

# INDIANA ECONOMIC ANALYSIS 2017 REPORT



**INDIANA**  
DEPARTMENT OF  
**WORKFORCE**  

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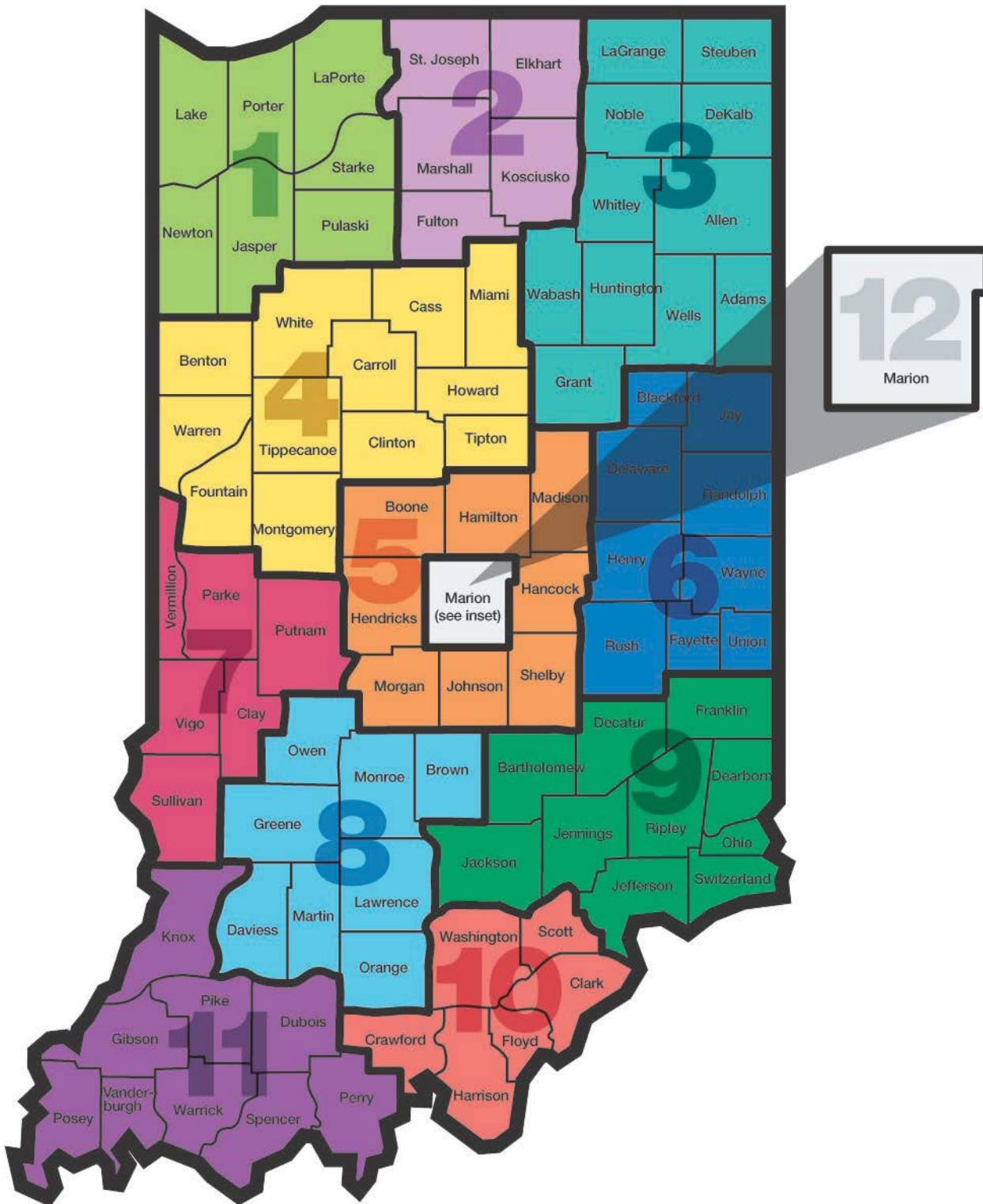
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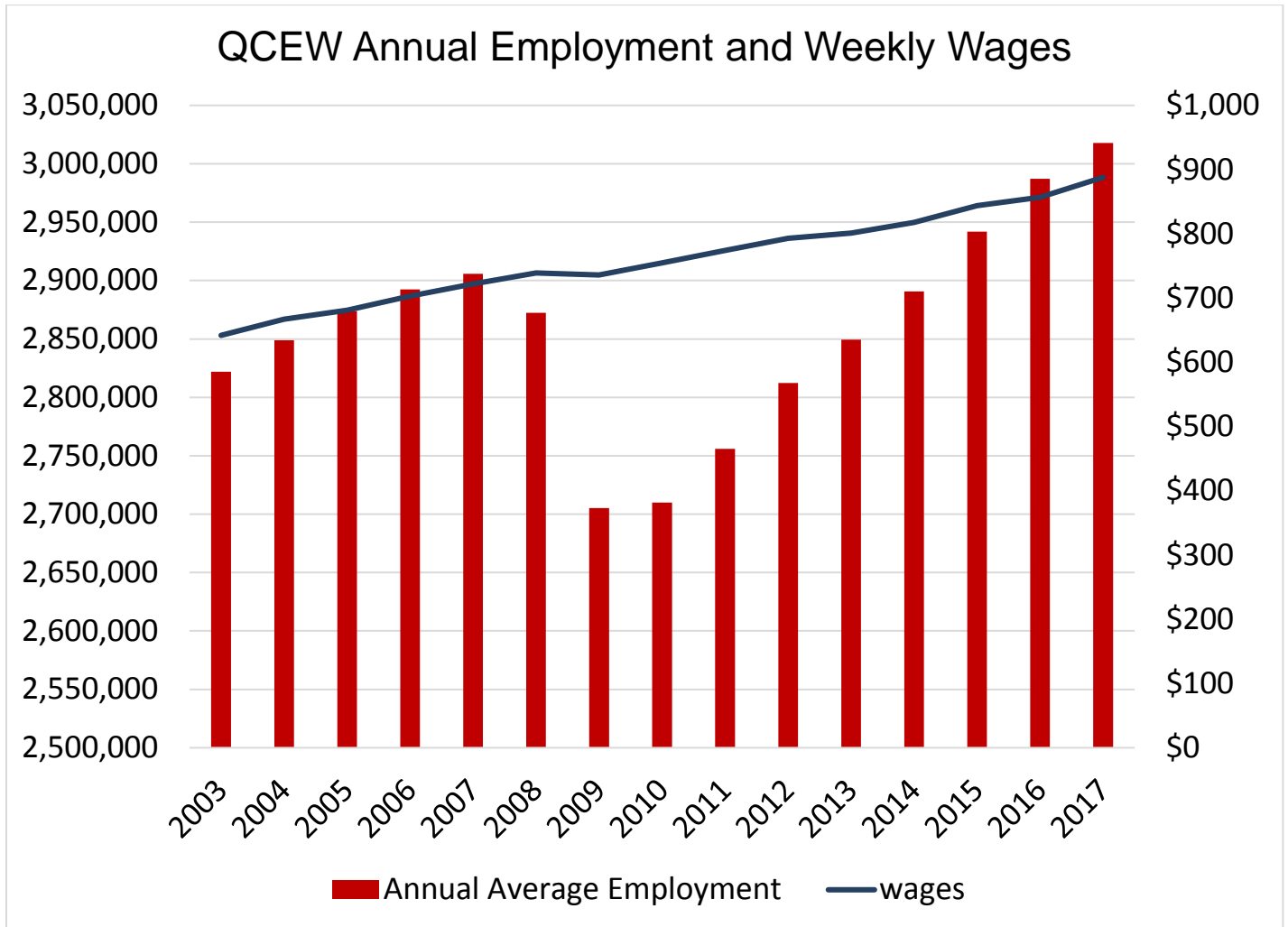
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### Economic Growth Regions



