

The Economic Bootprint of Defense Spending in Indiana

The growing prominence of the defense industry in Indiana may be one of the most important untold stories of the last decade. In 2010, more than 1,100 Indiana companies received defense-related contracts from the federal government, with 1,088 firms awarded contracts from the Department of Defense (DoD), and 133 firms working with the Department of Homeland Security (DHS). Overall, 2010 saw Indiana companies claim 9,889 defense contracts worth a total of more than \$4 billion.¹

Since 2001, the value of defense contracts awarded to Indiana has more than doubled, the annual number of unique contracts awarded has increased nearly five-fold, and the number of Indiana defense contractors has grown significantly (see **Table 1**). The 2010 value of Indiana's defense-related contracts ranked 23rd among states.

Table 1: Indiana Defense Contract Awards, FY 2001 to FY 2010*

Fiscal Year	Number of Contractors	Number of Contracts	Total Value of Contracts
2001	362	2,114	\$1,781,599,723
2002	477	3,839	\$1,823,460,354
2003	519	6,615	\$2,299,897,248
2004	786	7,378	\$3,105,494,963
2005	1,073	13,649	\$5,093,579,488
2006	1,097	8,366	\$4,901,644,892
2007	1,160	9,811	\$5,801,657,854
2008	1,196	10,939	\$7,795,067,767
2009	1,216	9,582	\$6,881,788,924
2010	1,136	9,889	\$4,037,339,824

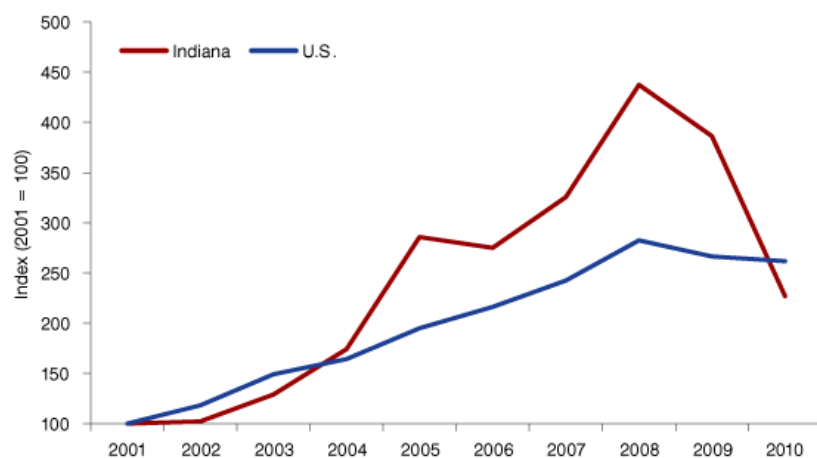
* Place, or state, of award may not necessarily be the state where the contract work is performed.

Source: Indiana Business Research Center, using usaspending.gov data

Growth in the value of contracts awarded to Indiana companies outpaced total defense-related contracting over much of the past decade (see **Figure 1**). At the 2008 peak, Indiana's \$7.8 billion in contracts was more than four-times greater than the 2001 level. All U.S.-based contracting increased by just less than three-times over the same period.

While the value of defense-related contracts in 2010 was roughly half of the 2008 level, the number of contracts awarded to Hoosier businesses, as well as the number of contractors receiving awards, has remained at historically high levels. Perhaps the sizeable dip in the value of contracts between 2009 and 2010 is a short-term anomaly, but data suggest a more fundamental shift in the nation's defense needs and a slowdown in contract values.

Figure 1: Change in the Value of Defense Contract Awards, Indiana and the United States, FY 2001 to FY 2010



Source: Indiana Business Research Center, using usaspending.gov data

Key Defense Industry Sectors

A large part of Indiana's surge in defense contract dollars can be attributed to a single company: AM General. This South Bend and Mishawaka-based manufacturer of the Humvee—(as well as other transportation-related products)—accounted for 44 percent of all defense contract dollars to the state in 2006 and roughly 60 percent of the total in both 2007 and 2008. In all, AM General claimed 41 percent of all defense contract dollars awarded to Indiana companies between 2001 and 2010.

Indiana's relative strength in transportation equipment manufacturing (TEM) is evident in the defense contract awards: more than half of the total value of contracts over the decade were in the TEM sector (see **Table 2**). In addition to motor vehicle manufacturing, this broad sector also includes aircraft and guided missile manufacturing activities. The sale of computer and electronic products placed a distant second with 16 percent of the total value, followed by professional and scientific services at 6 percent. Together, these three industries combined to claim three out of every four dollars in Indiana's defense-related contracts.

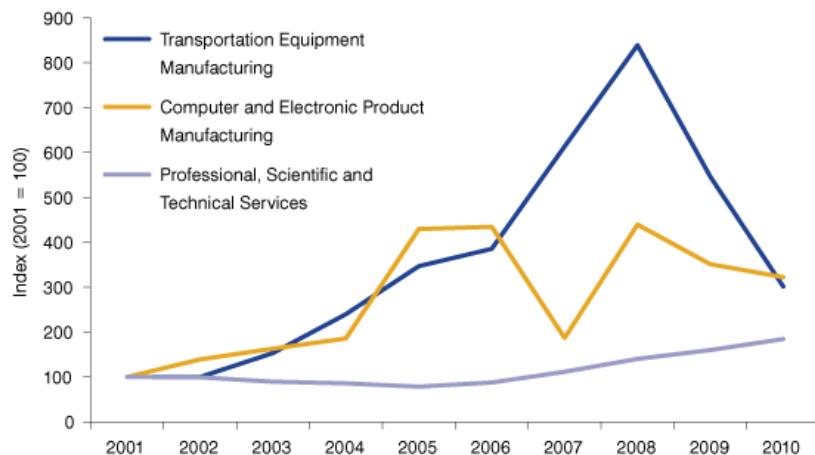
Table 2: Indiana's Top Defense Industry Sectors by Dollar Value, FY 2001 to FY 2010

Industry Sector	Rank	Value of Contracts	Percent of Total
Transportation equipment manufacturing	1	\$23,532,637,707	54.1%
Computer and electronic product manufacturing	2	\$6,910,740,440	15.9%
Professional, scientific and technical services	3	\$2,498,703,296	5.7%
Nondurable goods merchant wholesalers	4	\$1,618,906,619	3.7%
Fabricated metal product manufacturing	5	\$867,501,470	2.0%
Food manufacturing	6	\$811,066,490	1.9%
Machinery manufacturing	7	\$744,087,323	1.7%
Petroleum and coal products manufacturing	8	\$717,694,677	1.6%
Heavy and civil engineering construction	9	\$700,718,458	1.6%
Waste management and remediation services	10	\$500,844,699	1.2%
All others		\$4,618,629,856	10.6%
Total		\$43,521,531,036	100%

Source: Indiana Business Research Center, using usaspending.gov data

While contract activity in TEM has cooled in recent years, and TEM contract dollars will likely diminish as the dual wars wind down, contract dollars to Indiana's professional, scientific and technical service providers have more than doubled between 2005 and 2010 (see **Figure 2**). Given the recent growth of businesses associated with the WestGate @ Crane Technology Park, one may expect continued growth in contract dollars for professional, scientific and technical service providers. This suggests that the DoD and DHS are contracting with Indiana businesses for services that require higher human capital.

