990 to 2008**



Source: Moody's Economy.com

## Summary

Indiana continues, like most states, to see increases in foreclosures, sluggish home sales, declining housing starts and shrinking home values. But we note two significant trends: First, Indiana has experienced less dramatic price movements in its housing market. The slow rise in prices may be a contributing factor to the continuous high level of foreclosures,<sup>7</sup> though the lower rate of decline softens the current crunch. Second, Indiana is increasing its share of U.S. home sales based on recent data, which may mean that Indiana's affordable housing is getting more than second looks.

## Notes

1. The Midwest region for this article consists of Illinois, Indiana, Michigan, Ohio and Wisconsin.
2. Indiana State Government, "The NSP Substantial Amendment," *Official Website of the State of Indiana* (November 2008), [www.in.gov/ihcda/files/NSP\\_Final\\_12-18-08.pdf](http://www.in.gov/ihcda/files/NSP_Final_12-18-08.pdf).
3. Numbers are not seasonally adjusted; fourth quarter data from each year are used unless noted otherwise.

4. This number is the average of the median home sale prices for the 50 states plus the District of Columbia.
5. Numbers are current year dollars.
6. B. Baumohl, *The Secrets of Economic Indicators* (Upper Saddle River, New Jersey: Wharton School of Publishing, 2008).
7. Indiana State Government, "Interim Study Committee on Mortgage Lending Practices and Home Loan Foreclosures," *Official Website of the State of Indiana* (August 16, 2007), [www.in.gov/legislative/interim/committee/2007/committees/minutes/MLHLA8G.pdf](http://www.in.gov/legislative/interim/committee/2007/committees/minutes/MLHLA8G.pdf).

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## The Michigan City-LaPorte Metro Story: Told by STATS Indiana

This article is the 13th in a series about Indiana's metropolitan statistical areas (metros). All of the data used in this article can be found using the USA Counties and Metros Side-by-Side feature on STATS Indiana ([www.stats.indiana.edu](http://www.stats.indiana.edu)) unless otherwise noted.

### The Area

The Michigan City-LaPorte Metro consists of a single county—LaPorte—and is located in northwest Indiana. This county had a population of 110,888 in 2008, making up 1.7 percent of Indiana's population. While Michigan City-LaPorte's population growth (3.6 percent) from 1990 to 2008 hasn't been as fast as Indiana (15 percent) or the United States (22.2 percent), it has still managed to grow. When we look at the population by age data, we see that Michigan City-LaPorte had a higher proportion of people in the older adults categories in 2007 (see **Figure 1**).

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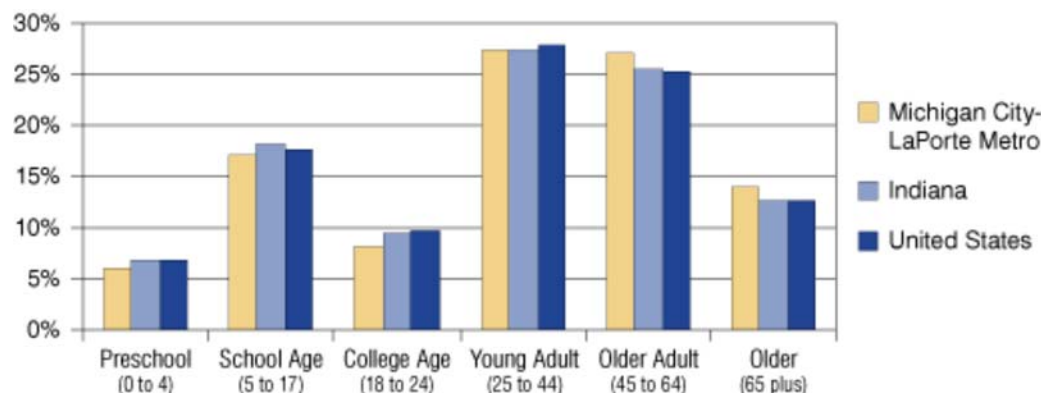
**From the Office of Management and Budget:** What does it take to make a metro? Metropolitan statistical areas must meet all of the following criteria:

- counties (or equivalent entities—In Indiana, metros are always made up of counties)
- at least one urbanized area of 50,000 or more people
- "adjacent territory" with a high degree of social and economic integration with the core. This integration is measured by commuting trends.

All metros in the United States make up about 84 percent of the U.S. population according to the Office of Management and Budget's latest update in November 2008.