**2017 Indiana Employment in Brief:**

Indiana has seen steady employment recovery following the Great Recession. The chart below represents QCEW employment which is employment covered by Unemployment Insurance. The 2017 average annual employment level was 2,627,101 for private employment and 3,017,933 for all industries. This is up 11.6% since the depths of the 2009 recession. This is also the highest the QCEW employment number has ever been and the first time this data set has exceeded 3 million jobs. The QCEW average weekly wages have risen to \$888 for all industries. The following charts summarize Indiana’s 2017 Employment from the Quarterly Census of Employment and Wages (QCEW) program.



Source: IDWD Quarterly Census of Employment and Wages

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**Summary: Current Employment Statistics and Labor Force 2017**

2017 estimates from the Current Employment Statistics (CES) and Local Area Unemployment Statistics (LAUS) indicate growing private sector employment and falling unemployment. Indiana's 2017 labor force is down 6,730 for the year but has gained 53,288 since 2015. Indiana's 2017 annual labor force stands at 3,320,409.

From January 2017 to January 2018 Indiana's Total Non-Farm employment grew by 23,300 and the private sector employment grew by 26,000. Key growth sectors over the past year include Private Educational and Health services which gained 13,300, Manufacturing with gains of 5,300, and Construction gaining 4,900 jobs.

IN Employment Change Over the Month, Year-to-Date and Over the Year (seasonally adjusted)						
Industry	January 2017	December 2017	January 2018	Month Change	Y-to-D Change	Y-to-Y Change
Private Educational & Health Services	462.9	476.7	476.2	-0.5	-0.5	13.3
.....Private Educational Services	61.6	63.8	64.7	0.9	0.9	3.1
.....Health Care & Social Assistance	401.3	412.9	411.5	-1.4	-1.4	10.2
Manufacturing	527.6	532.7	532.9	0.2	0.2	5.3
Professional & Business Services	334.4	337.7	338.5	0.8	0.8	4.1
Financial Activities	134.9	135.8	135.9	0.1	0.1	1.0
Construction	136.5	138.7	141.4	2.7	2.7	4.9
Leisure and Hospitality	308.2	306.6	307.9	1.3	1.3	-0.3
Trade, Transportation & Utilities	598.1	598.1	599.7	1.6	1.6	1.6
.....Trade	453.8	452.4	454.4	2.0	2.0	0.6
.....Transportation, Warehousing & Utilities	144.3	145.7	145.3	-0.4	-0.4	1.0
All Other	164.9	162.6	161.0	-1.6	-1.6	-3.9
Total Private	2,667.5	2,688.9	2,693.5	4.6	4.6	26.0
Government (Includes Public Schools & Hospitals)	428.2	426.0	425.5	-0.5	-0.5	-2.7
Total Nonfarm	3,095.7	3,114.9	3,119.0	4.1	4.1	23.3
United States Total Private	123,383.0	125,286.0	125,532.0	246.0	246.0	2,149.0

Source: Current Employment Statistics 2017

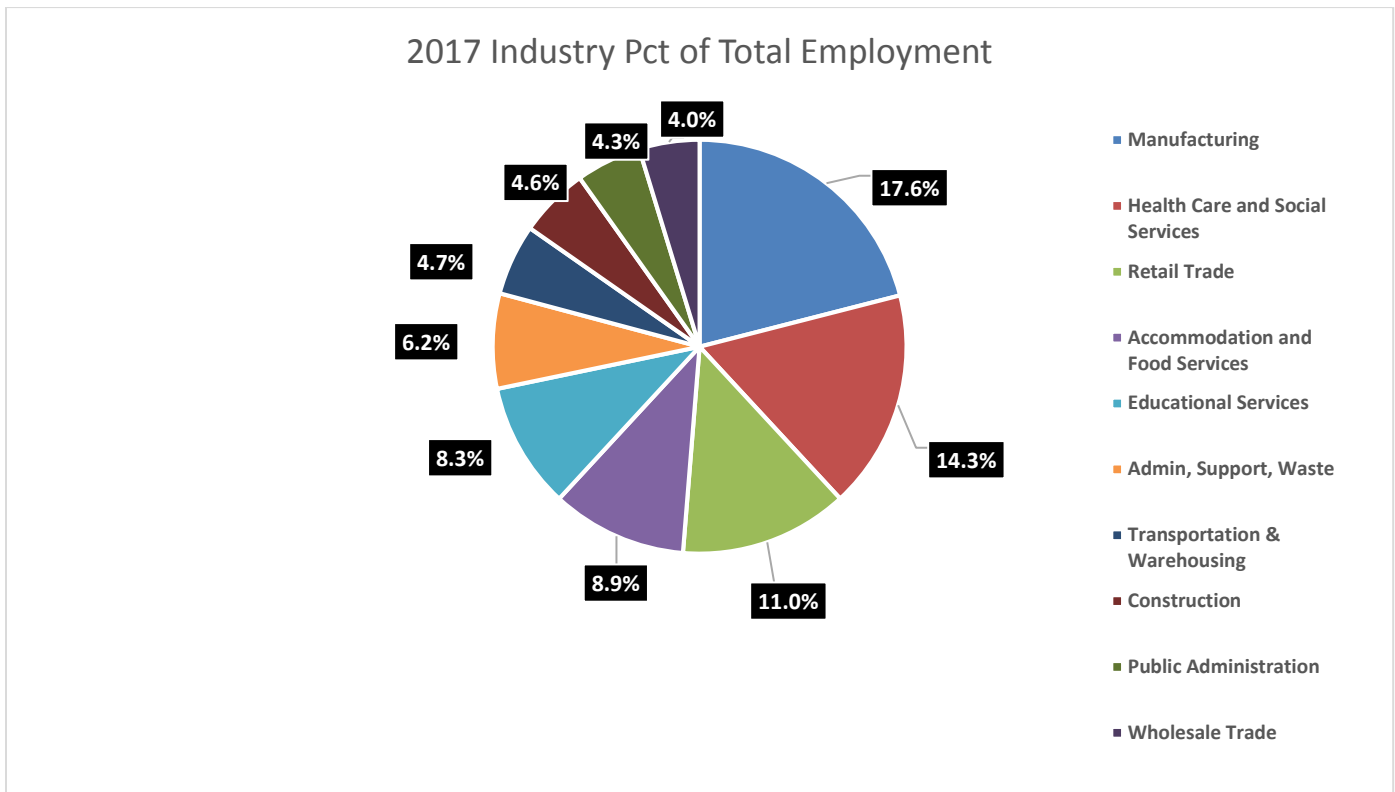
**SECTION A: ECONOMIC ANALYSIS**

**A1 Current (2017) Employment**

INDIANA EMPLOYMENT, FIRMS AND WAGES BY INDUSTRY, 2017				
Industries	Average Annual Wage	Units	Total Annual Wages In Billions	Average Employment
Total	\$46,191	164,735	\$137	3,015,496
Manufacturing	\$61,100	163,526	\$32	531,325
Health Care and Social Services	\$48,256	8,556	\$21	432,566
Retail Trade	\$27,404	20,377	\$9	333,036
Accommodation and Food Services	\$15,964	13,107	\$4	267,757
Educational Services	\$41,652	3,188	\$10	249,357
Admin, Support, Waste	\$31,824	9,479	\$6	187,769
Transportation and Warehousing	\$45,656	6,440	\$6	140,349
Construction	\$57,096	14,840	\$8	138,021
Public Administration	\$46,384	2,809	\$6	129,422
Wholesale Trade	\$65,936	14,145	\$8	119,269

