

Recession Alters Indiana Migration Trends

One important side effect of the recent recession has been a slowdown in migration across much of the country. Once booming states like Florida, Arizona and Nevada saw comparatively small population gains through migration in 2009. Indiana recorded a 2009 net in-migration of just 2,390 residents—our second lowest tally in this decade.

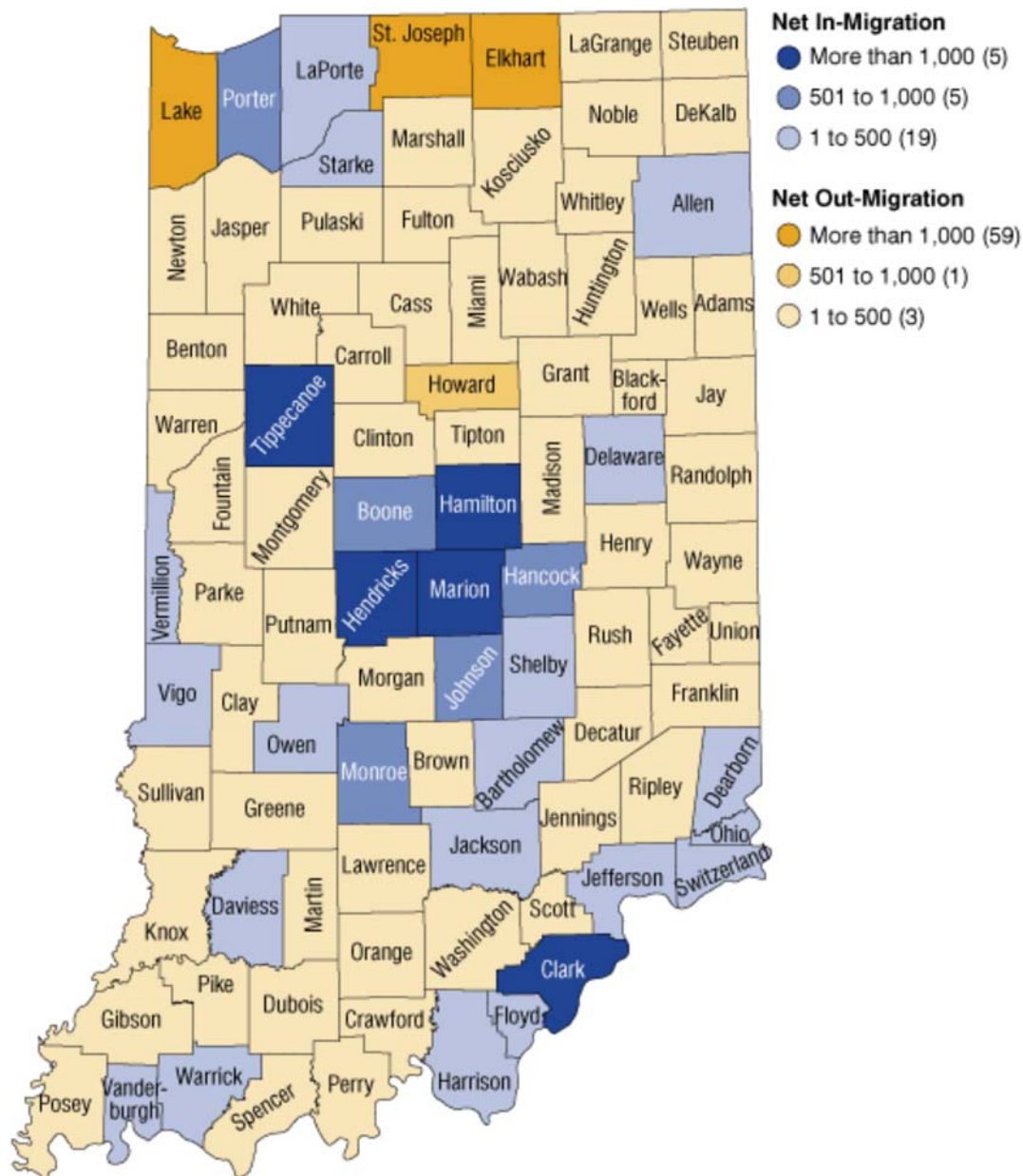
These waning migration trends have not occurred uniformly within Indiana, however. Using recently released data from the U.S. Census Bureau, this article will examine the 2009 migration figures for Indiana counties and compare them to trends throughout the decade. We will also pay particular attention to the interesting dynamics in the Indianapolis metro area and compare it to other major Midwestern cities.

2009 Migration

Figure 1 shows that Hamilton County led all Indiana counties with a net influx of more than 5,000 residents through migration followed by Hendricks (1,840), Tippecanoe (1,450) and Clark (1,190) counties. Marion County's net migration figure of 1,030 people marks its first net inflow since 1993.

The tough employment situation in Elkhart County resulted in the state's largest net out-migration of 1,580 residents. Other areas with significant net out-migrations were Lake and St. Joseph counties (-1,560 each) and Howard County (-850).

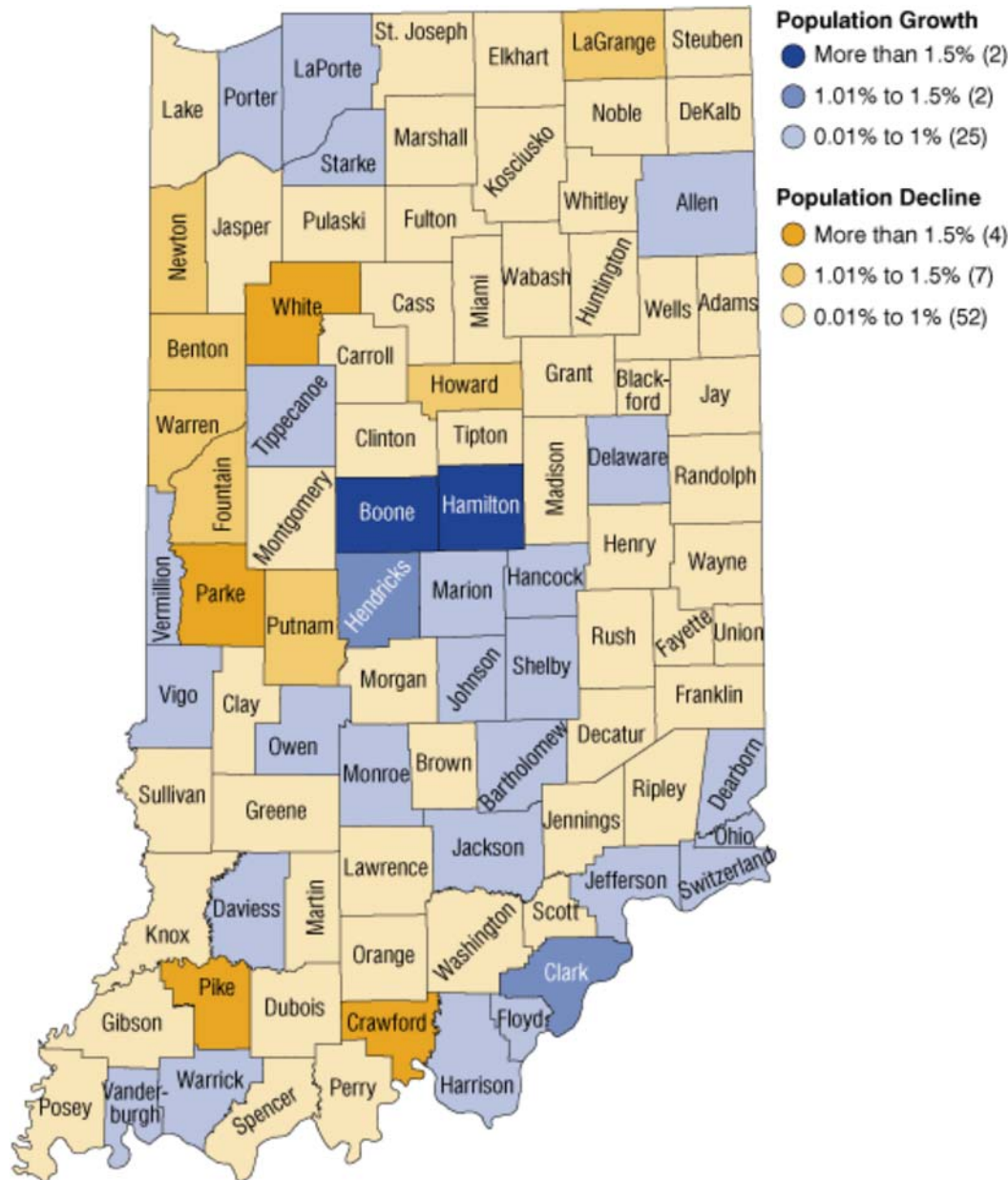
Figure 1: Net Migration by County, 2009



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

Figure 2 illustrates the percent of population change in each county that was due to net migration. Central Indiana suburban counties again lead the way on this measure but we see that it is largely rural counties that lost the greatest proportion of their populations through migration. Pike County in southwestern Indiana lost more than 2 percent of its population through net migration in 2009. A net outflow of residents accounted for more than a 1.5 percent population decline in White, Parke and Crawford counties

Figure 2: Percent Change in Population Due to Net Migration, 2009



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

In looking at these data it is important to keep in mind that we are considering migration only and not overall population change. For example, Elkhart and Lake counties had the greatest net out-migration figures in 2009, yet both of these counties registered overall population growth because their natural increase (more births than deaths) more than compensated for their net out-migration.