Figure 2: Change in the Value of Indiana's Defense Contracts, Select Industries, FY 2001 to FY 2010



Source: Indiana Business Research Center, using usaspending.gov data

Indiana's Top Defense Contractors

With more than \$3 billion in awards, Indiana's top 10 defense contractors in 2010 span a wide range of industries and claim more than 75 percent of the state's total contract dollars (see **Table 5**). The largest recipient, AM General, is primarily a manufacturer of motor vehicle-related products including the Humvee. Rolls-Royce supplies the military with a range of aircraft-related goods and R&D. Raytheon manufactures a host of different technological products for defense purposes. ITT Corporation's contribution to Indiana's defense contracts consists mainly of manufacturing wireless communication equipment. Finally, Calumet Specialty Products provides liquid fuel products and Ameriquel Group is one of only three companies approved to supply "Meals, Ready-to-Eat" (MRE) to the DoD.

Table 5: Top Indiana Defense Contractors, FY 2010

Company	Location	Contract Value	Percent of Total Indiana Contract Value
AM General	South Bend/Mishawaka	\$1,077,297,716	26.7%
Rolls-Royce Group, PLC	Indianapolis	\$733,056,959	18.2%
Raytheon Company	Indianapolis/Fort Wayne	\$665,257,188	16.5%
ITT Corporation	Fort Wayne	\$392,205,396	9.7%
Calumet Specialty Products	Indianapolis	\$132,208,000	3.3%
Ameriquel Group, LLC	Evansville	\$120,505,603	3.0%
Petroleum Traders	Fort Wayne	\$120,309,790	3.0%
ERAPSCO	Columbia City	\$87,009,407	2.2%
Tri Star Engineering, Inc.	Bedford	\$50,966,293	1.3%
Kimball International, Inc.	Jasper	\$27,704,505	0.7%
All Others		\$630,818,968	15.6%
Total		\$4,037,339,824	100.0%

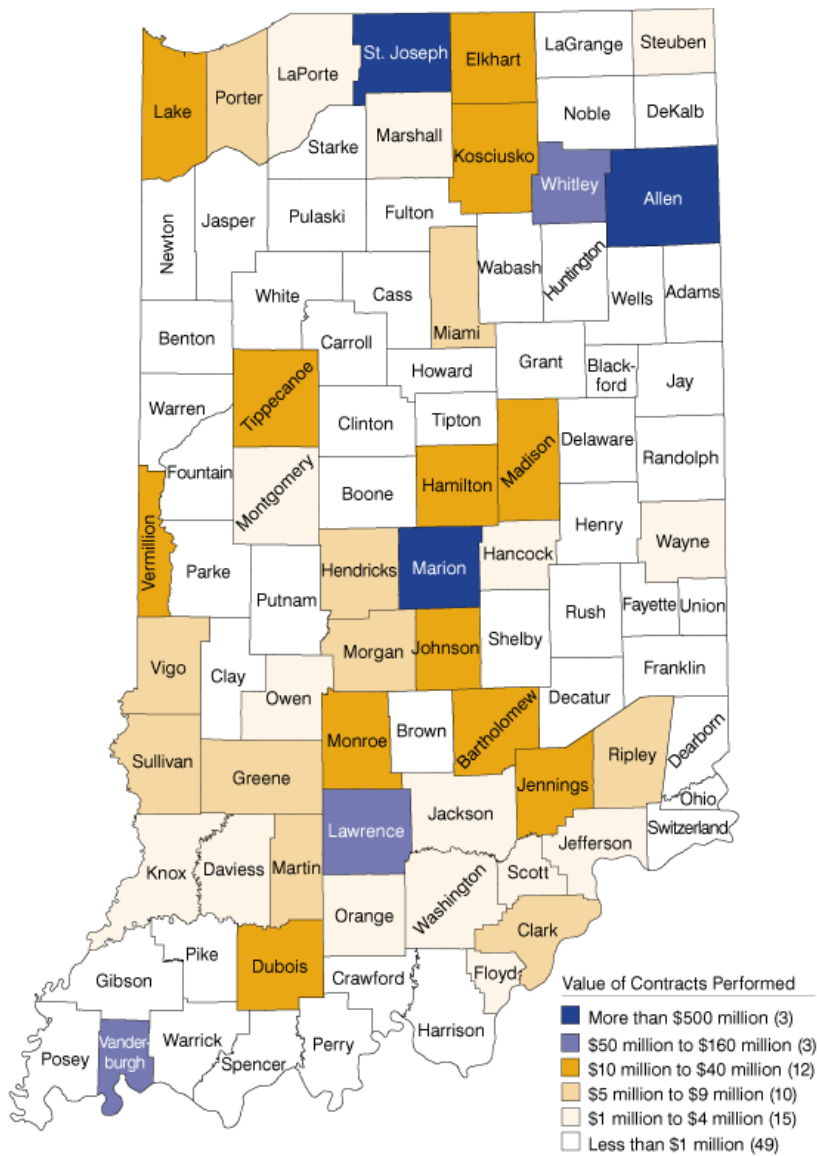
Source: Indiana Business Research Center, using usaspending.gov data

The Location of Indiana Contract Awards

More than 80 percent of Indiana's 2010 defense contract dollars were concentrated in three counties (see **Figure 4**). Thanks to the presence of large players such as Rolls Royce and Raytheon, Marion County (Indianapolis) topped the list with \$1.4 billion in 2010 contracts. Close behind at \$1.1 billion is St. Joseph County (South Bend/Mishawaka)—home to AM General and a division of Honeywell. Raytheon and ITT helped Allen County (Fort Wayne) place third with \$863 million in contracts.

While these are three of Indiana's larger counties, defense spending makes significant contributions to some of the state's smaller counties, as well. With U.S. Navy suppliers ERAPSCO and UnderSea Sensor Systems calling Columbia City home, Whitley County ranked fifth among counties in 2010 with contracts totaling \$91 million. Bedford-based Tri Star Engineering helped spur Lawrence County to sixth on the list with \$59 million in 2010 awards while furniture sales by Kimball International pushed Dubois County (Jasper) to seventh with \$39 million in contracts.