Source: Quarterly Census of Employment and Wages

**Major Industries, Composition**



Source: Quarterly Census of Employment and Wages

**Table 1 Indiana Statewide Employment Change**

INDIANA ANNUAL AVERAGE EMPLOYMENT BY INDUSTRY				
Sorted by Total Employment gains from 2012 to 2017				
Industry	2012	2017	Change	% Change
<b>Total</b>	2,812,347	3,015,496	203,149	7.2%
Management of Companies and Enterprises	29,082	34,468	5,386	18.5%
Professional and Technical Services	100,367	115,098	14,731	14.7%
Administrative and Waste Services	169,787	187,769	17,982	10.6%
Construction	124,999	138,021	13,022	10.4%
Agriculture, Forestry, Fishing, and Hunting	13,884	15,328	1,444	10.4%
Manufacturing	481,845	531,325	49,480	10.3%
Transportation and Warehousing	127,843	140,349	12,506	9.8%
Utilities	14,338	15,727	1,389	9.7%
Health Care and Social Assistance	395,412	432,566	37,154	9.4%
Accommodation and Food Services	245,919	267,757	21,838	8.9%
Real Estate and Rental and Leasing	32,334	34,889	2,555	7.9%
Retail Trade	312,508	333,036	20,528	6.6%
Other Services	82,288	87,117	4,829	5.9%
Finance and Insurance	92,349	96,975	4,626	5.0%
Arts, Entertainment, and Recreation	42,172	43,271	1,099	2.6%
Wholesale Trade	116,260	119,269	3,009	2.6%
Public Administration	126,567	129,422	2,855	2.3%
Educational Services	251,162	249,357	-1,805	-0.7%
Information	42,046	37,729	-4,317	-10.3%
Mining	6,736	5,743	-993	-14.7%

Source: *Indiana Quarterly Census of Employment and Wages (Public and Private)*

### **Industry Overview:**

From 2012 to 2017 total employment grew by 203,149 jobs (7.2%) overall for all industries, including both public and private employment. This is measured from the Quarterly Census of Employment and Wages, annual average employer reported data. QCEW is the best measure of true employment levels based on aggregated administrative tax data. This data is used by other surveys (such as the CES cited in the introduction) to benchmark by annually. This is the most recent full year of data at the time of this report. Over the most recent five year period of recovery nearly 72.4% of this growth was in a few key sectors in Indiana. Manufacturing saw the largest declines throughout the recession and has also seen the largest comeback in raw numbers with gains of over 49,480 (10.3%) since 2012. Health Care and Social Services increased by 37,154 jobs or 9.4%. Accommodations and Food Services grew by 21,838 (8.9%). Retail Trade grew by 20,528 jobs (6.6%) and Administrative and Support and Waste Management and Remediation services grew by 17,982 (14.8%) during this time frame.



## **Industries showing the highest employment increases from 2012 to 2017:**

### **Manufacturing**

Indiana manufacturers grew employment by 49,480 over this time frame. Manufacturing remains the largest increase in the recovery of total jobs for all industries. Manufacturing has a growth rate of 10.3% by industry for Indiana and pays wages greater than average with weekly wages at \$1,175 on average during 2017.

### **Health Care and Social Assistance**

Health Care and Social Assistance facilities have grown by 9.4% in the last 5 years, for an increase of 37,154 jobs. This sector growth includes physicians' offices, hospitals, and a wide range of providers. Wages in this industry averaged just above the statewide total, at \$928 weekly for 2017.

### **Accommodation and Food Services**

The Accommodation and Food Service industries have grown at a rate of 8.9% since 2012, growing 21,838 jobs. While many of these jobs are lower or middle wage jobs, growth in these industries indicates growth in consumer spending and confidence and may indicate positive economic trends for the state. This industry includes many part time workers, with average weekly wages of \$307 during 2017.

### **Retail Trade**

The Retail Trade industry grew by 20,528 or 6.6% between 2012 and 2017. Much like Accommodation and Food Services, growth in this industry indicates confidence in consumer spending. The wages for this industry are at \$527 for 2017.

### **Administrative Support and Waste Services**

This industry has grown by 17,982 over this 5 year period, at a rate of 10.6%. Gains have been dominated by growth in temporary employment services. Once concentrated in office support or manufacturing, recent growth indicates employment services now provide temporary labor to a wide variety of industries throughout the state. Wages for these industries vary widely, and the weekly averages may include part-time workers. During 2017, the average weekly wage for this industry was \$612.

### **Professional and Technical Services**

Professional and Technical Services has shown healthy growth from 2012 to 2017, showing promising projected future growth. Among the industries this sector contains are Legal Services, Architectural and Engineering, Research and Development and Computer Systems Design and Related Services. Many of these areas have been the focus of Indiana economic development. The sector has grown 14,731 jobs at a 14.7% gain over the past 5 years. The wages for 2017 are above the state average at \$1,301.

### **Transportation and Warehousing**

Transportation and Warehousing has grown by 12,506 from 2012-2017. This industry has also been a target for economic development for several years. This industry grew by 9.8% during this 5 year period. The wages for Transportation and Warehousing were at \$878 for 2017.

## **Industries showing decline from 2012 to 2017:**

The following industries are among those that have shown employment declines over the time frame from 2012 to 2017. This is based on the annual average estimates from QCEW, and includes public and private jobs.

### **Mining**

Mining is the smallest industrial sector in Indiana. Over the 2012 to 2017 time frame this industry lost 993 jobs, or a loss of -14.7% of its total. Mining does have a higher than average wage of \$1,368 which has increased by 10.6% over the past 5 years.

### **Educational Services**

This sector declined at a rate of -0.7%, losing 1,805 jobs over this 5 year period. These jobs pay an average weekly wage under the statewide average at \$801 in 2017. Employment in this industry includes private schools, and may also include early education programs.

### **Information**

The information sector lost 14,317 jobs at a rate of -10.3% decline from 2012 to 2017. This sector includes publishing, telecommunications, and internet broadcasting which all saw moderate declines over these years. Average weekly wages were above the state average, at \$1,026 during 2017.

## **Total Wages**

Average annual/weekly wages are affected by the ratio of full-time to part-time workers as well as the number of individuals in high-paying vs. low-paying occupations. Table 2 below shows the historical annual averages from 2003-2017 with 2017 showing a 3.6% increase from 2016.