Shifting Trends in Many Parts of Indiana

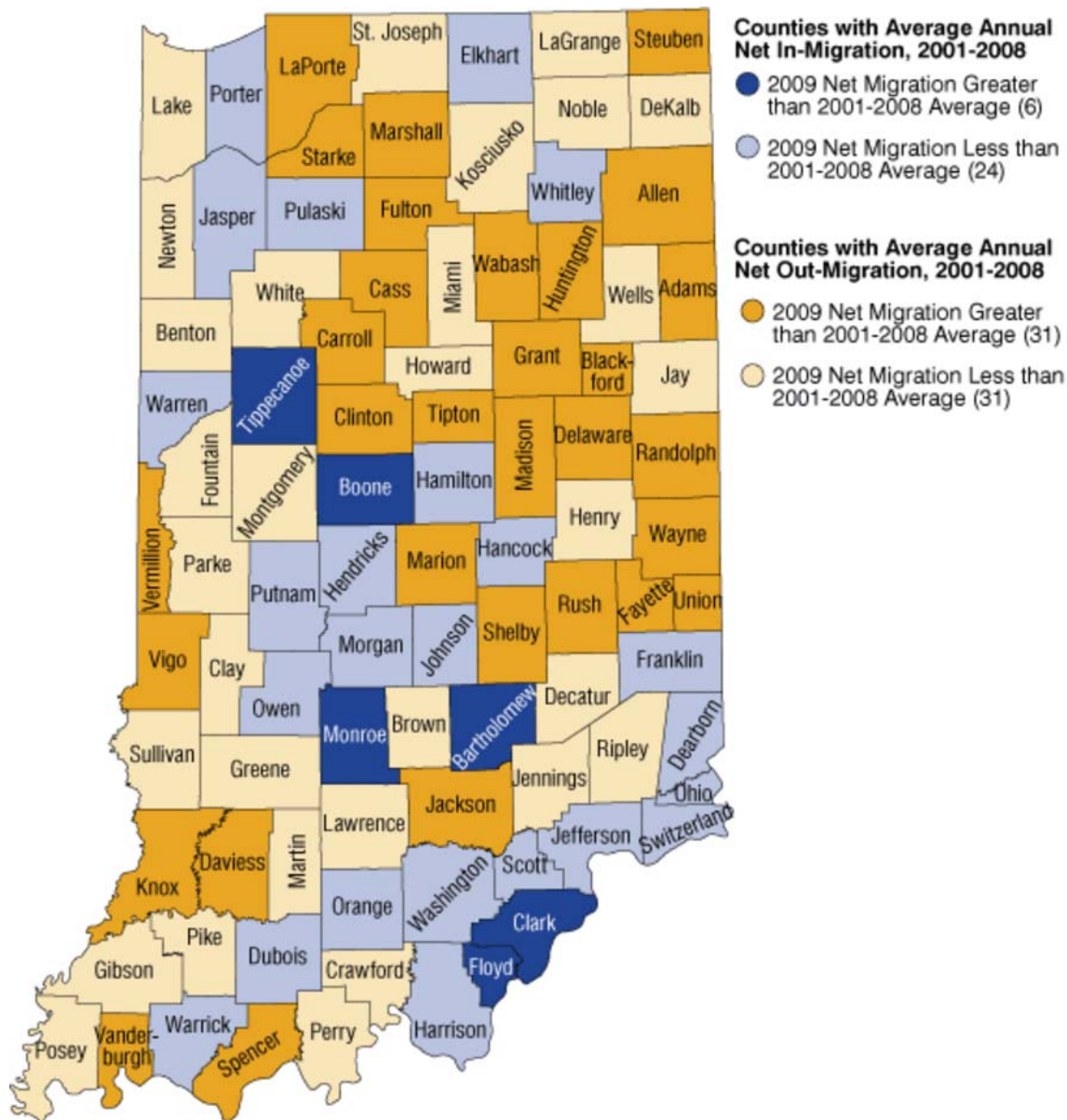
At first glance, there is nothing too surprising in the maps above. Twenty-nine counties registered a net in-migration in 2009—the same number of Indiana counties that had a net in-migration from 2001 to 2008. Suburban counties in the Indianapolis metro area remained the top magnets for movers while many rural areas of the state continue to lose residents through migration.

What is noteworthy about Indiana's migration trends in 2009, however, is the apparent

slowdown of movement in many parts of the state. Migration is a volatile process that is driven largely by economic and housing considerations. People most commonly make long distance moves to improve their employment situation while intra-regional moves (e.g. Marion County to Hamilton County) are typically spurred by housing decisions. The depressed labor market throughout much of the country would certainly discourage long distance moves. Meanwhile factors including tightened access to credit, the slumping housing market and employment insecurity would likely prompt many potential intra-regional movers to postpone a home purchase.

To help demonstrate this development, we organize all Indiana counties into one of four categories based on their migration trends throughout the decade (see **Figure 3**). The first category features the few counties whose 2009 net in-migration exceeded their positive average annual net migration between 2001 and 2008. For example, Boone County's net migration of 1,000 residents in 2009 was an improvement over its already strong average annual tally of 850 residents earlier in the decade. The other counties with accelerated in-migration were the university communities of Tippecanoe and Monroe counties, Clark and Floyd counties in the Louisville metro area and Bartholomew County.

Figure 3: Comparisons—Average Annual Net 2001 to 2008 Compared to 2009



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

The second group comprises counties whose 2009 net migration was less than their positive average annual mark throughout the decade. This group includes several counties in the Indianapolis metro area including Hamilton, Hendricks, Johnson, Hancock, and Morgan counties. Twelve of the 24 counties in this group fell from their general in-migration trend to a net outflow in 2009 including Elkhart, Putnam, Morgan and Dubois counties.

The remaining groups include the 62 counties that averaged an annual net out-migration between 2001 and 2008. Half of these communities saw either a lower level of net out-migration or registered a net influx of residents. The other 31 counties saw a greater than average net out-migration in 2009.

Table 1 shows some of the more extreme examples of these shifting trends. The most notable shift has occurred within the Indianapolis metro area where Marion County’s net migration mark for 2009 surpassed its average for the decade by more than 5,000

residents. Meanwhile, six of the 10 counties with the largest negative differences were counties in the Indianapolis metro area.

Table 1: Biggest Differences between Average Annual Net Migration from 2001 to 2008 and 2009 Net Migration

County	Average Annual Net Migration, 2001 to 2008	2009 Net Migration	Difference
Marion	-4,001	1,030	5,031
Delaware	-546	165	711
Tippecanoe	1,039	1,451	412
Grant	-537	-156	381
Madison	-345	-11	334
Allen	-153	133	286
Monroe	614	899	285
Clark	959	1,187	229
Wayne	-456	-244	212
LaPorte	-166	24	190
Hamilton	7,447	5,175	-2,272
Elkhart	317	-1,576	-1,893
Hendricks	3,271	1,838	-1,433
Johnson	2,110	954	-1,156
Lake	-706	-1,559	-853
Porter	1,335	532	-803
Morgan	243	-398	-641
St. Joseph	-993	-1,559	-566
Hancock	1,120	598	-522
Putnam	61	-426	-487

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

Other areas with substantial migration improvements in 2009 include Delaware, Madison and Grant counties along the Interstate 65 corridor. These counties have seen several years of employment declines (particularly in manufacturing) and have had the prevailing net out-migration trend to match. These counties have lost employment through the recession as well, but their rate of job loss has been less severe than the state average.¹ Perhaps the lack of employment opportunities elsewhere has removed a key incentive for some residents in these communities to move.

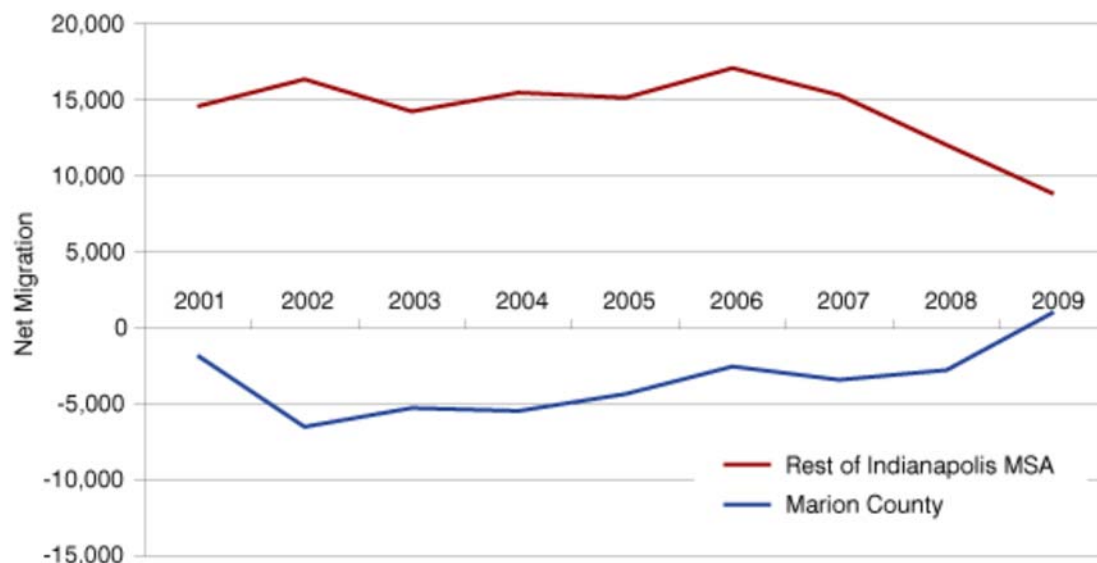
Elkhart, Lake and St. Joseph counties had a comparatively large net outflow of residents in 2009 but it is interesting to note that these counties saw a similar out-migration during the

last economic downturn. Between 2001 and 2003 (a period that coincides with our last recession), each of these counties had at least one year of net out-migration that approached or was greater than their 2009 mark.