Figure 4: Value of Indiana Defense Contracts by County, FY 2010



Source: Indiana Business Research Center, using usaspending.gov data

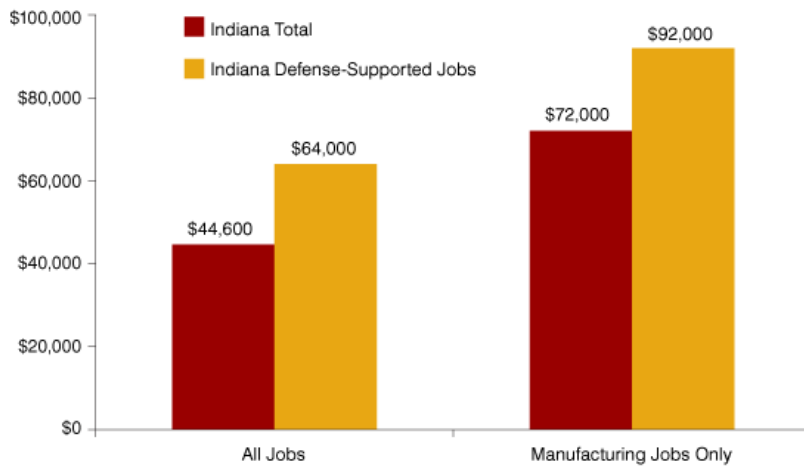
While Indiana companies were awarded \$4.0 billion in defense contracts in 2010, a small share of these awards (\$300 million) was performed in other states. By the same token, Indiana establishments served as the place of performance for contracts awarded elsewhere. In addition to the \$3.7 billion in contracts both awarded and performed in the state, Indiana establishments fulfilled the production of an additional \$700 million in contracts received by entities in other states. In that sense, Indiana was a net importer of defense production in 2010.

Defense Contracts Support High-Paying Jobs

One defining characteristic of defense spending in Indiana is that the contracts tend to be concentrated in high-wage industries. According to the IMPLAN model used to estimate the economic impact of the defense industry, the estimated average compensation for direct defense-supported jobs was nearly \$20,000 greater than Indiana's average compensation per worker for all jobs (see **Figure 7**).

This is not exactly an apples-to-apples comparison given that the Indiana total includes the full spectrum of industries including large numbers of lower-wage jobs in retail, food service, etc. That said, there is a similar gap when comparing manufacturing jobs alone. Indiana's average compensation per manufacturing job was \$72,000 in 2009 compared to \$92,000 for manufacturing jobs directly supported by defense contracts. It is clear by this measure that the nature of defense contracts helps to boost the state's standard of living.

Figure 7: Indiana's Compensation per Job, 2009



Note: The compensation per defense-supported job reflects direct effect jobs only. Indirect and induced effects are not included.
 Source: Indiana Business Research Center, using usaspending.gov data and IMPLAN economic modeling software

Conclusion

The importance of defense contracts to the Indiana economy is clear. Considering the types of jobs these contracts create magnifies the benefits of defense spending on the state. Defense dollars are heavily concentrated in high-tech, high-wage industries such as auto, truck and aircraft-related manufacturing; communication equipment manufacturing; and professional and scientific services. In this sense, not only does defense contracting generate a significant number of jobs, it generates the type of jobs that Indiana needs.

These DoD and DHS contracts and the jobs they create directly by the firms that win the awards also have ripple effects. That is, these contracts and jobs support other Hoosier jobs, whether along the supply chain or through household spending on such things as healthcare, utilities, groceries or entertainment. All told, the combined economic effects of this spending generated \$7.5 billion total economic output in the state in 2010 and supported an estimated 38,600 jobs. Add in the effects of payrolls at the state's defense facilities (i.e., Crane, Defense Finance and Accounting Services, etc.) and these estimates jump to \$8.3 billion in output and 56,600 jobs.

These impacts have increased over the decade, too. The estimate for the total jobs supported by defense spending increased nearly five-fold between 2001 and 2008, when the value of contracts was at its peak. The numbers have slipped since then, but the 2010 employment effect was still more than three-times greater than the 2001 mark.

This fluctuation in the value of defense contracts awarded to Hoosier businesses will bear watching in the coming years. Growth in contract dollars has significant positive ripple effects throughout the state's economy, but declining contract awards would place those positive effects in jeopardy. Contract levels are bound to change as the nation's defense needs evolve and federal budget priorities shift. The direction of these changes will be an important economic indicator for Indiana.

To learn more, read the full report, *Building National Security: The Economic Impact of Indiana's Defense Industry*.

Notes

1. The \$4 billion figure may understate the size of the DoD and DHS "footprint" in the state. The publicly available database on federal expenditures—USAspending.gov—may not include some of the spending on equipment and supplies at the state's military facilities like Crane or Camp Atterbury. At this time, however, it is unknown how much of this spending is missed by USAspending.gov. It could be a sizeable figure given that contracts to Indiana business from Crane alone totaled nearly \$500 million in 2010..

Timothy F. Slaper, Ph.D.

Director of Economic Analysis, Indiana Business Research Center, Indiana University Kelley School of Business

Matt Kinghorn

Demographer, Indiana Business Research Center, Indiana University Kelley School of Business

Ryan Krause

Does Cost of Living Affect Indiana Incomes?

Governmental statistics are provided and disseminated freely for use by researchers, policymakers and interested parties. However, these statistics often need clarification and contextualization. One example is Indiana's per capita income, which often finds itself in the press because it lags the national average. Taken at face value, this statistic is very sobering. Using 2010 data supplied by the Indiana Department of Workforce Development website (www.Hoosierdata.in.gov) and STATS Indiana (www.stats.indiana.edu), this article explores per capita income and the impact of cost of living adjustments. It briefly examines the influence of regional price adjustments and education in a crude and simplified manner as a first step in determining their impact on the differential between Indiana and U.S. incomes.

As shown in **Table 1**, Indiana per capita incomes lag behind the national average by 14.8 percent (or \$5,903) and rank 42nd out of the 51 geographies examined (U.S. states plus the District of Columbia). It certainly makes for a compelling case for Indiana administrative officials to tackle this issue and reduce the size of this gap.

Table 1: Per Capita Income, 2010

	Per Capita Income	Rank*
Indiana	\$34,042	42
U.S. Average	\$39,945	
Differential	-14.8%	

* Rank among the 50 states plus the District of Columbia
Source: Indiana Department of Workforce Development

While attempting to increase the incomes within one's state is a laudable task, the current situation might not be nearly as dour as perceived at first glance if one is focusing only on income rather than standard of living.

Most people understand that a dollar in Indiana does not have the same purchasing power in New York City, Chicago or San Francisco. Adjusting the wage data ensures that differences in cost of living are reflected. It is reasonable to assume that someone earning \$30,000 in Indianapolis would maintain more purchasing power than someone earning the same income in New York City. ACCRA (www.coli.org) provides estimates for cost of living adjustments on many metro areas. Combining the list of metro areas, along with their cost of living indexes, and population statistics from the U.S. Census Bureau a rough statewide weighted average cost of living index (COLI) adjuster was calculated.