Table 2a below shows percentage growth of wage changes over the last 5 years (2012-2017). Over this time several sectors experienced a more dramatic percentage change while other sectors were modest in their increase. Real Estate and Rental and Leasing wages increased by 19.5%. Agriculture, Forestry, Fishing, and Hunting, as well as Finance and Insurance wages grew by 18.5% over this time frame. Management of Companies wages grew by 17.2%. Several sectors including Finance and Insurance, and Other Services categories increased by more than 15% during this time. The slowest percentage increase was in Accommodation and Food Services, 4.41%.

**Table 2 Indiana Statewide Total Wages**

Year	Employment	Average Weekly Wage	% Chg
2003	2,821,879	\$642	2.4%
2004	2,848,873	\$667	3.9%
2005	2,873,795	\$681	2.1%
2006	2,892,419	\$703	3.2%
2007	2,905,725	\$722	2.7%
2008	2,872,442	\$739	2.4%
2009	2,705,331	\$736	-0.4%
2010	2,709,831	\$755	2.6%
2011	2,755,826	\$774	2.5%
2012	2,812,347	\$793	2.5%
2013	2,849,311	\$801	1.0%
2014	2,890,758	\$818	2.1%
2015	2,941,991	\$844	3.2%
2016	2,987,091	\$857	1.5%
2017	3,017,933	\$888	3.6%

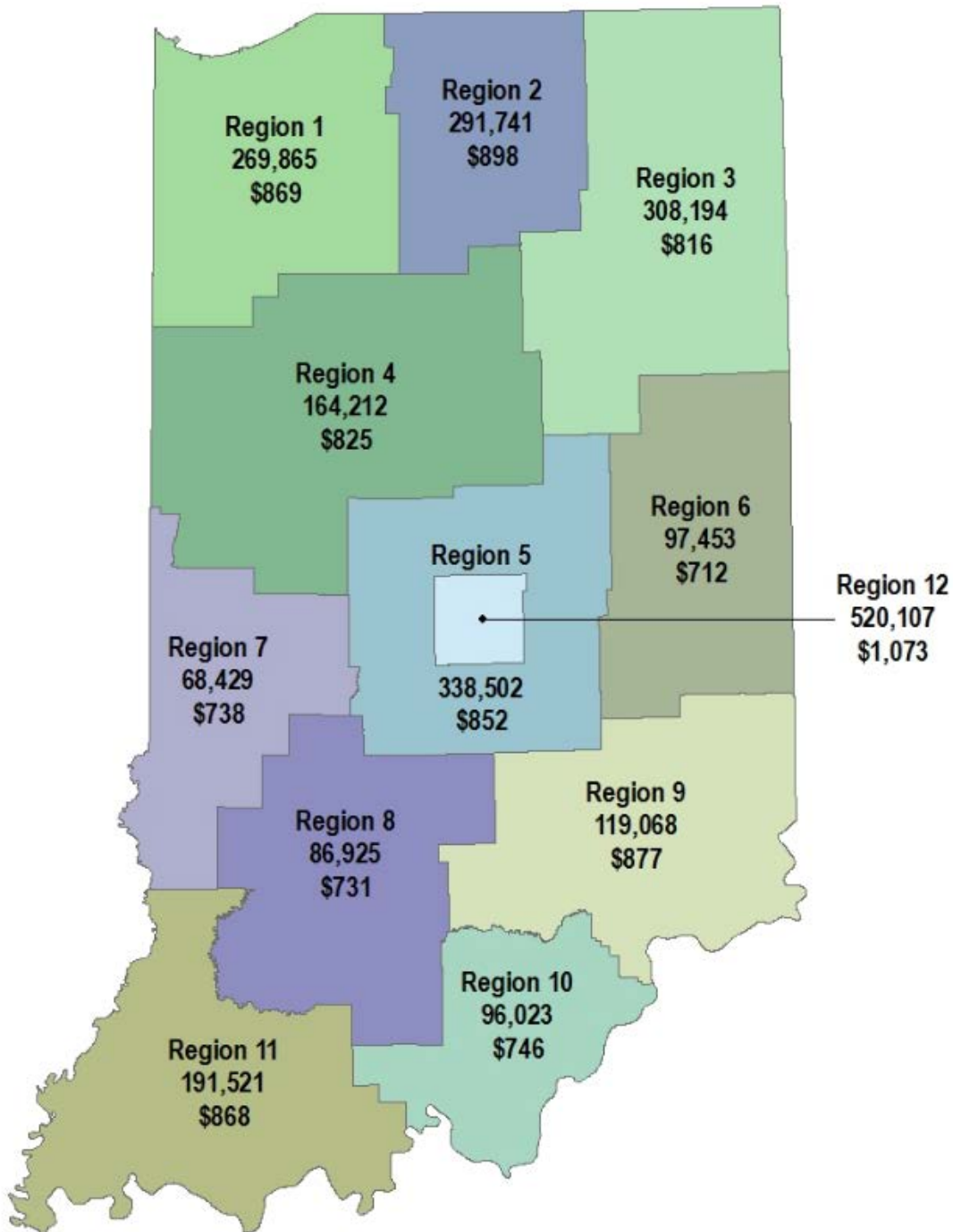
Source: IDWD Quarterly Census of Employment and Wages, data not seasonally adjusted

**Table 2a Indiana Statewide Data**

2017 INDIANA AVERAGE WEEKLY WAGES BY INDUSTRY (comparison to 2012 & 2016)					
NAICS Code	2012	2016	2017	% Change From 2012	% Change From 2016
Indiana State Totals	\$793	\$857	\$888	12.0%	3.6%
Management of Companies and Enterprises	\$1,607	\$1,811	\$1,884	17.2%	4.0%
Utilities	\$1,571	\$1,693	\$1,724	9.7%	1.8%
Mining	\$1,237	\$1,297	\$1,368	10.6%	5.5%
Finance and Insurance	\$1,153	\$1,278	\$1,332	15.5%	4.2%
Professional, Scientific, Technical	\$1,133	\$1,258	\$1,301	14.8%	3.4%
Wholesale Trade	\$1,096	\$1,233	\$1,268	15.7%	2.8%
Manufacturing	\$1,083	\$1,138	\$1,175	8.5%	3.3%
Construction	\$1,040	\$1,054	\$1,098	5.6%	4.2%
Information	\$918	\$987	\$1,026	11.8%	4.0%
Health Care and Social Services	\$819	\$897	\$928	13.3%	3.5%
Public Administration	\$816	\$867	\$892	9.3%	2.9%
Transportation & Warehousing	\$791	\$854	\$878	11.0%	2.8%
Educational Services	\$723	\$777	\$801	10.8%	3.1%
Real Estate and Rental and Leasing	\$707	\$812	\$845	19.5%	4.1%
Agriculture, Forestry, Fishing and Hunting	\$622	\$723	\$737	18.5%	1.9%
Arts, Entertainment, and Recreation	\$565	\$608	\$625	10.6%	2.8%
Other Services (Except Public Administration)	\$530	\$596	\$614	15.8%	3.0%
Admin, Support, Waste	\$529	\$581	\$612	15.7%	5.3%
Retail Trade	\$468	\$511	\$527	12.6%	3.1%
Accommodation and Food Services	\$268	\$295	\$307	14.6%	4.1%

Source: IDWD Quarterly Census of Employment and Wages

**Indiana Economic Growth Regions  
2017 Annual Average  
Employment and Weekly Wage**



Source: IDWD Quarterly Census of Employment and Wages

# Career and technical education: Outcomes on employment, wages, and industry

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Career and Technical Education (CTE) represents one part of Indiana's efforts to prepare students for careers in high-wage, high-demand occupations. Primarily focused on high school students, CTE currently includes courses in six program areas:

- Agricultural education
- Business and information technology
- Engineering and technology
- Family and consumer sciences
- Health science
- Trade and industrial education

Through CTE, students can learn about potential career options and have the opportunity to learn applicable skills, earn industry certifications and gain college credits.