Focus on Large Metropolitan Areas

As we have seen, some of the most dramatic migration shifts in 2009 were seen in the Indianapolis Metropolitan Statistical Area (MSA).² **Figure 4** provides greater detail on this region's net migration trends and suggests that there has been some degree of interdependence between Marion County and surrounding areas. Most notably, the suburban county in-migration declined when fewer people were moving from Marion County. This relationship makes sense given that the most recent migration data (2007) from the Internal Revenue Service indicated that 37 percent of migrants to these suburban counties moved there from Marion County.

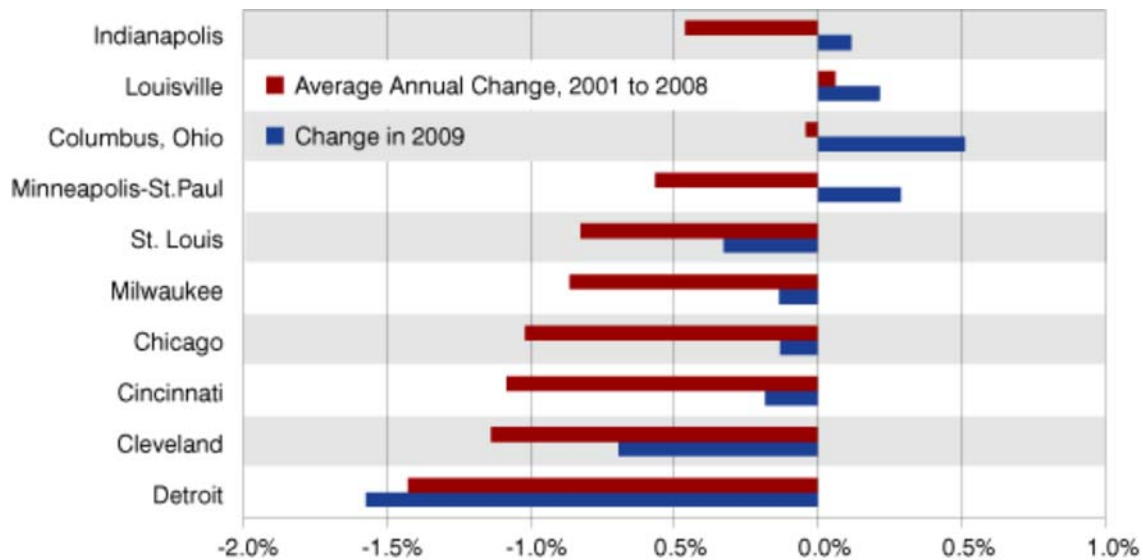
Figure 4: Net Migration in the Indianapolis Metro Statistical Area (MSA), 2001 to 2009



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

This trend is not unique to the Indianapolis MSA. As **Figure 5** shows, many Midwestern cities have had consistent net out-migration in this decade; yet with the exception of Detroit, each also had a substantial improvement in their net migration figure in 2009.³ Columbus, Ohio; Minneapolis-St. Paul; and Louisville joined Indianapolis in posting a net in-migration for 2009. With the exception of Cleveland and Milwaukee (which have had little suburban growth in this decade), these regions have also seen a corresponding decline in suburban migration.

Figure 5: Percent Change in Population due to Net Migration, 2001 to 2008 and 2009*



*These are county level data. However, the counties are referred to by the more familiar city names in this graphic.

Note: Minneapolis-St. Paul includes Hennepin and Ramsey counties. St. Louis combines St. Louis County and St. Louis city.

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

Conclusion

The recession has certainly had an effect on migration patterns in Indiana as it has throughout much of the country. The most intriguing development in the Midwest may be the shifting trends in the Indianapolis metro area and many of its regional peers.

The point in examining these major metro areas is not to suggest that more people have suddenly opted for urban living over suburbia. Rather, the more plausible explanation for this about-face is that the number of residents moving away from these cities during the tough economy has declined much more than the number of residents moving in.

Unfortunately, given that there is only a “net” migration number to analyze, the data are not detailed enough to say with certainty that this is the case.

It is too early to know whether this recession marks a true turning point in urban/suburban migration patterns but it seems likely that once the economy gets moving again, people will get moving too.

Notes

1. Employment change was measured from second quarter 2008 to second quarter 2009 using the Bureau of Labor Statistics’ Quarterly Census of Employment and Wages.
2. The Indianapolis MSA includes Boone, Brown, Hamilton, Hancock, Hendricks, Johnson, Marion, Morgan, Putnam and Shelby counties.
3. These are county level data. However, the counties are referred to by the more familiar city names.

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Segmenting Indiana's Automotive Manufacturing Industry: Jobs and Wages

When we think of automotive manufacturing, we often focus on the final product such as the car, truck or recreational vehicle we may purchase. What we may overlook is that most economic activity and employment in this industry are “upstream” of the original equipment manufacturers (OEMs) since body and trailer manufacturers and particularly parts manufacturers are the larger direct employers. This article summarizes current employment and the major employers in this industry and its three major sub-sectors across Indiana counties. It then compares employment and wage trends over the 1998 to 2008 time period, by grouping counties into three clusters according to their mixtures of employment in the three major auto industry segments. We find that while counties with predominantly parts manufacturing workers are experiencing decreasing employment and depressed wages, counties with relatively high proportions of workers in full vehicle manufacturing actually have steady employment and real wage growth. Counties that focus on the manufacture of motor vehicle bodies and trailers (including recreational vehicles) experience volatile employment patterns that seem highly dependent on national recession cycles.¹

Indiana's Automotive Industry

Of Indiana's 102,000 automotive manufacturing workers in 2008, the majority (58 percent) were employed in the motor vehicle parts manufacturing sub-sector (NAICS 3363) at companies that do not produce complete vehicles but focus on component parts. Most of the remaining 30,349 workers (29.6 percent) worked at companies that build trailers or vehicle frames (NAICS 3362). Only 12,720 workers (12.4 percent) were employed in companies that produce complete motor vehicles (NAICS 3361).²

Table 1 summarizes the biggest employers in each of the three major automotive manufacturing sectors and we see that the top four parts manufacturers are also the four largest employers overall. Among these, the largest employer by far is Cummins in Columbus who is the world's largest manufacturer of heavy diesel engines with over 34,000 workers in Indiana and annual revenues of over \$10 billion.³ Other major parts producers include three other major employers in or near the Indianapolis Metropolitan Area: Firestone Diversified Products in Marion County, as well as Remy International Inc. and Remy Inc. of Madison County. Elkhart County, widely regarded as the “RV Capital of the World” has all five of the top body and trailer manufacturing companies in Indiana, including Forest River (5,850 employees) which is the fifth largest automotive manufacturing company overall. Meanwhile, the two biggest employers that manufacture complete auto vehicles are Toyota Motor Manufacturing with 4,300 employees in Gibson County and Subaru of Indiana Automotive with over 2,800 employees in Tippecanoe County.

Table 1 : Top Automotive Manufacturing Employers in Indiana by Sub-Sector, 2008-2009

Rank	Company	Main Location City (County)	Employees
Motor Vehicle Parts Manufacturing (NAICS 3363)			
1	Cummins Inc.	Columbus (Bartholomew)	34,900
2	Firestone Diversified Products LLC	Indianapolis (Marion)	11,300
3	Remy International Inc.	Anderson (Madison)	7,971
4	Remy Inc.	Pendleton (Madison)	6,800
5	United Components Inc.	Evansville (Vanderburgh)	4,900
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
1	Forest River Inc.	Elkhart (Elkhart)	5,850
2	Supreme Corporation	Goshen (Elkhart)	2,200
3	Jayco Inc.	Middlebury (Elkhart)	1,770
4	Skyline Corporation	Elkhart (Elkhart)	1,300
5	Gulf Stream Coach Inc.	Nappanee (Elkhart)	1,200
Motor Vehicle Manufacturing (NAICS 3361)			
1	Toyota Motor Manufacturing Indiana Inc.	Princeton (Gibson)	4,300

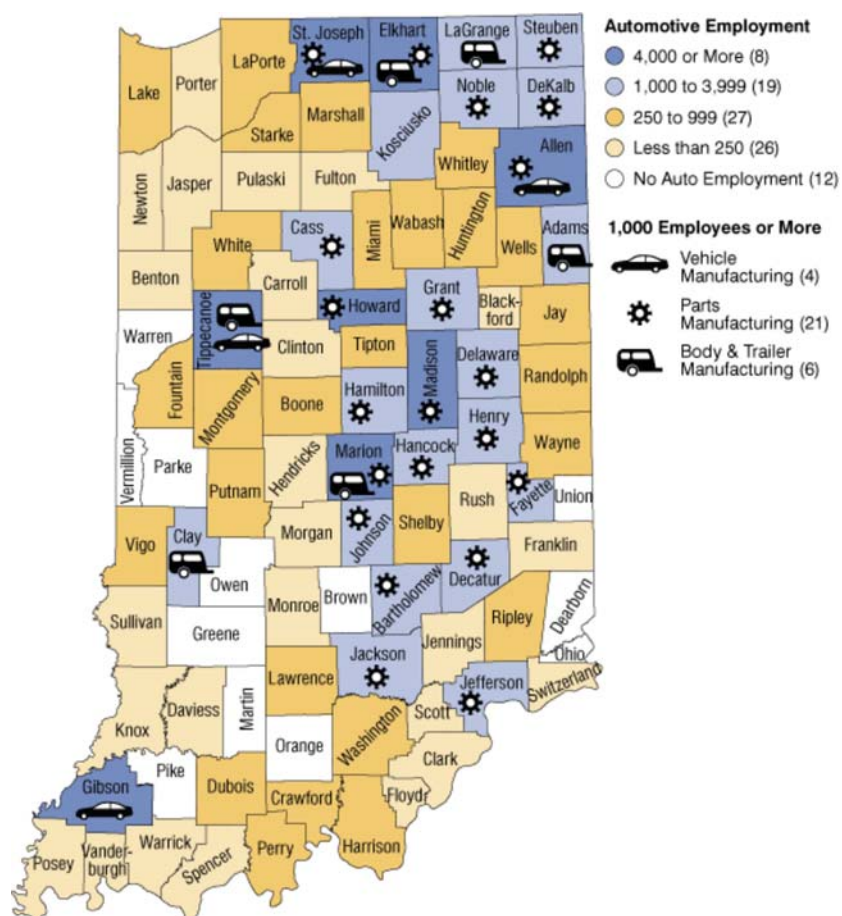
2	Subaru of Indiana Automotive Inc.	Lafayette (Tippecanoe)	2,813
3	AM General LLC	South Bend (St. Joseph)	1,599
4	Utilmaster Holding Co.	Wakarusa (Elkhart)	1,100
5	Crossroads RV	Topeka (LaGrange)	600

Note: Figures reflect different fiscal years according to each company. Available data do not include Honda Manufacturing of Indiana (Greensburg, Decatur County).