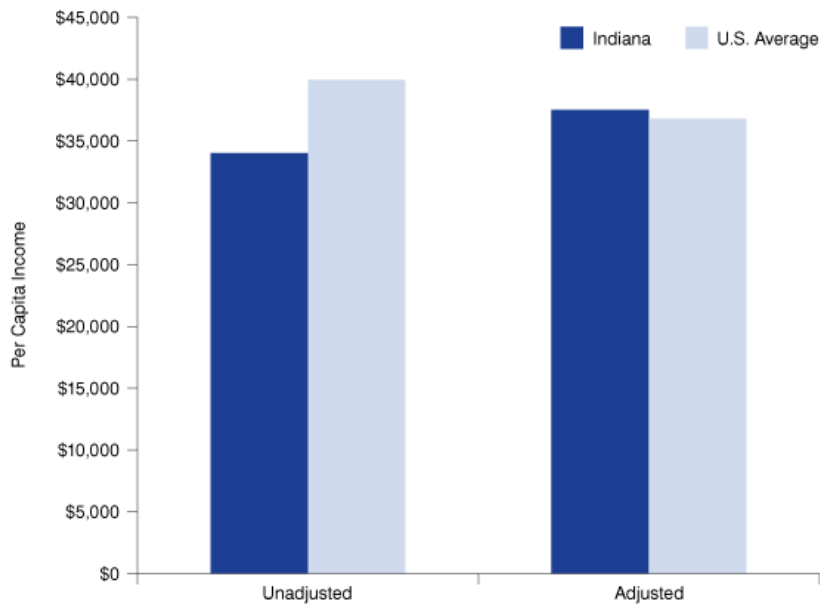
Utilizing this COLI adjuster, Indiana adjusted per capita incomes are 2 percent (or \$719) higher than the adjusted national average, as shown in **Table 2**. The ranking of adjusted incomes increased to 26th, showing that Indiana incomes hold up rather well to the national average after accounting for cost of living (see **Figure 1**).

Table 2: Per Capita Income Adjusted for Cost of Living, 2010

	Adjusted Per Capita Income	Rank*
Indiana	\$37,538	26
U.S. Average	\$36,819	
Differential (in %)	2.0%	

* Rank among the 50 states plus the District of Columbia
Source: Indiana Department of Workforce Development

Figure 1: Per Capita Income Comparison, 2010



Source: Indiana Department of Workforce Development

Indiana also ranks 44th in the percentage of adults with a bachelor's degree or more, based on 2009 Census data. Since educational attainment is an important factor in determining income levels, the fact that Indiana has maintained an adjusted income near the national average—despite low levels of college attainment—speaks somewhat to the vibrancy of its employment market. While public policy research should be focused on increasing incomes and educational attainment, the general perception that Indiana salaries lag nationally can be mitigated somewhat by adjustments.

It should be noted that the standard deviation of per capita incomes across states after adjustment fell by 38 percent indicating a reduction of variation. This finding is consistent with purchasing power parity. If opportunities of real wage disparity existed across state lines, arbitrage would exist and work to eliminate such variation. The limitations of this analysis are without question. The cost of living index adjustment could use further refinement and no modeling attempt was conducted on education. It is hoped that this analysis will foster further research to help clarify and correctly interpret the income data.

 [Download the summary data of these findings.](#)

Timothy E. Zimmer, Ph.D.

Manager, Research and Analysis Division of the Indiana Department of Workforce Development

Kimberley Linville

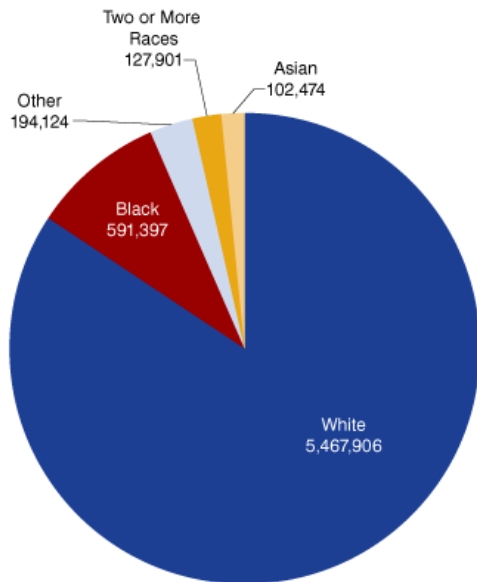
Program Director, Economic Market Analysis, Research and Analysis Division of the Indiana Department of Workforce Development

Indiana's Minority Population Is Growing

Indiana is becoming more diverse. Between 2000 and 2010, Indiana's minority population grew 39 percent, with the addition of 336,237 people.¹ Meanwhile, the state's white non-Hispanic population increased by a mere 1.3 percent, or 67,080 people.

Figure 1 shows that Indiana remains a predominately Caucasian state, with the white population comprising 84 percent of the total population. However, this is down from 87 percent in 2000.

Figure 1: Indiana's Population by Race, 2010

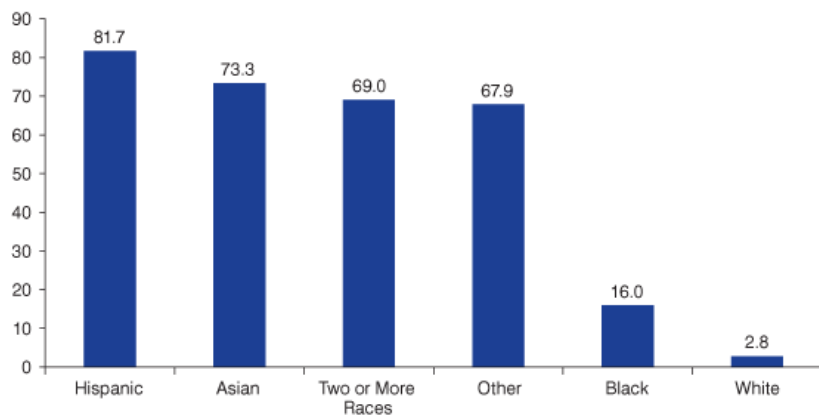


Note: There are 389,707 Hispanics in Indiana, which is considered an ethnicity and not a race, so Hispanics can be of any racial group.

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

In both numeric and percentage terms, the Hispanic population has seen the most growth since 2000—gaining 175,171 individuals for an 82 percent increase (see **Figure 2**). In fact, the Hispanic population was the only minority group to see growth in all 92 counties during the decade.

Figure 2: Percent Change in Indiana Population by Race/Ethnicity, 2000 to 2010



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

The minority population remains largely concentrated in Indiana's largest urban areas, with minorities comprising 45 percent of Lake County's population and 40 percent of Marion County's residents (see **Table 1**).