Analyses of outcomes for Indiana CTE participants are promising, but often tend to focus on educational outcomes (assessment exams, graduation rates or enrollment in college) or credentials earned (certificates and licenses). Analysis of wage records for Indiana employers yields additional insight on the employment status, wages and industries of graduated CTE participants.

## *Summary of findings*

Long-term outcomes are defined as being 22 quarters after last CTE participation (see the 2010-2011 cohort discussion), while short-term outcomes are 10 quarters after (see the 2013-2014 cohort discussion).

### **Long-term outcomes**

- Of high school graduates who took at least one CTE course, 64 percent were employed in Indiana 22 quarters later.
- Those that were employed were more likely to work in manufacturing and the health care and social assistance sectors. They were less likely to work in retail trade and accommodation and food services.

## Short-term outcomes

- Rates of college enrollment, employment and industry of employment differ depending on the number of CTE courses taken and the subject areas studied.
- CTE-participating high school graduates who took five or more CTE courses were more likely to be employed in Indiana 10 quarters later compared to all CTE-participating graduates (64 percent vs. 58 percent).
- Participants who focused on trade and industrial education had relatively high rates of employment in Indiana (67 percent) and low rates of enrollment in public Indiana colleges (19 percent) in the 2015-2016 school year.
- Participants who focused on health sciences or engineering and technology had higher rates of enrollment in Indiana public colleges (42 percent and 37 percent, respectively).
- Compared to 22- to 24-year-old workers overall, CTE-participating graduates appear more likely to be working in industries related to the CTE subject areas they focused on.

## *About the data*

Two cohorts are used to measure employment outcomes for CTE participants. The first is the set of nearly 37,000 high school graduates whose last CTE course was in the 2010-2011 school year, and who were 18 to 19 years old at the end of that term. Graduation dates are not available in this data, so these criteria are intended to approximate the set of CTE participants who graduated from high school in that school year. These data lack detail on the number of CTE courses taken and their subject matter.

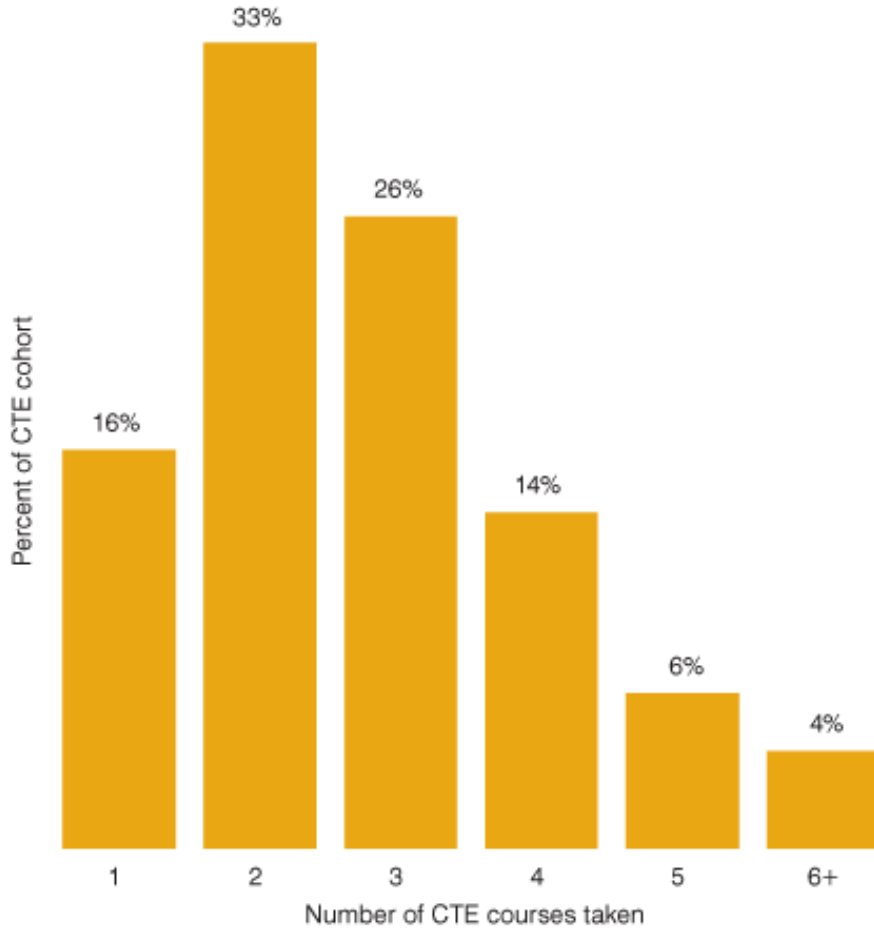
A second cohort of over 40,000 high school graduates (based on the 2013-2014 school year) is used to estimate shorter-term employment outcomes. Data for this cohort include more detail on the number of CTE courses taken and the subject matter of each CTE course.

Because these cohorts are defined regardless of college attendance, and because the short-term outcomes are likely to be influenced by college attendance, rates of enrollment in Indiana public colleges for the 2013-2014 cohort are also presented for context (in **Figure 5**).

Typically, analyses of CTE participants focus on “CTE concentrators,” a term for students who earn six or more credits in a CTE pathway. Because the data used in this analysis lack reliable information on credit hours for years before 2013-2014, the number of courses a student completed is used to identify students

with more intensive CTE participation. Approximately 10 percent of the 2013-2014 cohort completed five or more CTE courses (see **Figure 1**).

**Figure 1: Total number of CTE courses taken, 2013-2014 cohort**



Source: Indiana Department of Workforce Development

As noted above, definitions and data used in this analysis are not the same as those used in other reports<sup>1,2</sup> on CTE in Indiana, so results are often not directly comparable.

To determine employment outcomes, the CTE participants were matched to wage records from unemployment insurance filings. They were also matched to data from the Commission for Higher Education (CHE) to determine whether they were enrolled in an Indiana public college or university during the 2015-2016 school year. In some cases, data from the U.S. Census Bureau's Quarterly Workforce Indicators on employment of 22-to 24-year-olds in Indiana is used as a comparison group.