Source: Hoover's Inc.

Employment in the automotive manufacturing industry is thus broadly distributed across Indiana though particularly dominant in the northeastern region of the state near Michigan—the hub of the American automobile industry (see **Figure 1**). Between 1998 through 2008, only 12 of Indiana's 92 counties had no employment in this industry while most counties had at least 250 workers; Eight counties—Allen, Elkhart, Gibson, Howard, Madison, Marion, St. Joseph and Tippecanoe—averaged more than 4,000 automotive workers each year.⁴ While most counties' auto workers are employed with parts manufacturers, six counties including three northeastern counties—Adams, Elkhart and LaGrange—had over 1,000 workers employed in body and trailer manufacturing. Only four counties had more than 1,000 workers employed in complete vehicle manufacturing including Gibson and Tippecanoe counties, home of Toyota and Subaru plants, respectively.⁵

Figure 1 : Average Annual County Employment in Automotive Manufacturing, 1998-2008



Source: Hoover's, Inc.; Dun & Bradstreet; and U.S. Bureau of Labor Statistics

Understanding Employment and Wage Growth by County Automotive Manufacturing Cluster

This research uses cluster analysis to divide Indiana's 80 counties with employment in the automotive manufacturing industry into three major clusters to better understand their employment and wage trends (see **Table 2**).⁶ While many counties have employment in at least two of the three major sub-sectors of the industry, the 63 counties in the large parts cluster have almost their entire auto manufacturing workforce—typically more than 95 percent but at least 70 percent—employed in parts manufacturing. The 12 counties in the body/trailer cluster are also highly specialized due to their predominantly high employment in body and trailer manufacturing (usually over 90 percent). The body/trailer cluster counties are: Adams, Benton,

Clark, Clay, Daviess, Elkhart, Jasper, Kosciusko, LaGrange, Rush, Switzerland and White. Only employment in the five vehicle cluster counties is fairly diverse since these counties (Allen, Gibson, Randolph, St. Joseph and Tippecanoe) merely have high proportions of their auto employment (more than 40 percent) in the manufacture of complete vehicles but still have substantial amounts of employment in body and trailer manufacturing (16.5 percent) and parts manufacturing (26.6 percent).⁷

Table 2 : Summary of County Automotive Manufacturing Clusters, 1998-2008

Cluster Name	Employment Criteria	Number of Counties	Average Percentage Employment by Automotive Employment Sub-Sector		
			Motor Vehicle (complete)	Motor Vehicle Body & Trailer	Motor Vehicle Parts
Vehicle	Employment in NAICS 3361 of 40 percent or more	5	57.0%	16.5%	26.6%
Body/Trailer	Employment in NAICS 3362 of 65 percent or more	12	0.1	90.4	9.5
Parts	Employment in NAICS 3363 of 70 percent or more	63	0.3	3.6	96.0

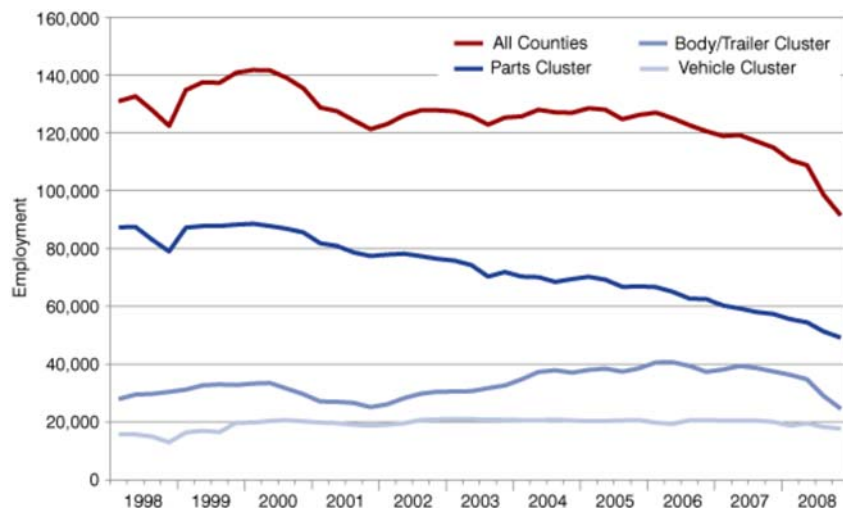
Note: 12 of Indiana's counties did not have automotive employment during the 1998-2008 period. This includes Greene County which only had a small number of automotive workers at the beginning of the period.

Source: Hoover's, Inc.; Dun & Bradstreet; and U.S. Bureau of Labor Statistics

Employment by Automotive Manufacturing Cluster

Employment in the automotive manufacturing industry is perceived to be both volatile and on a downward trend. A close look at **Figure 2** though compounds this overall theme since we see that volatility is primarily a feature of counties in the body/trailer cluster and the vehicle cluster counties have remarkably steady employment. Over the 1998-2008 period, statewide auto worker employment reached to a peak of 141,700 workers in the first quarter of 2000, and despite holding steady between 120,000 and 130,000 workers from 2001 to 2006, dropped precipitously to 91,500 workers by the end of 2008 and is likely to have declined further in 2009 as the U.S. recession continued. However, during this period, employment in the vehicle cluster counties was virtually constant at approximately 20,000. Employment volatility is more noticeable in the body/trailer cluster counties, due in large part to the cyclical nature of recreational vehicle retail sales, with higher levels of employment after the 2001 recession to a high of 40,000 workers by 2006 and a very sharp decline entering the 2008-2009 recessionary period. Finally, employment in parts cluster counties seems to be responsible for most of the state's job loss in the automotive manufacturing industry dropping steadily almost regardless of recessionary cycles from near 90,000 workers through 2000 down more than 40 percent to only 49,200 by the end of 2008.

Figure 2 : Indiana Employment by County Automotive Manufacturing Cluster, 1998:1 through 2008:4



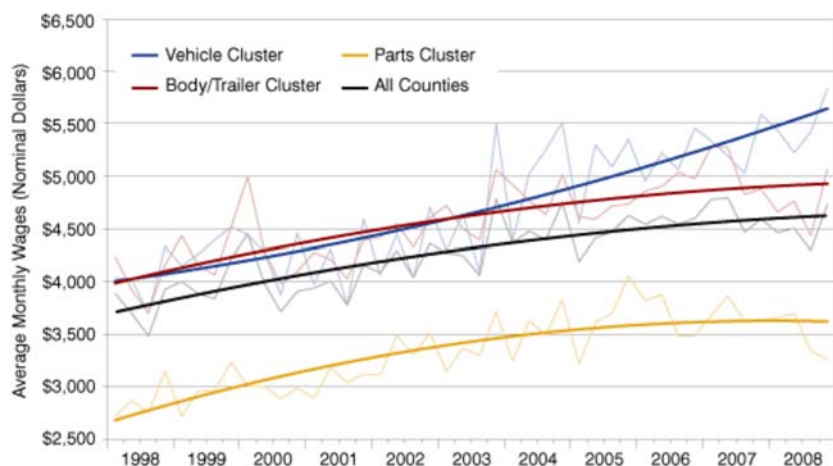
Note: Hash marks indicate quarters of each year. This chart uses combined employment data for motor vehicle manufacturing (NAICS 3361), motor vehicle body and trailer manufacturing (NAICS 3362), and motor vehicle parts manufacturing (NAICS 3363). The 80 Indiana counties that have employment in these sectors have been divided into these three clusters based on their similarities.

Source: Hoover's, Inc.; Dun & Bradstreet; and U.S. Bureau of Labor Statistics

Wages by Automotive Manufacturing Cluster

Even in nominal terms, wage growth in the automotive manufacturing industry has been flat in Indiana and trending downward between 1998 and 2008 (see **Figure 3**). The big exception to this pattern is the accelerating wage growth experienced by workers in the vehicle cluster counties whose monthly wages grew from \$4,000 at the start of 1998 to over \$5,500 by 2008—a 38 percent increase that reflects real growth in inflation-adjusted wages as well. Although the wages of workers in body/trailer cluster counties were similar to workers in vehicle cluster counties in 1998, their wages grew slowly with a downward trend over this period, increasing less than \$1,000 over the 10-year period.

Figure 3 : Average Monthly Wages per Worker by County Automotive Manufacturing Cluster, 1998:1 through 2008:4



Note: Hash marks indicate quarters of each year. This chart uses combined employment data for the motor vehicle manufacturing (NAICS 3361), motor vehicle body and trailer manufacturing (NAICS 3362) and motor vehicle parts manufacturing (NAICS 3363). The 80 Indiana counties that have employment in these sectors have been divided into these three clusters based on their similarities.