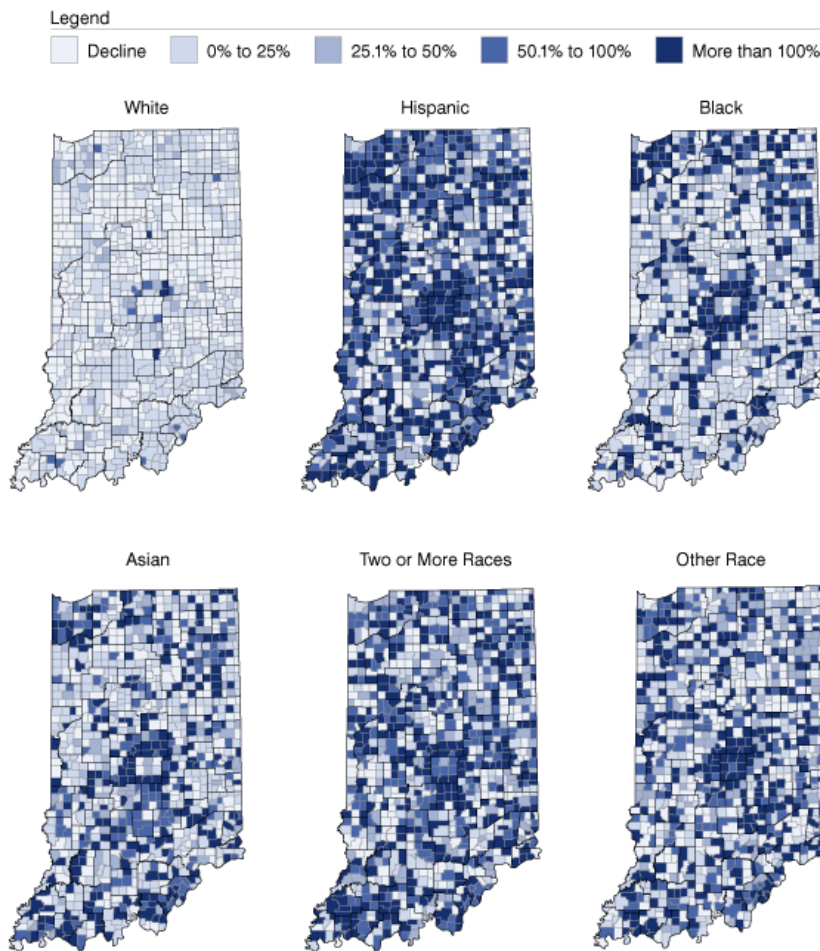
Table 1: Top 10 Counties with the Largest Minority Share of Total Population, 2010

County	Minorities as a Percent of Total Population	Total Minority Population	White	White, Non-Hispanic	Black	Asian	Other Race	Two or More Races	Hispanic
Lake	45%	221,843	319,412	274,162	128,263	6,142	30,528	11,660	82,663
Marion	40%	365,488	566,853	537,905	240,975	18,314	51,794	25,457	84,466
St. Joseph	24%	65,230	209,972	201,701	33,958	5,036	10,255	7,710	19,395
Allen	24%	83,540	281,653	271,789	41,618	9,721	11,890	10,447	23,093
Elkhart	23%	45,004	163,792	152,555	11,307	1,915	15,620	4,925	27,886
Tippecanoe	20%	33,925	145,190	138,855	6,913	10,730	6,175	3,772	12,947
LaPorte	19%	20,772	93,787	90,695	12,001	583	2,553	2,543	6,093
Cass	16%	6,342	34,385	32,624	578	419	2,974	610	4,897
Clark	15%	16,345	95,961	93,887	7,661	875	3,273	2,462	5,350
Vanderburgh	15%	26,623	154,882	153,080	16,347	2,003	2,370	4,101	3,873

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

However, growth in the minority population was widespread across the state as shown in **Figure 3**.

Figure 3: Township Population Change by Race/Ethnicity, 2000 to 2010



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

More data on Indiana's minority population is available for numerous geographies at www.stats.indiana.edu/topic/census.asp.

Notes

1. For purposes of this article, the minority population is defined as the total population minus the white non-Hispanic population.

Rachel Justis

Geodemographic Analyst, Indiana Business Research Center, Indiana University Kelley School of Business

A Demographic View of Indiana's Housing Slump

As the U.S. housing slump enters its fifth year, it is easy to become numb to the steady stream of bleak news accounts and statistics. Unfortunately, as many key indicators demonstrate, the housing market shows few signs of turning the corner. And while other states have grabbed the national headlines, the housing downturn continues to dog Indiana as well.

Table 1 shows that Indiana's 2010 existing home sales declined faster than the national average and remained well below peak sales levels seen in 2005. Indiana's house prices continue to fall, though not as quickly as the U.S. average. The state continues to have a large share of mortgages that were seriously delinquent (i.e., 90 days overdue or in foreclosure) and building permit activity is down again after a slight uptick in 2010.

Table 1: Indiana's Housing Market by the Numbers

Housing Indicator	U.S.	Indiana	Indiana's Rank
Number of Existing Home Sales, Percent Change 2009 to 2010	-4.8%	-6.7%	34
House Price Appreciation, 2010:2 to 2011:2*	-6.1%	-4.0%	19
Value of Residential Building Permits, Percent Change 2010 to 2011**	-1.0%	-5.1%	25
Share of Mortgages that are Seriously Delinquent, 2011:2	7.9%	8.2%	9
Share of Mortgages with Negative Equity, 2011:2	22.5%	10.9%	31

* Data are from the FHFA's newly released Expanded House Price Index

**This comparison uses value of permits issued through August of each year

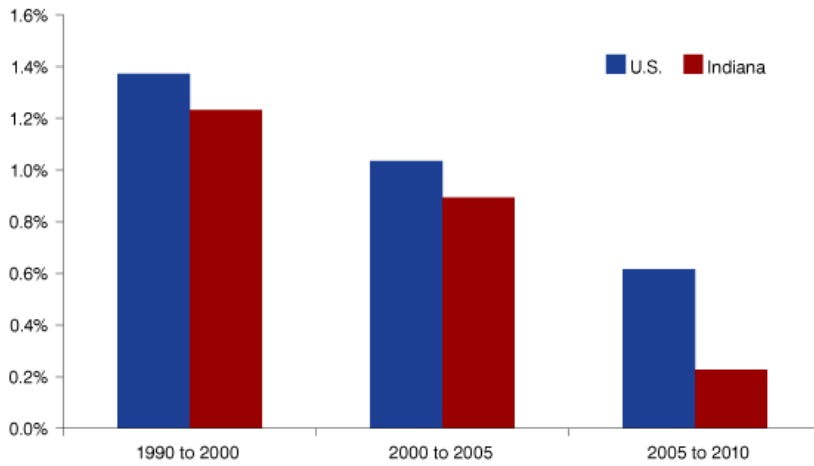
Source: National Association of Realtors, Federal Housing Finance Agency, U.S. Census Bureau, Mortgage Bankers Association and CoreLogic

This article examines the demographic fundamentals of Indiana's housing slump. Stubbornly high unemployment and foreclosure rates, along with general uncertainty in the labor market, have had a dampening effect on many of the demographic drivers of housing demand. For instance, new households are forming at a snail's pace in recent years as more households double up and migration slows. Additionally, homeownership is on the decline, particularly in younger age groups and certain minority populations. A greater rate of household formations, along with stable homeownership rates, will be important factors in a housing rebound.