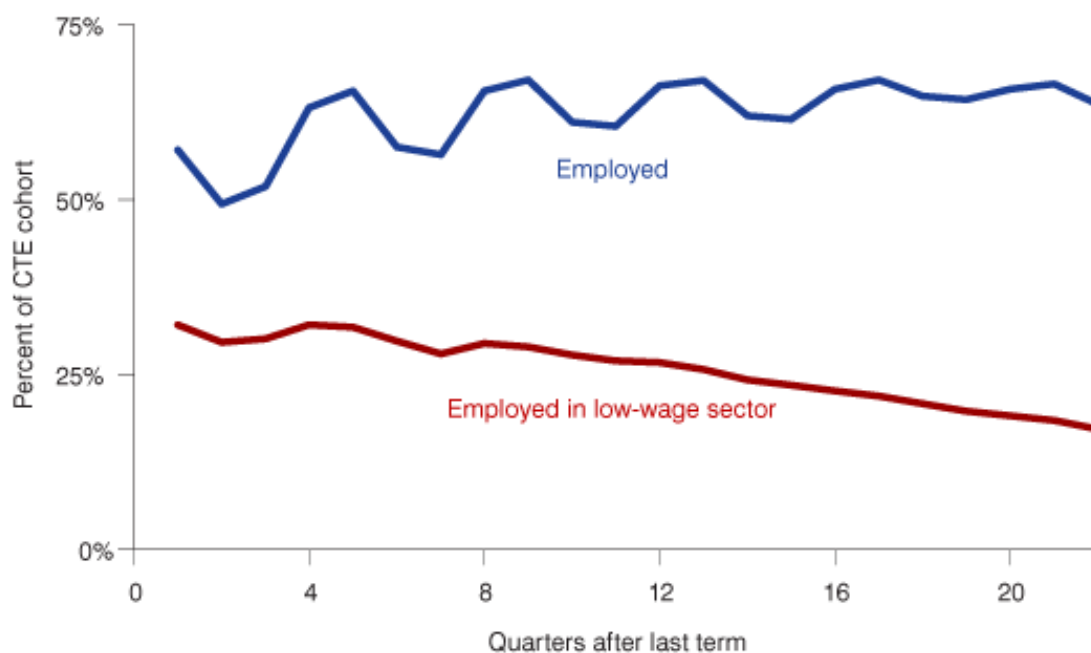


## Long-term outcomes

### Employment and wages

The 2010-2011 cohort of CTE-participating high school graduates can provide a general picture of long-term employment and wage outcomes. The number employed in each quarter grew to around 64 percent by the 22nd quarter after the cohort's last term (see **Figure 2**). It is important to note that this does not count anyone who was employed outside Indiana. Immediately following the last term, 32 percent of graduates (56 percent of those employed) worked in retail trade or accommodation and food services—industry sectors that tend to include a high percentage of low-wage workers. This percentage declined to 17 percent (27 percent of workers) by the 22nd quarter.

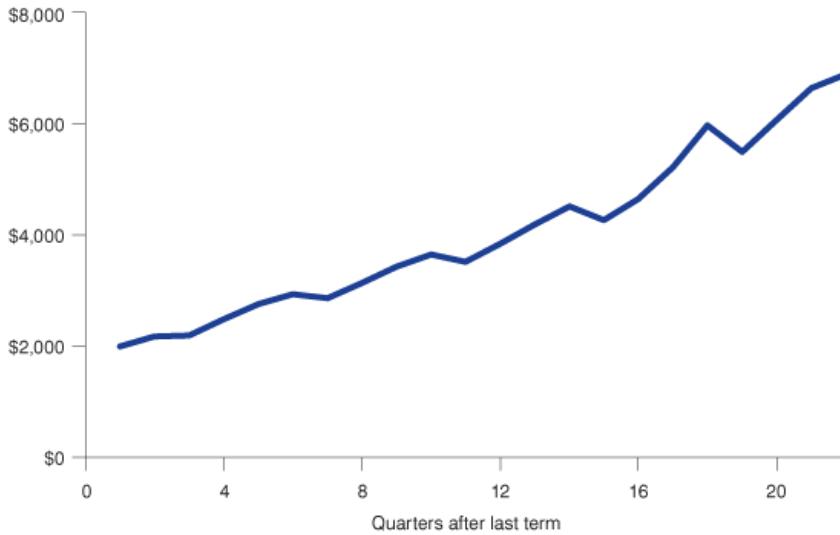
**Figure 2: Employment outcomes of CTE graduates by quarter, 2010-2011 cohort**



Note: Employment data are limited to those who were employed within Indiana.

Source: Indiana Department of Workforce Development

Average quarterly wages also increased for graduates who were employed, from just under \$2,000 up to \$6,885 in the 22nd quarter (see **Figure 3**). It isn't immediately clear how much of this increase results from more hours worked and how much is due to higher wage rates, but the decline in the percentage of graduates in low-wage sectors implies that the latter probably explains a portion of the increase.

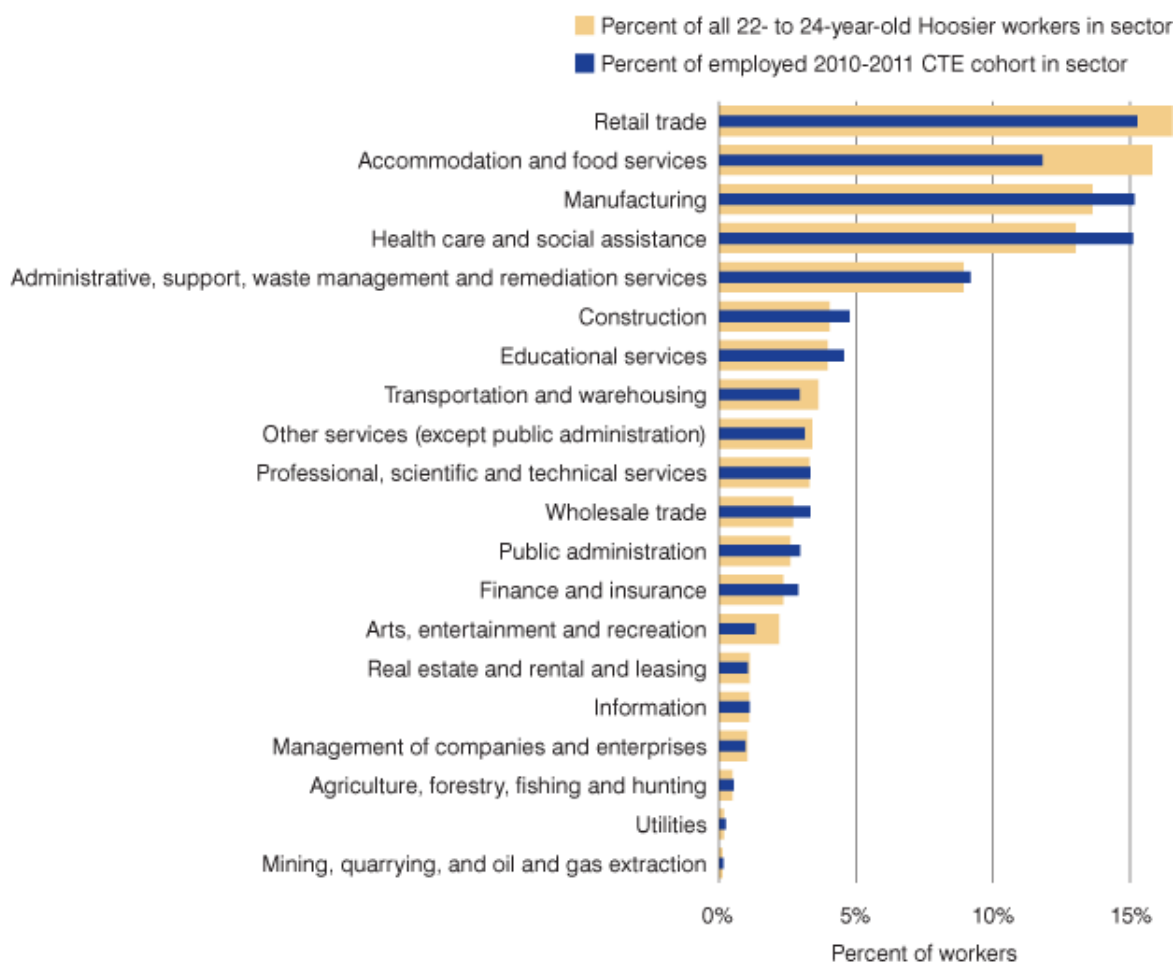
**Figure 3: Average quarterly wages of CTE graduates, 2010-2011 cohort**