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**Figure 1: Percent of Population by Age Group in Michigan City-LaPorte, 2007**



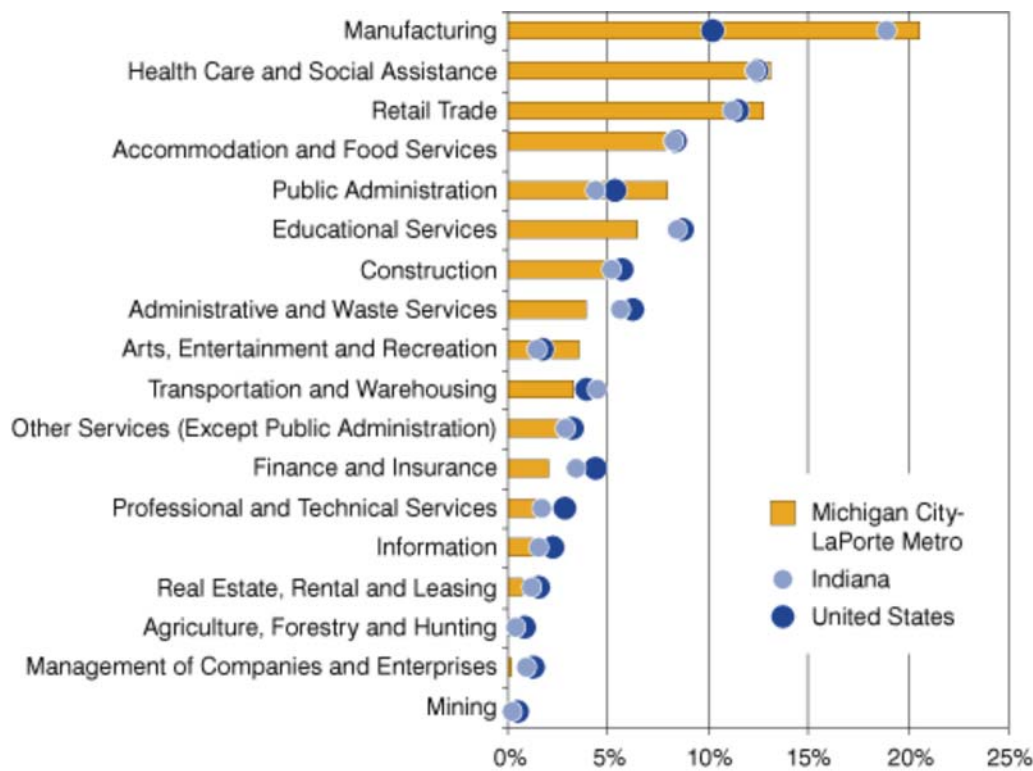
Source: IBRC, using U.S. Census Bureau data

From 2007 to 2008, the Michigan City-LaPorte metro grew in all three components of population change: net domestic migration, net international migration and natural increase. Indiana as a whole saw a negative net domestic migration (more people moved out of the state than into it) but more than made up for the loss with positive international migration and natural increase numbers.

## Jobs and Wages

According to the most recent data from the Bureau of Labor Statistics, more than one in every five jobs in the Michigan City-LaPorte metro was in the manufacturing industry, compared to 18.9 percent in Indiana and 10.3 percent in the United States. In 2007, there were 191 manufacturing establishments employing 9,230 people paying an average annual wage of \$42,697 in the Michigan City-LaPorte metro. As can be expected, health care and social assistance and retail trade were also among the top three industries for jobs in the metro, Indiana and the United States (see **Figure 2**).

**Figure 2: Industry Distribution of Jobs in the Michigan City-LaPorte Metro Compared to Indiana and the United States, 2007**



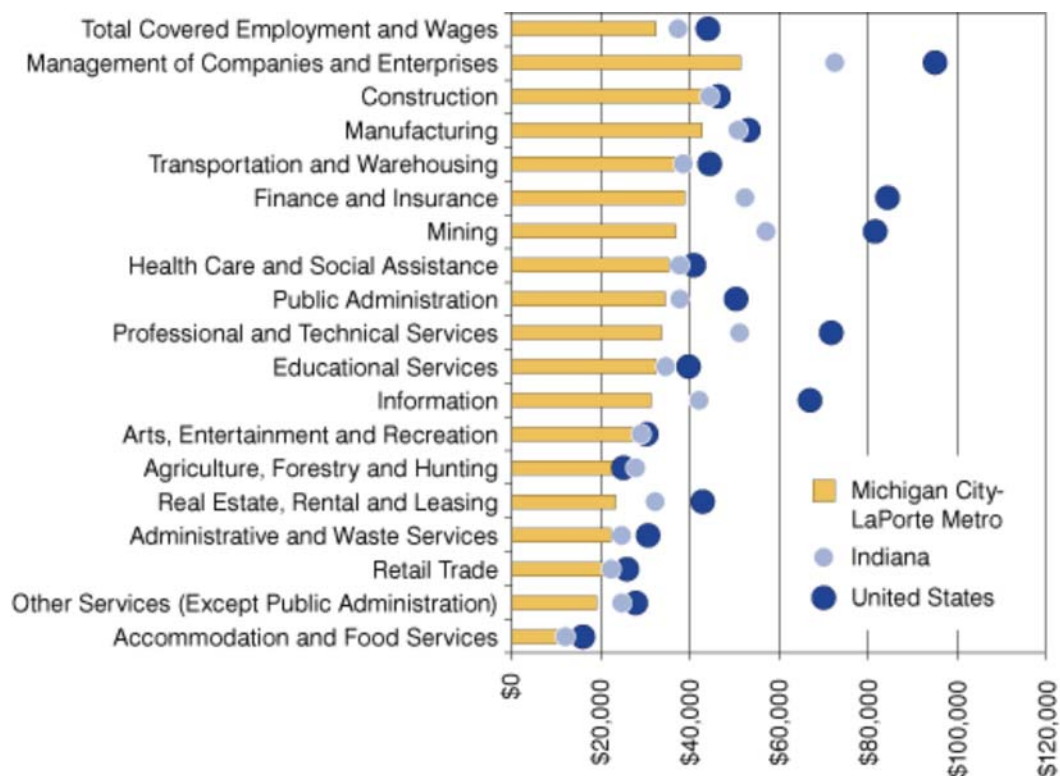
Note: Data for wholesale trade and utilities were not available for the Michigan City-LaPorte metro