Household Formations Slow Dramatically

The rate of Indiana's household growth slowed dramatically in the latter part of the last decade. Between 2005 and 2010, the number of households in the state grew by an average rate of 0.2 percent per year compared to 0.9 percent annually in the first half of the decade and 1.2 percent through the 1990s (see **Figure 1**). These rates translate to a decline from approximately 21,300 new households per year between 2000 and 2005 to 5,600 after. The nation as a whole has had higher rates of household formation yet has seen a similar decline in this measure.

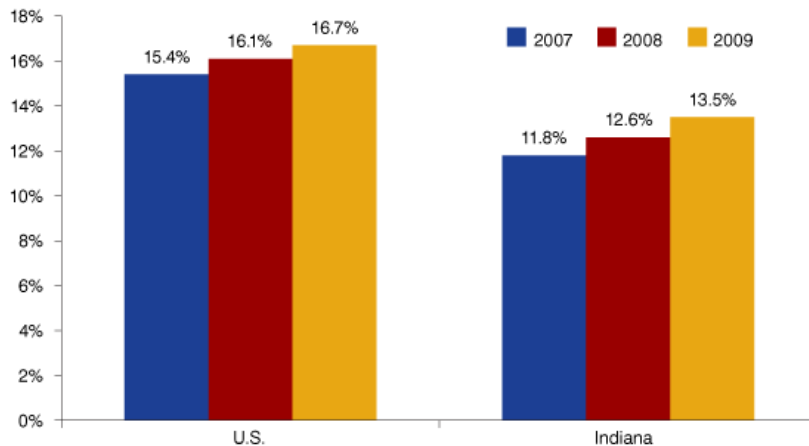
Figure 1: Average Annual Household Formation Rates, U.S. and Indiana, 1990 to 2010



Source: U.S. Census Bureau, Decennial Census and American Community Survey

Several factors have contributed to the decline in household formation. First, economic hardships like unemployment, foreclosure or decreased income may have forced many adults to move-in with family or friends—a process commonly called “doubling up.” A recent surge in the number of multi-generational households illustrates this trend. According to a recent Pew Research Center analysis of American Community Survey (ACS) data, the share of Indiana residents that lived in multi-generational households increased from nearly 12 percent in 2007 to 13.5 percent in 2009 (see **Figure 2**).¹ These figures translate to a jump from an estimated 749,000 Hoosiers living in multi-generational households in 2007 to 867,000 just two years later—a 16 percent increase.

Figure 2: Share of Population Living in Multi-Generational Households, 2007 to 2009

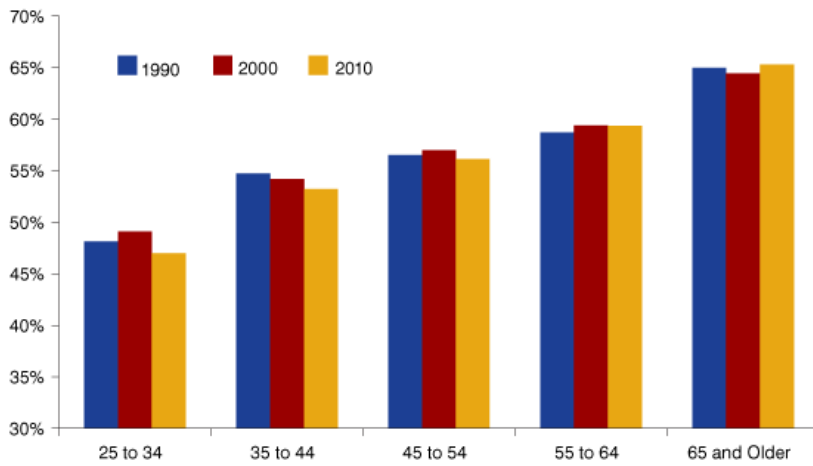


Source: Pew Research Center, using American Community Survey data

The Pew study suggests that the ability to move in with relatives is providing an important economic safety net for many that are reeling during the downturn. As a case in point, multi-generational households nationwide had a poverty rate of 11.5 percent in 2009 compared to 14.6 percent for all other households.²

Doubling up is also evident in Indiana’s declining headship rates (i.e., the number of households divided by population), particularly among younger age groups. The share of Indiana residents between the ages of 25 and 34 that headed their own household dropped 2.1 percentage points between 2000 and 2010 (see **Figure 3**). This relatively steep decline for young adults makes sense given that this group has higher unemployment rates than older adults, according to ACS data for Indiana. Headship rates are also down for the 35 to 54 age group, yet slight gains in the population over the age of 65 help to offset some of these losses. To give these figures some context, the state would have roughly 46,500 more households in 2010 had the headship rates held at 2000 levels.

Figure 3: Indiana Headship Rates by Age, 1990 to 2010



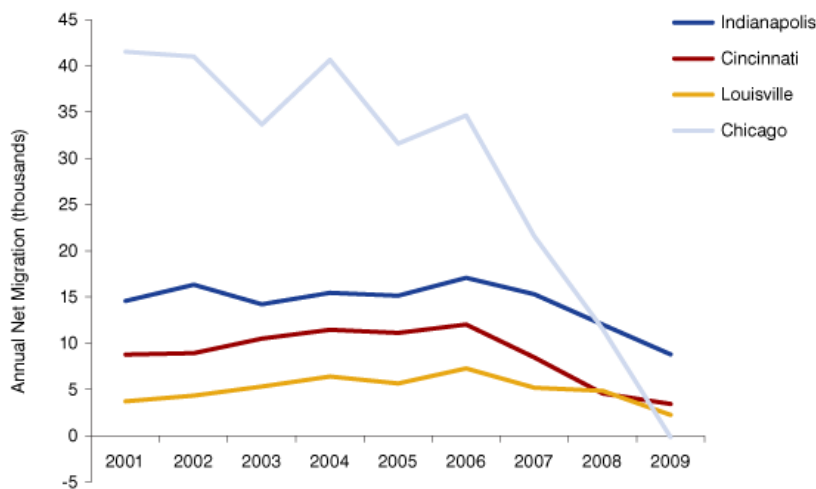
Source: U.S. Census Bureau, Decennial Census

A Sharp Decline in Migration

Another factor suppressing household formations is the dramatic decline in migration. This trend has been a key side effect of the most recent economic downturn not only in Indiana but also around the country. The latest population estimates from the Census Bureau show that once booming states like Florida, Arizona and Nevada saw comparatively small population gains through migration in 2009. In the same year, Indiana registered its second-lowest migration figure in nearly two decades, with a net influx of just 2,400 residents from outside the state.

Movement within the state is also down as the slumping housing market and employment insecurity forced many potential movers to sit tight. This is particularly true among homeowners. Data from the ACS shows that the share of Hoosier homeowners that reported moving within the state over the previous year declined from 7 percent in 2005 to 5.6 percent in 2009. Dampened mobility within Indiana along with low levels of migration from elsewhere has meant that many fast-growing communities saw far fewer new residents than usual toward the end of the last decade. This is most evident in the suburbs of large metro areas.