Source: Indiana Department of Workforce Development

### Industry of employment

Breaking out employment by industry sector in the 22nd quarter reveals some interesting information about how employment outcomes for CTE participants compare to overall employment of young adults in Indiana (see **Figure 4**). A smaller share (27 percent) of CTE participants work in the two low-wage sectors compared to all 22- to 24-year-olds in Indiana (32 percent). Instead, CTE participants are more likely to work in the manufacturing or health care and social assistance sectors than other workers at similar ages.

**Figure 4: Industry of CTE graduate workers, 22 quarters after last term, 2010-2011 cohort**

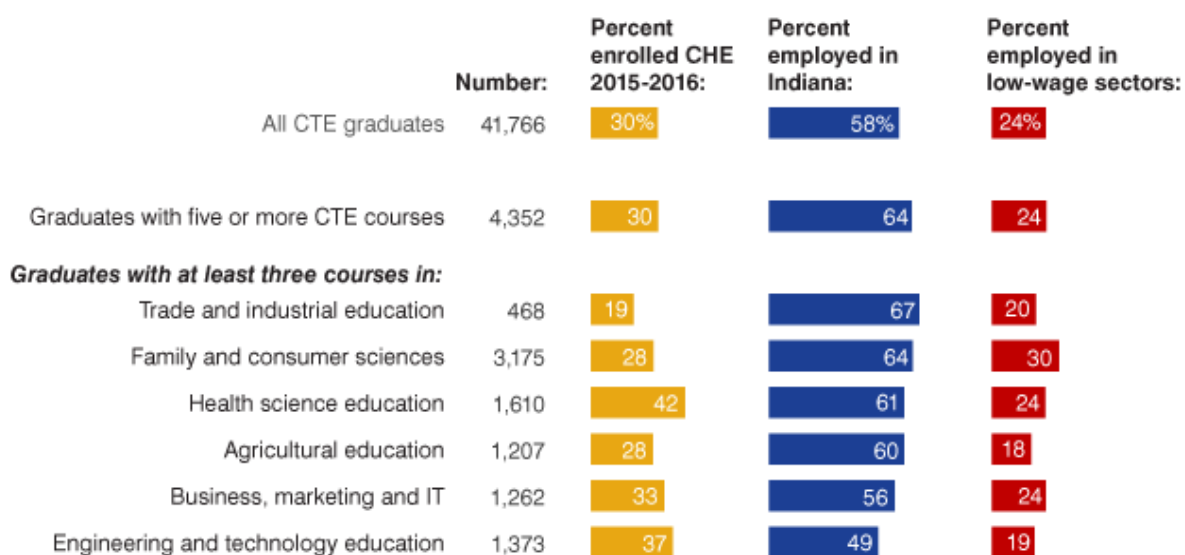


Source: Indiana Department of Workforce Development (CTE cohort) and U.S. Census Bureau Quarterly Workforce Indicators (all workers)

## *Short-term outcomes (2013-2014 cohort)*

### **Employment and wages**

The 2013-2014 cohort can provide a more detailed view of how outcomes for CTE participants vary depending on the number and subject area of the courses they took. In the fourth quarter of 2016 (10 quarters after the 2013-2014 cohort's last term), 58 percent of the cohort was employed in Indiana (see **Figure 5**). Graduates who took five or more CTE courses were more likely to be employed (64 percent) than CTE graduates overall.

**Figure 5: Outcomes for CTE graduates 10 quarters after last term, 2013-2014 cohort**

Source: Indiana Department of Workforce Development

Thirty percent of CTE participants were enrolled in an Indiana public college during the 2015-2016 school year. CHE enrollment and wage employment are not mutually exclusive, so some of these students may also be counted in the 58 percent employed. Twenty-four percent of CTE participants were employed in the retail or accommodation and food services sectors.

Looking at the subject areas that CTE participants studied can provide further insight into the relationship between CTE and employment outcomes. Students who took courses in health science or in engineering and technology education were most likely to be enrolled in public colleges in Indiana during the 2015-2016 school year (42 percent and 37 percent, respectively). Students who took at least three courses in the trade and industrial education subject area had the lowest CHE enrollment rate (19 percent), but the highest employment rate (67 percent). Students who studied family and consumer sciences also had high employment rates (64 percent), but nearly half of them worked in the low-wage retail and food and accommodation sectors.

### Industry of employment

Although the wage data lacks information on workers' occupations, the industry of the employer can still provide some information on whether fields CTE students end up in are related to their CTE participation. Associating each CTE subject area with specific industry sectors or subsectors (see **Table 1**) enables a crude analysis of whether CTE participants are more likely to work in fields related to the CTE courses they took in high school.

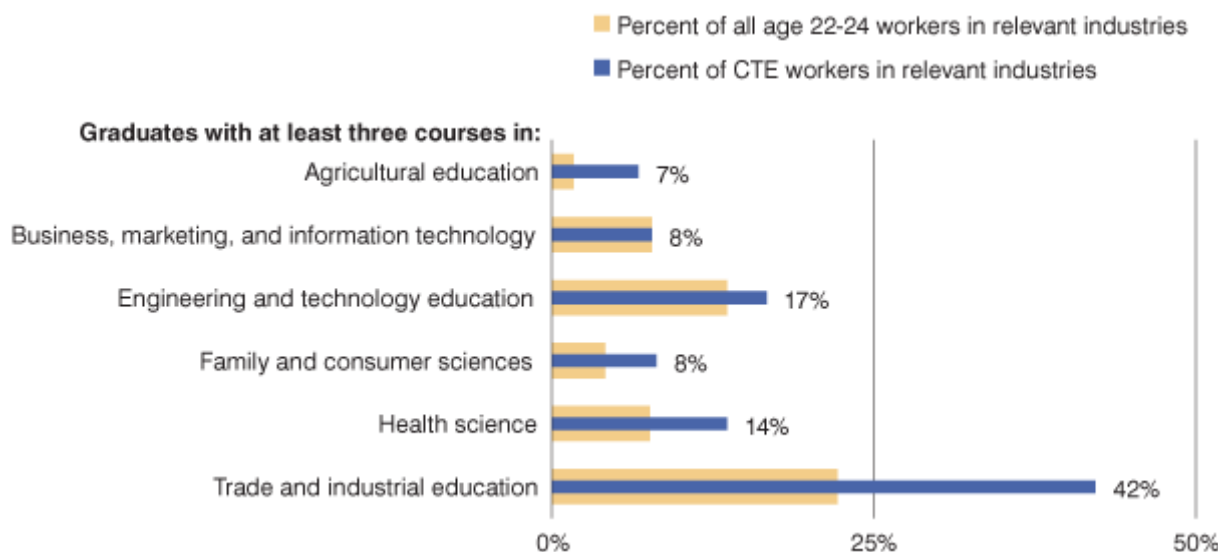
**Table 1: Relevant industries for each CTE program area**