Source: Hoover's, Inc.; Dun & Bradstreet; and U.S. Bureau of Labor Statistics

However, the most startling lack of wage growth was demonstrated by workers in the parts cluster counties whose relatively low monthly average wage of approximately \$2,500 grew only anemically through 2007 and in 2008 started showing signs of decline even in nominal terms. Some of this worsening wage trend can be explained by parts manufacturing jobs moving away from the Midwest to Southeastern states and by differing cost structures for suppliers to the Detroit Three automakers (General Motors, Ford and Chrysler) compared to foreign automobile manufacturers.⁸ More simply, the fact that parts cluster counties are experiencing rapidly declining employment (as seen in **Figure 2**) indicates that there may be a glut of labor supply versus actual demand for employment which could significantly depress wages.

Silver Lining to the Pattern of Decline

Overall, this article reveals that Indiana counties are experiencing lower levels of employment and stagnating levels of wage growth in the automotive industry but these trends are not constant within the differing segments of the industry. The fact that parts cluster counties continue to show a rapid decline in employment and decreasing wage growth means that the overall automotive industry is likely to continue to decline in Indiana since the vast majority of automotive workers are employed within the parts sub-sector. Many parts manufacturing workers will simply have no choice but to re-train and take advantage of new job opportunities, such as those in chemical manufacturing, the life sciences or a host of newly-defined "green" occupations.

However, vehicle cluster and body/trailer cluster counties seem to have substantially different patterns in their employment and wage outcomes compared to the rest of the state. Bucking overall trends, the five counties in the vehicle cluster have shown remarkably steady levels of employment and wage growth between 1998 and 2008. Decatur County is likely to become the sixth county to join this cluster due to the recent opening of the Honda manufacturing plant and this has the potential of boosting employment and wage levels there and perhaps elsewhere in the state. Although the body/trailer cluster counties have recently experienced tremendous employment losses—notably Elkhart County, which briefly had the highest unemployment rate in the nation in 2009—their employment is poised to rebound (as it did between following the 2001 recession) as the U.S. economy improves in 2010 and 2011.

Endnotes

1. In recent related research, we reviewed key factors that influence employment and GDP growth in the automotive

manufacturing industry across the 48 contiguous states. GDP growth was found to be directly linked to increased revenues of the U.S. automakers between 1998 and 2008. Furthermore, despite the global nature of the automotive industry, state level employment in the automotive sector (especially the parts manufacturing subsector) was positively linked to the performance of the U.S. carmakers but inversely to Japanese carmakers. This was generally true, except in the case of Toyota, whose tremendous recent growth had no measurable impact on state-level automotive GDP or employment. This research is in: "Employment and Economic Growth in the U.S. Automotive Manufacturing Industry: Considering the Impact of American and Japanese Automakers," *Indiana Business Review* 85: 1 (Spring 2010), www.ibrc.indiana.edu/ibr/2010/spring/article2.html.

2. These figures come from the U.S. Bureau of Labor Statistics and more information on the North American Industrial Classification System (NAICS) can be found at www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2007.
3. This information comes from analysis of Cummins Inc. 2009 annual reports conducted by Hoover's Inc.
4. These calculations use data from the U.S. Bureau of Labor Statistics. Greene County had a small amount of employment during the 1998-1999 but no employment was recorded for the rest of this period.
5. The fact that Allen and St. Joseph counties had over 1,000 employees in motor vehicle manufacturing even though they do not contain large plants that do complete vehicle manufacturing suggests that employees may reside in those counties but commute to work at facilities in neighboring counties.
6. These clusters were determined by a (k)-means cluster analysis procedure that divided counties into three clusters based on their similarity/dissimilarity (via Euclidean distance) according to their relative proportion of employment in each of the three automotive manufacturing clusters.
7. Decatur County is categorized here as belonging to the parts cluster and not the vehicle cluster because Honda Manufacturing of Indiana's plant in Greensburg was not in full operation until after the 1998-2008 time period.
8. This information comes from: Benjamin Collins, Thomas McDonald, and Jay A. Mousa, "The Rise and Decline of Auto Parts Manufacturing in the Midwest," *Monthly Labor Review* 130, no. 10 (2007): 14-20.

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The Importance of Indiana Agriculture

Agriculture has a rich heritage in Indiana and Lt. Governor Becky Skillman has noted that agriculture contributes an estimated \$25 billion a year to the state's economy. The agriculture industry involves more than production agriculture, which includes the raising of livestock or crops. It also includes manufacturing, wholesale, storage, support services, tourism, and retail operations. Agriculture is entwined in every aspect of our lives, regardless of where we live through the basic essentials of food, clothing, and shelter. Therefore, it is important to revisit and realize the importance of agriculture in Indiana as its impact is far reaching. Utilizing the U.S. Department of Agriculture (USDA) data, this article discusses agricultural trends and their impacts on Indiana.

Indiana Farmer Demographics

Over the past 60 years, the production agriculture industry has seen the average age of farm operators increase, an increase in off-farm occupations by farm operators, a decline in the amount of available farmland, and a growing spread in farming operation size. Data showing these trends over time can be seen in **Table 1**. Since the 1987 Census of Agriculture, the average age of farm operators has been greater than 50 with Indiana's average age at 55. A reason for this advanced age structure of farm operators is the farm's status as the family home. More than 20 percent of farm operators report that they are retired and have simplified their farming practices, yet they are still counted in the Agriculture Census. The decline in operators under the age of 25 may be attributed to the fact that more farmers are pursuing a college education. Almost one-quarter of farmers today have graduated from college with a four-year degree or more, compared to only 4 percent of farmers in 1964. One reason why farm operators are pursuing higher education is to enhance their ability to adapt to the rapidly changing agricultural marketplace, adopt new farming techniques, and obtain nonfarm jobs.

Table 1 : Indiana Farm Operator and Farm Characteristics Over Time

	2007	2002	1997	1992	1987	1950	Change since 1987*
Age of Farm Operator							
Under 25 Years	396	537	928	1,321	1,669	3,760	-76.3%
25 to 34 Years	4,136	4,001	4,940	7,231	9,923	23,321	-58.3%
35 to 44 Years	9,217	11,729	12,312	13,496	14,449	34,067	-36.2%
45 to 54 Years	16,832	16,260	13,908	13,923	15,607	35,766	7.8%
55 to 59 Years	7,999	7,424	6,688	6,720	7,810	34,473	2.4%
60 to 64 Years	7,004	6,667	6,014	6,523	7,824		-10.5%
65 to 69 Years	5,820	5,268	4,776	5,398	5,742	26,086	1.4%
70 Years and Over	9,534	8,410	8,350	8,166	7,482		27.4%
Average Age	55.0	53.7	52.8	51.6	50.5	49.6	8.9%
Primary Occupation							
Farming	25,510	33,612	26,993	31,547	36,654	89,709	-30.4%
Other	35,428	26,684	30,923	31,231	33,852	70,356	4.7%
Number of Farms and Farm Size							
Number of Farms	60,938	60,296	57,916	62,778	70,506	166,627	-13.6%
Small Farms							
1 to 9 Acres	9,720	5,436	4,183	5,141	5,444	14,755	78.5%
10 to 49 Acres	19,533	18,595	13,987	14,234	15,010	37,132	30.1%
Mid-size Farms							
50 to 179 Acres	15,993	18,691	19,913	21,268	24,892	80,319	-35.8%
180 to 499 Acres	8,012	9,263	11,099	12,928	15,902	32,375	-49.6%
500 to 999 Acres	3,774	4,494	5,268	6,000	6,670	1,835	-43.4%
Large Farms							
1,000 to 1,999 Acres	2,621	2,827	2,753	3,207	2,588	211	1.3%

2,000 Acres or More	1,285	990	713	N/A	N/A	N/A	80.2%
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*Percent change from 1987 to 2007

Note: Farm operator characteristics only represent the principal farm operator (1 per farm). Shaded cells indicate a declining trend.

Source: IBRC, using data from the Census of Agriculture reports

Contrary to prior declines in the number of Indiana farms, the number of farms has increased since 1997. This increase is due to a rapid 40 percent growth in farming operations between one and 50 acres. **Table 1** also shows the changes in farm size over time, with mid-size farms showing a steady decline while small and large farms have experienced growth in the past 20 years. Now the concern is focused on the mid-size operations (50 to 1,000 acres) as they have declined by a total of 36 percent over the past 20 years.

Agriculture-Related Occupations

As the saying goes in the agriculture industry, "agriculture is more than just cows, sows, and plows." In 2008, slightly more than 129,000 Hoosier workers were involved in an agricultural-related occupation, a decline of 3,000 workers from 2007.¹

Additionally, the 2007 Census of Agriculture showed Indiana had 91,590 farm operators on 60,938 farms, with 36,343 of these operators indicating that farming was their primary occupation (see **Table 1**). The Census of Agriculture only determines primary occupation for three operators per farm, so this number may be understated. Thus, it is assumed that roughly 168,650 Hoosiers were involved in an agricultural occupation in 2007.² Therefore, agricultural occupations consisted of 4.5 percent of all Indiana employment in 2007 (see **Table 2**).

Table 2 : The Agriculture Industry and Indiana's Workforce, 2005 to 2007

	2005	2006	2007
State Employment (BEA)	3,684,823	3,705,903	3,727,784
Agricultural-Related Occupations (IDWD)+	133,095	133,205	132,310
Farm Operators (USDA)	34,977*	34,977*	36,343**
Agriculture as Percentage of Workforce	4.6%	4.5%	4.5%

*The Census of Agriculture is only taken in years that end with "2" or "7," therefore the number of farm operators was averaged between years 2002 and 2007. The 2002 data may be underrepresented because it only reflects the number of principal operators (1 per farm) who consider farming as their primary occupation.