Figure 4: Net Migration in Suburban Counties of Select Metro Areas, 2001 to 2009



Source: U.S. Census Bureau Population Estimates

Figure 4 illustrates the annual net migration for the suburban counties of the Indianapolis metro area along with the large metros that border the state.³ According to Census population estimates, the nine suburban counties of the Indianapolis area averaged a net in-migration of roughly 15,400 residents a year between 2001 and 2007. However, the net influx dropped to 12,000 in 2008 and 8,800 in 2009. Within the area, Hamilton County had the largest drop—going from an annual average of 7,600 net in-migrants between 2001 and 2007 to 5,200 in 2009. Comparing the same periods, the net in-migration marks for Hendricks and Johnson counties were down 1,600 residents and 1,200 residents, respectively.

The outlying counties of the Chicago metro area (which include Lake, Porter, Jasper and Newton counties in Indiana) have shown an even more dramatic fall in migration. These 13 counties combined to average a net in-migration of 35,000 residents a year

between 2001 and 2007 yet had a slight net out-migration in 2009. Of this group, Indiana's Lake County had the largest 2009 net out-migration at nearly 1,600 residents. Overall, migration to Louisville's suburbs was down too, yet Indiana's Clark and Floyd counties bucked the broader trend as their net influx in 2009 outpaced their average from earlier in the decade.

Homeownership in Retreat

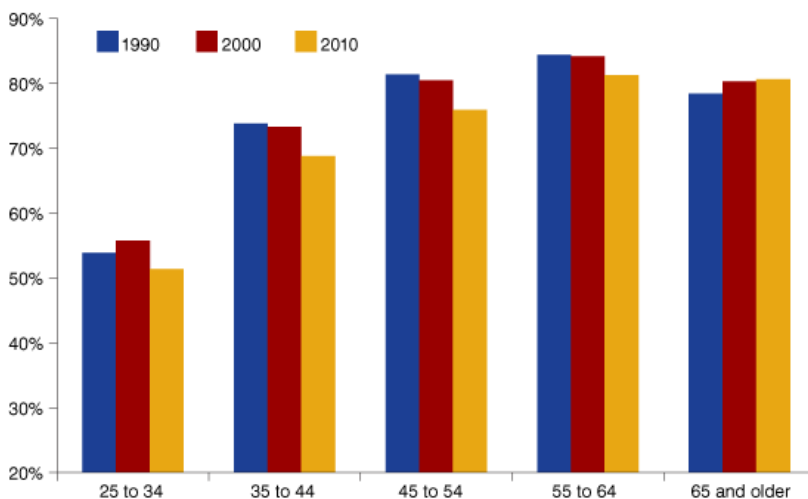
The rate of household formation is down but this trend should improve when the economy does. A 2010 study indicated that a 2 percentage point drop in the U.S. unemployment rate between 2010 and 2012 would increase the nation's household formations by 2 percentage points over the same period.⁴ But will these new households be looking to buy at the same levels seen prior to the housing crash or will they continue to tilt more heavily toward the rental market? Given tighter lending standards, the continued fallout from the foreclosure crisis and lagging incomes in Indiana, the latter seems more likely.

Indiana's homeownership rate has already dropped precipitously since the onset of the housing slump. Data from the Census Bureau's Housing Vacancy Survey indicate that after a dramatic climb in homeownership beginning in the mid 1990s that was fueled by easier access to credit and the aging of the baby boom generation, the state's homeownership rate plunged 3 percentage points between 2008 and 2010. According to the 2010 Census, the state's homeownership rate now stands at 69.9 percent, which is below the mark measured in 1990 (70.2 percent) and 2000 (71.4 percent).

Indiana's overall rate in 2010 masks what is an even more dramatic fall in homeownership. Under normal conditions, Indiana's homeownership rate would have risen simply because the state is growing older and homeownership increases with age. Baby boomers are now between the ages of 45 and 65, meaning that this age group holds a larger share of the state's population than ever before. This expansion of the prime homeownership age group tends to boost the rate, even if age-specific homeownership rates are down.

And Indiana's age-specific homeownership rates are down significantly. The homeownership rates for each 10-year age group between the ages of 25 and 54 are down roughly 4.5 percentage points when compared to the 2000 Census (see **Figure 5**). The homeownership rate for the 55 to 64 age group was down 2.9 percentage points to 81.3 percent while the share of Indiana seniors that owned their home increased slightly to 80.6 percent. These data underscore the toll that the spike in foreclosures and the economic downturn have taken on homeownership.

Figure 5: Indiana Homeownership Rates by Age, 1990 to 2010

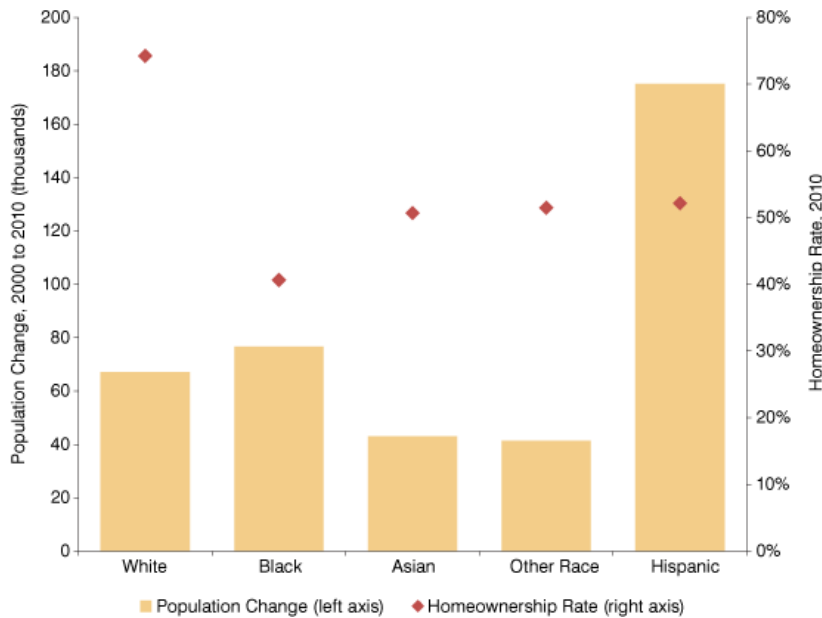


Source: U.S. Census Bureau

Another factor that could continue to tilt the balance between homeownership and renting is Indiana's increasing racial and ethnic diversity. Over the last decade, an additional 175,000 Hispanic residents called Indiana home—an 82 percent increase. The state's black population grew by nearly 77,000 while the number of white residents increased by 67,000.⁵ With these different growth rates, Indiana's white population went from 86 percent of the state's total in 2000 to 82 percent in 2010. Meanwhile, the state's black and Hispanic populations now account for 9 percent and 6 percent of the total, respectively.

These are meaningful shifts considering that housing trends vary widely by race and ethnicity in Indiana. For instance, the homeownership rate for Indiana's white householders is 74 percent (see **Figure 6**). By contrast, 52 percent of the state's Hispanic households own their homes and just 41 percent of black households are owner-occupied.