Source: IBRC, using Bureau of Labor Statistics data

After adjusting for inflation, wages in Michigan City-LaPorte have increased \$865 from 1997 to 2007, a real increase of 2.7 percent. Meanwhile, Indiana's wages increased 5 percent and the United States experienced an increase in wages of 11.5 percent. Of the industries with data available in the metro (in other words, excluding wholesale trade and utilities), management of companies and enterprises paid the highest wages across all three geographies. Construction and agriculture were the only two industries in the metro to pay

higher wages than the U.S. average (see **Figure 3**). Overall, wages in the metro were about 73 percent of wages in the United States. In Indiana as a whole, wages were 84 percent of the nation's wages.

**Figure 3: Average Wages per Job by Industry in the Michigan City-LaPorte Metro, Indiana and the United States, 2007**

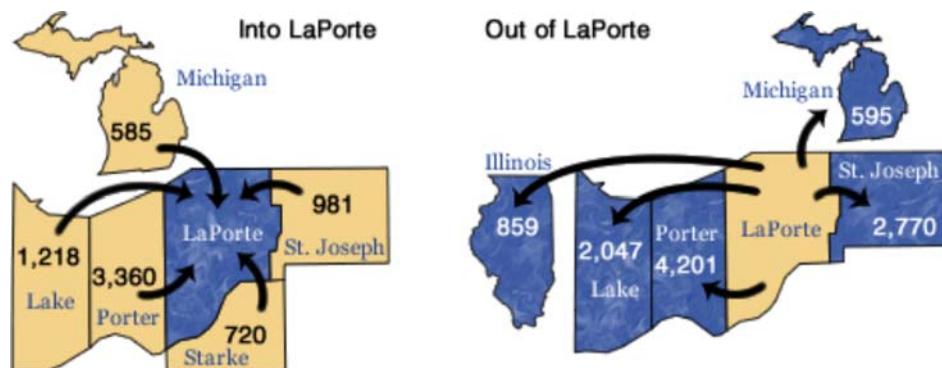


Note: Data for wholesale trade and utilities were not available for the Michigan City-LaPorte metro  
 Source: IBRC, using Bureau of Labor Statistics data

### Commuting Trends

Since the Michigan City-LaPorte metro only consists of LaPorte County, we are able to take a look at the commuting trends data on STATS Indiana. The metro is a net exporter of workers, sending 11,816 workers from LaPorte County to other counties in the United States and bringing in 7,810 workers from elsewhere. **Figure 4** shows the top five counties getting workers from LaPorte and the top five counties sending workers into LaPorte County.

**Figure 4: Commuting Trends Into and Out of LaPorte County, 2007**



Source: STATS Indiana, using Indiana IT-40 tax returns

## Two Out of Three Not Great

While the Michigan City-LaPorte Metro's wages increased from 1997 to 2007, the area saw a decline in jobs over the 10-year span as well as a decline in establishments. Meanwhile, Indiana and the United States experienced increases in all three measures. Based on the high percentage of LaPorte's workers in the manufacturing industry, this county seems to be subject to the overall economic restructuring of the manufacturing industry.<sup>1</sup>

## Note

1. Carol D'Amico and Jerry Conover, "Indiana's Special Sectors Outlook for 2009," *Indiana Business Review*, November 2008, [www.ibrc.indiana.edu/ibr/2008/outlook/special-sectors.html](http://www.ibrc.indiana.edu/ibr/2008/outlook/special-sectors.html).

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