**2007 data includes up to three operators per farm who consider farming as their primary occupation. Therefore, the 2007 data may be underrepresented, but better stated than 2002 data.

+Data for hunting and trapping, farm product warehousing and storage, tobacco manufacturing, seafood product preparation and packaging, animal aquaculture, and sheep and goat farming were either suppressed or had less than 50 employees. To include these industries, 25 employees was arbitrarily selected to serve as proxy for employment; therefore, the total agricultural-related employment may be slightly under or over-represented.

Source: IBRC, using data from the Bureau of Economic Analysis (BEA), Indiana Department of Workforce Development (IDWD), and USDA Census of Agriculture

The top 10 agricultural-related occupations include a diverse array of employment ranging from production agriculture to value added manufacturing of raw agricultural products. Due to the dominance of manufacturing in Indiana, it is not surprising to see five of the 10 occupations in this sector (see **Table 3**).

Table 3: Top 10 Indiana Agricultural Occupations by Employment, 2008

Rank	Occupation	Employment
1	Farming as a Primary Occupation	36,343*
2	Grocery and Related Product Merchant Wholesalers	13,332
3	Other Wood Product Manufacturing**	10,428
4	Animal Slaughtering and Processing	8,939
5	Wood Kitchen Cabinet and Countertop Manufacturing	8,602
6	Bakeries and Tortilla Manufacturing	8,027
7	Veterinary Services	6,571
8	Wood Office Furniture Manufacturing	4,559
9	Other Food Manufacturing***	4,462

*This number represents up to three operators per farm that consider farming as their primary occupation and may be understated. Farming as a primary occupation is derived from the 2007 Census of Agriculture and may be more or less than the declared number for 2008.

** Other wood product manufacturing includes manufacturing of wood window and doors; cut stock, resawing lumber and planing; other millwork (including flooring); wood container and pallets; manufactured homes; and prefabricated wood building materials.

*** Other food manufacturing includes manufacturing of roasted nuts and peanut butter; other snack foods; coffee and tea; flavoring syrup and concentrate; mayonnaise, dressing and other prepared sauces; spices and extracts; and perishable prepared foods.

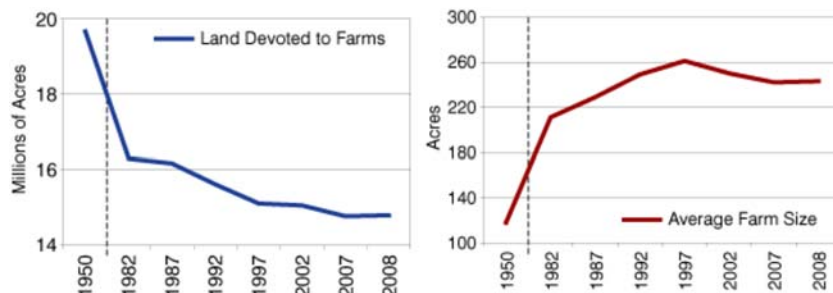
Source: IBRC, using data from the Indiana Department of Workforce Development (IDWD) and the 2007 Census of Agriculture

Of all the agricultural occupations, the top five highest paying were pesticide and other agriculture chemical manufacturing (\$106,322), research and development in the physical engineering and life sciences (\$82,171), commodity contracts brokerage (\$69,246), food product machinery manufacturing (\$64,387), and agricultural implement manufacturing (\$60,487).

Agriculture Productivity and Output

Over time, the amount of land in Indiana devoted to agricultural production has declined, ranging from nearly 19.7 million acres devoted to farms in 1950 to the latest estimate of 14.8 million acres, a decline of 25 percent (see **Figure 1**). Although the quantity of land availability has declined, the size of farming operations has risen, in part due to the number of retiring farm operators. Purchasing farmland is expensive; ranging from \$3,351 to \$4,994 per acre in Indiana, depending on the land quality.³ Therefore established farmers with available capital have a greater chance of purchasing the land than smaller, beginning operators. This increases average farm size over time.

Figure 1: Land Devoted to Farms and Average Farm Size



Source: IBRC, using data from the Census of Agriculture reports for 1950 through 2007 and Indiana National Agricultural Statistics Service data for 2008

Despite the conversion of farmland to residential and commercial use, productivity levels have dramatically increased from 1960 to 2004 (the latest available data). Indiana's agricultural productivity increased 2.3 percent to 1.42, placing the state seventh in the nation in productivity, much better than Indiana's rank of 27th in 1960. This surge likely came from the adoption of technology amongst Indiana farm operators as they lagged far behind the technology leaders in 1960.⁴

The advancement of agricultural productivity has helped Indiana's farm operators be more efficient and increase their production levels. Indiana is currently ranked in the top 10 in sales value of several commodities (see **Table 4**). The state dominates in the production of corn, soybeans, poultry, hogs, and milk and other dairy products from cows (particularly ice cream).

Table 4: Indiana's Output of Agricultural Products, 2007

Item	Farms	Sales (\$1,000)	U.S. Rank in Sales
Layers (Chickens that Produce Eggs)	3,583	11,731,996	3
Corn for Grain	24,597	4,306,502	5
Soybeans for Beans	22,569	2,247,468	4
Poultry and Eggs	3,798	887,196	15
Hogs and Pigs	3,420	783,507	5
Milk and Other Dairy Products from Cows	2,071	583,212	14
Cattle and Calves	18,483	275,196	27
Turkeys	498	269,606	7
Nursery, Greenhouse, Floriculture and Sod	888	126,241	27

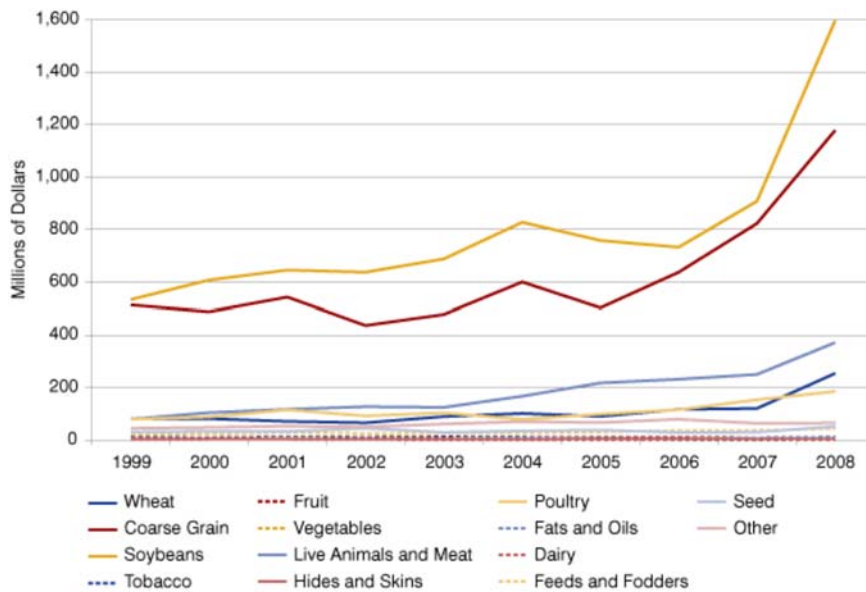
Wheat for Grain	5,033	107,744	19
Vegetables, Melons, Potatoes, and Sweet Potatoes	1,380	78,719	25
Other Crops and Hay	8,493	64,391	36
Other Animals and Other Animal Products	1,057	25,457	15
Fruits, Tree nuts, and Berries	749	19,193	28
Horses, Ponies, Mules, Burros, and Donkeys	2,749	15,472	24
Sheep, Goats, and Their Products	3,000	7,422	23
Tobacco	267	6,598	11
Cut Christmas Trees and Short Rotation Woody Crops	202	2,662	21
Aquaculture	31	2,567	44
Pullets for Laying Flock Replacement	519	N/A	5
Broilers and Other Meat-Type Chickens	399	N/A	23

Source: IBRC, using data from the 2007 Census of Agriculture and Indiana National Agricultural Statistics Service

Agricultural Exports

The state not only produces a large amount of agricultural products, but also ranked as the ninth largest exporter of agricultural commodities in the United States in 2008 at nearly \$3.8 billion. Since 2004, the value of agricultural exports has nearly doubled (94.5 percent). Top exported products and their U.S. rankings include soybeans and its products (fourth), seeds (fifth), feed grains and products (sixth), poultry and products (seventh), and live animals and meat (10th).⁵ Exports increased in nearly every commodity except tobacco and dairy between 1999 and 2008 (see **Figure 2**).

Figure 2: Indiana Agricultural Export Trends, 1999 to 2008



Source: IBRC, using data from the USDA Economic Research Service

The majority of the agricultural commodities mentioned and shown in **Figure 2** are non-value added products, meaning raw products. **Table 5** shows the agricultural output along with the remainder of the state’s exports.⁶ Of all the goods exported from Indiana, the greatest shares belong to transportation equipment manufacturing (22.7 percent), chemical manufacturing (17.8 percent), machinery manufacturing (13.7 percent), and crop and animal production (12.6 percent). Agricultural products are involved in three of the top four exporting industries and its relative share is shown in the chemical and machinery manufacturing sections below. Overall, the agricultural industry sectors contributed roughly 17.6 percent of the state’s exports for a value of \$5.3 billion in 2008.