Figure 6: Indiana Population Change and Homeownership Rates by Race and Ethnicity, 2000 to 2010



Source: U.S. Census Bureau

Wide income disparities certainly play a large role in the different rates of homeownership. The 2010 median household income for Indiana's white population was \$47,200 compared to \$33,200 for Hispanic households. The median household income for Indiana's black households was \$30,000. Clearly, economic development and improved educational outcomes will be critical to closing the gaps in income and homeownership.

One hopeful sign that this gap could already be closing is the improved homeownership rate of Indiana's Hispanic population. Between 2000 and 2010, the state's Hispanic homeownership rate increased by nearly four percentage points. Unfortunately, the experience for Indiana's black population has been far different. In 2000, 45.2 percent of Indiana's black householders owned their home but this mark dropped to 40.6 percent by 2010. The homeownership rate for Indiana's white population also declined slightly over the decade.

Conclusion

It may well be appropriate that more Hoosiers look to rent and that Indiana's homeownership rate settles at a more sustainable level. However, the combined effects of the decline in household formation, migration and homeownership have implications for the broader economy. Residential fixed investment (RFI), which tends to be a key leading indicator for the economy, has yet to contribute consistently to the nation's economic recovery. In fact, since 1950, RFI has accounted for 4.7 percent of U.S. GDP on average. As housing demand has nosedived, however, RFI's share of economic activity stood at just 2.3 percent in 2010—the lowest annual mark since the end of World War II.

The pieces are in place for a housing recovery. Homes have rarely been more affordable and mortgage interest rates are at historic lows. During a more typical economic slump, these conditions would likely help to spur an economic recovery but the opposite is true this time. Given housing's central role in this downturn, it appears that only a sustained recovery in other areas of the economy will stoke the demographic drivers of housing demand.

Notes

1. For its report, the Pew Research Center defined multi-generational households as a household that includes a parent and an adult child (age 25 or older), three or more generations living together, or grandparents raising grandchildren alone.
2. "Fighting Poverty in a Tough Economy, Americans Move in with Their Relatives," Pew Research Center, October 2011, www.pewsocialtrends.org/files/2011/10/Multigenerational-Households-Final1.pdf.
3. In the case of the Indianapolis metro area, the suburban counties are Boone, Brown, Hamilton, Hancock, Hendricks, Johnson, Morgan, Putnam and Shelby. Marion County is the metro area's core county and is excluded from these numbers. Many of the Midwest's core metro counties—Marion County included—saw marked improvements in their net migration figures through the downturn as the flow of residents to suburban areas or to other fast-growing regions of the country slowed.

4. Gary Painter, "What Happens to Household Formation in a Recession?", Research Institute for Housing America, April 2010.
5. The term Hispanic refers to an ethnicity and not a race so Hispanic residents can be of any race. The figures reported for specific race groups in this section exclude the Hispanic residents of that race. Therefore, figures for the state's white population, for example, refer to non-Hispanic white residents.

Matt Kinghorn

Demographer, Indiana Business Research Center, Indiana University Kelley School of Business

Measuring Housing: Quick Facts from the 2010 Census for Indiana

A mere 10 questions were asked on the Census 2010 questionnaire.¹ Of those, only one dealt with housing. That one question is limited (and users will need to turn to the American Community Survey for more detail), but it can provide us with important information about whether or not people rent or own (and whether they own outright or have a mortgage). Combined with age, race and sex data collected at the same time, we can get perspective on the population that owns or rents.

3. Is this house, apartment, or mobile home —
Mark ONE box.

- Owned by you or someone in this household with a mortgage or loan? *Include home equity loans.*
- Owned by you or someone in this household free and clear (without a mortgage or loan)?
- Rented?
- Occupied without payment of rent?

B. If vacant, ask: Which category best describes this vacant unit as of April 1, 2010? (Read categories.)

- For rent
- Rented, not occupied
- For sale only
- Sold, not occupied
- For seasonal, recreational or occasional use
- For migrant workers
- Other vacant

The status of the housing unit—whether it was vacant and if so, why, was only asked during a process called non-response follow-up, where census takers actually went to the non-responding unit.

What We Found

The vast majority (97.1 percent) of Indiana's population lives in housing units of some type—family homes, apartments, condominiums or mobile homes. Fewer than 200,000 people in Indiana were living in group quarters at census time (April 2010). Group quarters include facilities such as dormitories, nursing homes, halfway houses, prisons, jails and long-term care hospitals.

Our state continues to have a high percentage of people living in homes they own—either outright or with a mortgage. Seventy percent of housing units are what the Census defines as owner occupied and the majority of those have mortgages, while 20 percent are homes owned outright (see **Table 1**).

Table 1: Indiana's Occupied Housing Units, 2010

Occupied housing units	2,502,154
Owner occupied	69.9%
Owned with a mortgage or loan	50.3%
Owned free and clear	19.5%
Renter occupied	30.1%

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

The Race and Ethnicity of Homeowners and Renters

The majority of housing units are owned or rented by non-Hispanic whites, which correlates with the majority of the population being white. We can also look at the data in terms of ownership or renting within each type of population, though, and begin to see the significant differences in ownership by race or ethnicity, as shown in **Table 2**. While non-Hispanic whites are overwhelmingly homeowners (74.2 percent), that isn't the case within the black population, where nearly 60 percent of blacks rent. Most Hispanics are homeowners, but the proportion of owners to renters is much closer—52.2 percent and 47.8 percent, respectively.

Table 2: Indiana's Homeownership by Race/Ethnicity, 2010

Race/Ethnicity of Householder	Own	Rent
Not Hispanic	70.6%	29.4%
White	74.2%	25.8%
Black	40.6%	59.4%
Hispanic	52.2%	47.8%

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

We have also gleaned information on vacant housing, significant because of the number of foreclosures that have occurred over the past few years and coupled with the downturn in the housing market. The Census doesn't reveal information on foreclosures, but we can see from the data that a large number (nearly 10 percent) of housing units were vacant at the time of the census —nearly 300,000 units. The reasons for vacancy vary considerably, with the most prevalent being units for rent (see **Table 3.**)

Table 3: Indiana's Vacant Homes, 2010

Vacancy Status	Number	Percent of Total
Vacant housing units	293,387	100.0
For rent	93,029	31.7
Rented, not occupied	3,859	1.3
For sale only	46,410	15.8
Sold, not occupied	10,862	3.7
For seasonal, recreational or occasional use	45,571	15.5
For migratory workers	200	0.1
Other vacant	93,456	31.9

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

With the release of what is called Summary File 1 (SF1) in August, significant geographic detail is available to users who want to see housing and population counts for counties, cities or towns, townships, school districts, census tracts and more. Please visit the **Census topic page** on STATS Indiana to learn more.

Notes

1. This interactive web tool shows the actual 10 questions asked on the form: <http://2010.census.gov/2010census/about/interactive-form.php>.

Carol O. Rogers

Deputy Director and Executive Editor, Indiana Business Research Center, Indiana University Kelley School of Business