Table 5: Indiana Exports by NAICS Code, 2008

NAICS Code	NAICS Code Description	Value (\$000)	Percent of Exports
n/a	Total	30,103,689	100.00%
336	Transportation Equipment Manufacturing	6,843,996	22.42%
325	Chemical Manufacturing	5,345,639	17.51%
333	Machinery Manufacturing	4,107,926	13.46%
111- 112	Crop and Animal Production	3,788,200	12.41%
334	Computer and Electronic Product Manufacturing	1,912,883	6.27%
331	Primary Metal Manufacturing	1,833,372	6.01%
339	Miscellaneous Manufacturing	1,428,536	4.68%
335	Electronic Equipment, Appliances, and Component Manufacturing	1,078,941	3.53%
332	Fabricated Metal Product Manufacturing	719,702	2.36%
326	Plastics and Rubber Products Manufacturing	676,849	2.22%
311	Food Manufacturing	511,321	1.67%
990	Special Classification Provisions	342,882	1.12%
325320	Pesticide and Other Agricultural Chemical Manufacturing	308,373	1.01%
323	Printing and Related Support Activities	297,223	0.97%
33311	Agricultural Implement Manufacturing	282,526	0.94%
333210	Sawmill and Woodworking Machinery Manufacturing		
333294	Food Product Machinery Manufacturing		
910	Waste and Scrap	240,078	0.79%
321	Wood Product Manufacturing	211,379	0.69%
327	Nonmetallic Mineral Product Manufacturing	170,370	0.56%
322	Paper Manufacturing	150,441	0.49%
337	Furniture and Related Product Manufacturing	130,167	0.43%
324	Petroleum and Coal Products Manufacturing	68,004	0.22%
314	Textile Product Mills	59,393	0.19%
312	Beverage and Tobacco Product Manufacturing	40,475	0.13%
313	Textile Mills	35,385	0.12%
212	Mining (except Oil and Gas)	29,454	0.10%
113	Forestry and Logging	26,385	0.09%
920	Used Merchandise	18,225	0.06%
316	Leather and Allied Product Manufacturing	13,901	0.05%
315	Apparel Manufacturing	11,778	0.04%
980	Goods Returned to Canada	9,360	0.03%
511	Publishing Industries (except Internet)	1,242	0.00%
211	Oil and Gas Extraction	128	0.00%
114	Fishing, Hunting, and Trapping	54	0.00%

Note: Shaded rows indicate an agricultural industry sector. See endnote number 6.

Source: IBRC, using data from the Office of Trade and Economic Analysis (OTEA) and USDA Economic Research Service

Summary

Concerns may still linger about Indiana agriculture's trends, but the data show that agriculture is indeed an important (and growing) sector in our state economy. Although it employs a small share of the workforce, its output is quite impressive and has a strong impact on the state's export values. Our agriculture industry is diverse and dynamic, thus we expect to see the industry's output to continue its growth in the future whether it be through specialty or mainstream agriculture paths. Through consumer support, Indiana agriculture can continue to flourish and enhance our state's economy.

Notes

1. Data on Indiana agricultural occupations came from the Indiana Department of Workforce Development (IDWD) for years

2005 through 2008. These data do not include sole proprietors, which would include a large percentage of farmers, and it does not include retail agricultural occupations.

2. This assumption is determined by adding 36,343 (the number of farm operators from the Census of Agriculture) and 132,485 (the number of agricultural workers in 2007, according to the Indiana Department of Workforce Development).
3. C. Dobbins and K. Cook, Indiana Farmland Values and Cash Rents: Relative Calm in a Turbulent Economy, *Purdue Agricultural Economics Report*, 2009, www.agecon.purdue.edu/extension/pubs/paer/2009/august/dobbins.asp.
4. E. Ball, Agricultural Productivity in the United States: Data Documentation and Methods, Economic Research Service, USDA, 2010, www.ers.usda.gov/data/agproductivity/methods.htm.
5. U.S. agricultural exports, by leading states: estimated value by commodity group, FY 2008. Compiled by the Economic Research Service using data from USDA's National Agricultural Statistics Service and U.S. Department of Commerce, Census Bureau.
6. Data for this graph come from the Office of Trade and Economic Analysis (OTEA) and the USDA. These two agencies have different methodologies on gathering agricultural export data, with the USDA's data showing a more robust picture of Indiana's exports. Therefore, NAICS 111 and 112 utilize USDA's data while the remainder of the data come from the OTEA. There may be a slight overlap in data in NAICS 111 and 112 with 311 and 312, but it was assumed to be minimal due to the low value of exports for dairy and tobacco products.

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Down for the Count, Up for the Data



The decennial census has a central purpose: to count everyone residing in the United States. But that purpose must be transformed into numbers of people (and their characteristics of age, race and sex) by state and locality.

The Data Products

The first aggregated numbers must be presented to President Obama by the end of this year (no later than December 31, 2010), showing the total for the nation as well as for each state in the union. Those figures will tell us quickly which states are winners or losers in terms of seats in Congress.

March to April 2011

It is the later release of data, in March or April of 2011, that will hold more interest for most of us, since we will get tallies of our population based on actual counting for the first time since 2001. Those tallies will show us the enumerated populations of all of our counties, cities, towns, townships, precincts and other geographic areas. The first people to receive these will be my office (as the state data center and Governor's liaison to the Census) but also the leaders of each caucus in the General Assembly, the Legislative Services Agency and the Governor of Indiana. This is sometimes referred to as the P.L. 94-171 data release. It is used for apportionment and redistricting, giving us information on where the voting age population lives.

May 2011

A demographic profile of states, counties, cities, towns and townships will be released and will likely reflect much of what was in the same profile for Census 2000—total population, population by age, by sex, by race, Hispanic origin and housing tenure (owned or rented).

June to August 2011

So called Summary File 1 will be released with the data collected for all geographic areas down to census block, which will be particularly useful to everyone who needs to use that information to produce maps or have a GIS layer using block-level data. It will also be helpful to neighborhood groups, cities and many others who want to see what basic changes have occurred between the censuses, where an area's age could have shifted dramatically or its racial composition changed significantly.

It is important to note here what we won't get: no data on income, poverty, education, commuting or what I like to call the "juicy bits." However, by August or September of 2011 we should see the release of census tract data from the American Community Survey, which is essentially what used to be the long-form transformed to an annual survey.

The Geography Products



Geography is critical to the census and to our understanding of the data results, and this has been true since the first census in 1790. It wasn't until the early part of the 20th century, though, that researchers realized the value of the geographic units the Census Bureau used to collect the information, and by the 1960 Census and the first Geographic Based File (GBF), a cadre of people began viewing the information by those census tracts and census blocks to try to understand the spatial nature of population change.

Probably the most important geographic product today is TIGER (that is, the Topologically Integrated Geographic Encoding and Referencing system), which provides us with the critical boundary information needed to create maps and then show the census demographics within those maps. TIGER/Line was arguably the progenitor what became a whole new industry—GIS—and while much is done to enhance TIGER's basic information (and correct it), it remains the foundation of all mapping done today for places in the United States.

The latest TIGER/Line shapefiles (the Census Bureau turned to that most common of formats a few years ago) were released in the fall of 2009 and reflect the current collection geography of Census 2010. It also reflects the latest boundaries for legal entities as of January 1, 2009. Almost as useful, TIGER/Line shapefiles include spatial data for geographic features such as roads, railroads, rivers, and lakes, as well as legal and statistical geographic areas that correspond to the 2009 American Community Survey, 2009 Population Estimates, 2007 Economic Census, and Census 2000.

For more information, don't hesitate to e-mail us at ibrc@iupui.edu, as we are always happy to help!

Useful Materials for Further Edification

- A good overview of the geography in brochure format: www.census.gov/geo/www/geo_counts2010.pdf
- A complete list of anticipated products: www.census.gov/population/www/censusdata/c2010products.pdf
- Geographic boundary change notes: www.census.gov/geo/www/bndrychanges/boundary_changes.html

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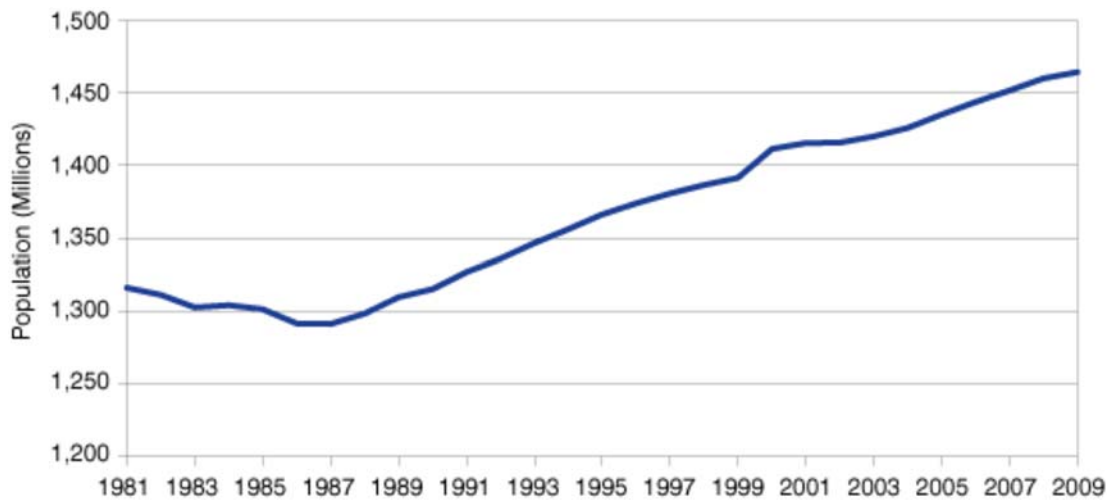
Realtors Region 1—The View from STATS Indiana

Many statewide organizations in Indiana carve the state into regions that best represent either administrative, civic, constituent or engagement needs. One such group is the Indiana Association of Realtors™, which has recently embarked on a campaign to educate businesses, economic developers and other organizations on the importance of housing as part of attracting businesses to our state and the importance it plays in the site location equation.

For years, *InContext* has published demographic profiles in these pages focused on metropolitan areas, economic growth regions and others. This year, we have decided to do two things: First was to establish the Realtors region as an automated drop-down option for the IN Depth profiles on STATS Indiana. Second, we will continue our *InContext* series on regions with a focus on the six Realtors regions (see **Figure 1**).

All of the information provided in these profiles is readily available on STATS Indiana (www.stats.indiana.edu) and always updated as soon as new source data arrive.

Figure 1: Indiana Realtors Regions, August 2009



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

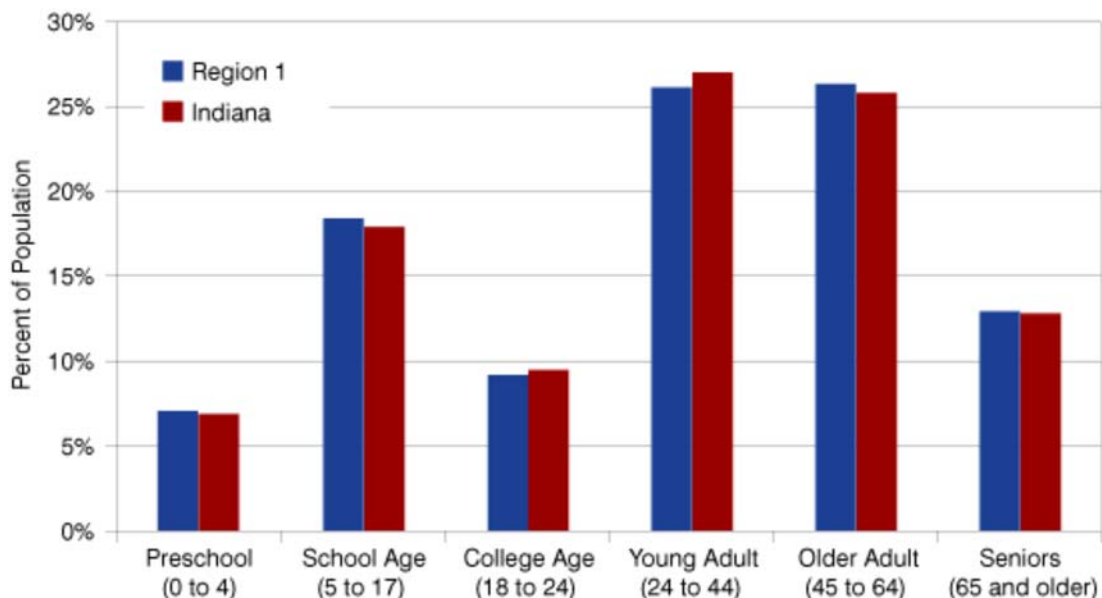
Table 1: Largest Cities in Realtors Region 1, 2008

Largest Cities	Population in 2008	Percent of Region
South Bend	103,807	7.1%
Gary	95,920	6.6%
Hammond	76,732	5.3%
Elkhart	52,653	3.6%
Mishawaka	50,026	3.4%
Portage	36,976	2.5%
Merrillville	33,057	2.3%
Goshen	32,630	2.2%
Michigan City	32,405	2.2%
Valparaiso	30,429	2.1%

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

In terms of age structure, the region is quite similar to the state overall, but with slightly higher proportions of young children and older adults, which makes for an interesting mix of housing needs (see **Figure 3**).

Figure 3: Current Age Structure, 2008



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

The region is among the more diverse in the state in terms of race and Hispanic origin, with 14.5 percent of its people identified as non-white and 10 percent as Hispanic (nearly double the state’s 5.2 percent).

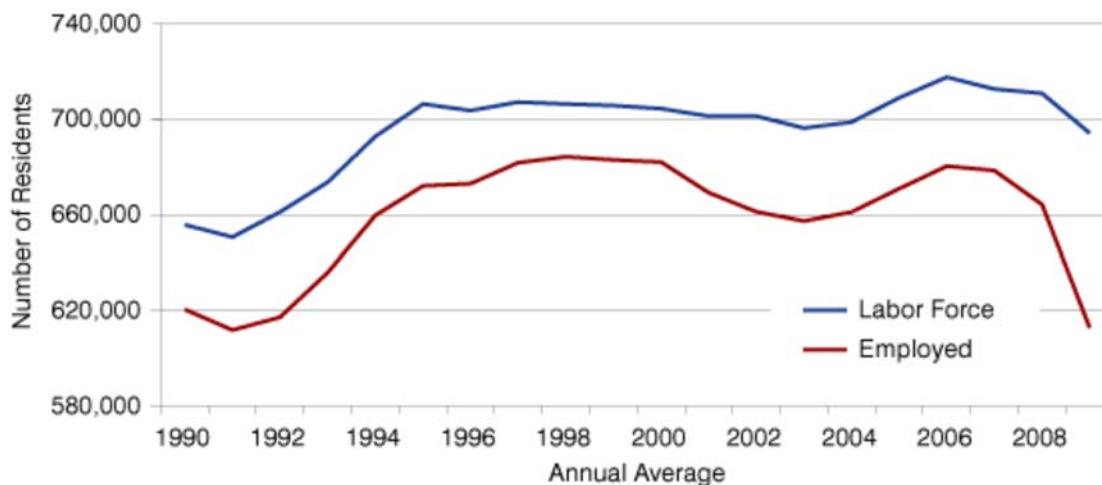
Housing

Nearly 620,000 housing units existed in 2008, an increase of 9 percent since the 2000 Census. The vast majority of those were owner occupied (68 percent), with 25 percent renter occupied. The remainder were either vacant or seasonal housing (there were nearly 35,000 seasonal homes counted in Census 2000).

Labor Force

Today, more than 690,000 people living in the region are in the labor force, as shown in **Figure 4**. Of these, 88 percent are working and 12 percent are looking for work. It is a region that expects to commute to work, either to another city, a different county or even another state (think Illinois and Michigan).

Figure 4: Region 1 Resident Labor Force and Employment



Source: IBRC, using the Indiana Department of Workforce Development

Unemployment has struck hard in this region because of the transportation equipment industry and those that depend on it. Elkhart County on the eastern edge of the region has seen some of the highest unemployment, although for most of the counties in the region, including Elkhart, unemployment levels have begun to subside. This is in part due to some new jobs coming to the area, but also due to people leaving the labor force to return to school, sign on for training, start their own business, stay home with children, or take early retirement.

Work

Manufacturing is by far the largest employer, with more than 140,000 jobs estimated in that industry in 2008. A distant second is health care and social services (75,000). See **Table 2** for a ranked list of jobs by industry.

Table 1: Realtors Region 1 Jobs by Industry, 2008

Industry	Establishments	Establishment LQ	Jobs
Total	32,657	1.00	618,089
Manufacturing	2,478	1.92	142,485
Health Care and Social Services	2,794	1.15	75,271
Retail Trade	4,683	1.27	71,231
Educational Services	589	0.96	56,286
Accommodation and Food Services	2,682	1.09	47,893
Construction	3,755	1.18	32,591
Wholesale Trade	2,300	1.02	24,490
Administrative, Support and Waste Management	1,482	0.79	24,404
Public Administration	480	0.98	23,670
Other Services (Except Public Administration)	2,963	0.63	19,080

Source: IBRC, using U.S. Bureau of Labor Statistics

Economic Clusters

Recent work by Purdue University and Indiana University has focused attention on identifying the type and size of industry clusters in regions across the United States. The following table identifies those clusters in this region, focusing on the number of business firms in each cluster and their location quotient, which helps identify a cluster's exporting capacity (that is, likelihood it is providing goods and services outside the region). Any LQ that is larger than 1.0 indicates the cluster serves a wider region (domestically or globally) than just the local area. Most notable are those within manufacturing: transportation

equipment has an LQ of 4.66 and primary metals manufacturing is at 3.19 (see **Table 3**). These data can also be viewed for the individual counties in the region by going to www.statsamerica.org/innovation and going to the Industry Cluster tool.

Table 3: Realtors Region 1 Industry Clusters, 2008

Description	Cluster Establishments	Industry Cluster Establishment LQ
Total All Industries	32,657	1
Agribusiness, Food Processing and Technology	557	1.07
Manufacturing Supercluster	1,167	2.32
Glass and Ceramics	181	2.3
Transportation Equipment Manufacturing*	260	4.66
Computer and Electronic Product Manufacturing*	45	0.66
Education and Knowledge Creation	748	1.06
Advanced Materials	1,070	2.1
Chemicals and Chemical Based Products	529	2.09
Printing and Publishing	586	0.82
Business and Financial Services	4,052	0.8
Primary Metal Manufacturing*	69	3.19
Electrical Equipment, Appliance and Component Manufacturing*	50	1.89
Forest and Wood Products	1,027	1.45
Information Technology and Telecommunications	1,095	0.7
Energy (Fossil and Renewable)	2,294	1.07
Mining	43	0.99
Fabricated Metal Product Manufacturing*	516	2.35
Machinery Manufacturing*	227	2.07
Apparel and Textiles	271	0.91
Transportation and Logistics	1,154	1.56
Biomedical/Biotechnical (Life Sciences)	1,133	1.43
Defense and Security	807	0.74
Arts, Entertainment, Recreation and Visitor Industries	723	0.75

*These are subclusters within the manufacturing supercluster

Source: IBRC, using U.S. Bureau of Labor Statistics and Purdue Center for Regional Development data

Conclusion

There is much more that could be shown and described, but the hope is that these regional

views will give the reader just enough to want more. You can go to STATS Indiana and STATS America (a companion site recently released as part of an EDA project) and explore the wealth of data, news and research articles available.

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