CTE subject area	Relevant industries (NAICS code)
Agricultural education	Agriculture, forestry, fishing and hunting (11), food manufacturing (311)
Business, marketing and information technology	Information (51), finance and insurance (52), professional, scientific, and technical services (54), management of companies and enterprises (55)
Engineering and technology education	Manufacturing (31-33)
Family and consumer sciences	Elementary and secondary schools (6111), social assistance (624)
Health science	Ambulatory health care services (621), hospitals (622)
Trade and industrial education	Construction (23), manufacturing (31-33), transportation and warehousing (48-49), repair and maintenance (811)

Source: Indiana Department of Workforce Development

In general, it appears that employed graduates who took at least three courses in a single CTE subject area are more likely to be working in related industries when compared to the share of 22- to 24-year-old Hoosiers in those industries overall (see **Figure 6**).

**Figure 6: Graduates tend to work in CTE subject areas they studied**



Source: Indiana Department of Workforce Development (CTE cohort) and U.S. Census Bureau Quarterly Workforce Indicators (all workers)

This is especially true in trade and industrial education, as well as health science. For example, 42 percent of CTE participants with three or more courses in trade and industrial education were employed in the construction, manufacturing, transportation and warehousing, or repair and maintenance industries. However, only 22 percent of all 22- to 24-year-old Hoosiers work in these industries.

## Directions for future research

There are two major limitations on this analysis that might be remedied in future research. First, using data that includes only CTE participants limits the ability to compare outcomes for CTE-participating graduates to similar high school graduates who did not participate in CTE. One potential solution to this problem is to use student data matched to wage records for all high school graduates to form a better comparison group.

Another limitation on this analysis is that the lack of data on occupation of employed graduates makes it difficult to determine with confidence whether CTE participants are employed in fields where their CTE education is relevant. The Indiana Department of Workforce Development is currently partnering with the Indiana Business Research Center with the goal of assigning occupational classifications to the department's wage records.<sup>3</sup> The outcome of this project might result in better opportunities to evaluate how employment outcomes for CTE participants relate to the subject areas and pathways they choose in school.

## Notes

1. Fleck Education, "2016 Indiana Career Readiness Report," [www.doe.in.gov/sites/default/files/cte/17-state-cte-career-readiness-report-final-3-3-17.pdf](http://www.doe.in.gov/sites/default/files/cte/17-state-cte-career-readiness-report-final-3-3-17.pdf).
2. Center for Education and Career Innovation, "CTE ROI Study Update," October 28, 2014, [www.in.gov/icc/files/Sector\\_Strategies\\_Taskforce\\_-\\_CTE\\_ROI\\_10-28-14\\_Final.pdf](http://www.in.gov/icc/files/Sector_Strategies_Taskforce_-_CTE_ROI_10-28-14_Final.pdf).
3. Thea Evans and Carol O. Rogers, "Occupation Assignment Engine Helps Fill Knowledge Gaps," *InContext*, July 2017, [www.incontext.indiana.edu/2017/july-aug/article2.asp](http://www.incontext.indiana.edu/2017/july-aug/article2.asp).

*InContext* is an award-winning publication from the [Indiana Business Research Center](http://www.incontext.indiana.edu) at Indiana University's [Kelley School of Business](http://www.kelley.iu.edu).

**INDemand Jobs**

**INDIANA CAREER READY** is an Indiana Department of Workforce Development website that focuses on high-demand, high-wage jobs for today and tomorrow. The INDemand focus, which emphasizes both short term and long term growth will help ensure the ability to find a job now and investment towards a long and rewarding career. The demand indicator used is based on a methodology that ranks all Indiana jobs based on current employer demand, short term and long term total openings, future growth and wages. Whether a job seeker is searching for a first job, changing jobs, re-entering the workforce or planning a career change, the INDemand Jobs page meets all users' needs.

**Updated Occupational Demand Methodology**

Indiana has established an occupational demand ranking system designated by "Flames." An occupation will be assigned between 1 and 5 flames, depending denoting the level of "INDemand" ranking per occupation in Indiana. The methodology for the occupational demand ranking system is detailed below.

Each occupation in Indiana is designated a 1-10 score in five categories: Total Openings (X2), Growth Openings, Percentage Change, Real Time Labor Market Information, and Wages for both Short Term and Long Term outlook using 2017-2019 Short Term Projections and 2016-2026 Long Term Projections and Bureau of Labor Statistics wage estimates. The scoring method is determined by deciles or, in other words, a percentile system ranging from the 90th percentile down to the 10th percentile and under. The averaged total for each occupation is then divided by two to produce an INDemand ranking in both outlooks. Lastly, both the short-term and long-term outlook IN Demand ranking scores for each occupation are averaged to calculate the occupation's final rating.

- 5 Categories for Short Term and Long Term Outlook
- Total Job Openings X2 (Projected total openings, includes growth and separations)
- Growth Openings (Occupational growth openings)
- Percentage Change (Occupational percentage change from base year to projected year)
- Real time labor market information (Job posting data)
- Wages (2017 OES Wage Estimates)

SOC Code	SOC Title	Final Score	Flames
11-1021	General and Operations Managers	5	*****
11-9021	Construction Managers	5	*****
11-9111	Medical and Health Services Managers	5	*****
13-1111	Management Analysts	5	*****
13-2011	Accountants and Auditors	5	*****
15-1132	Software Developers, Applications	5	*****
29-1069	Physicians and Surgeons, All Other	5	*****
29-1123	Physical Therapists	5	*****
29-1141	Registered Nurses	5	*****
29-1171	Nurse Practitioners	5	*****
29-2021	Dental Hygienists	5	*****
31-9092	Medical Assistants	5	*****
43-6013	Medical Secretaries	5	*****
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	5	*****
47-2111	Electricians	5	*****
47-2152	Plumbers, Pipefitters, and Steamfitters	5	*****

Source: IDWD Research & Analysis Occupational Projections.

**B1 Labor Force****Section B: Workforce Analysis****Estimates**

Indiana's unemployment rate dropped from a 10 year peak of 10.4% in 2010, to 4.4% annually in 2016. By 2017, the rate has decreased to 3.5% and the labor force continued to be near all-time highs. This trend below 4.0% unemployment has continued into 2018.

<b>INDIANA LABOR FORCE AND UNEMPLOYMENT Non-Seasonally Adjusted 1998 - 2017</b>				
<b>Year</b>	<b>Labor Force</b>	<b>Employment</b>	<b>Unemployment</b>	<b>Unemployment Rate</b>
1998	3,123,160	3,026,444	96,716	3.1
1999	3,124,851	3,029,834	95,017	3
2000	3,126,379	3,029,073	97,306	3.1
2001	3,140,899	3,007,507	133,392	4.2
2002	3,171,168	3,006,811	164,357	5.2
2003	3,182,988	3,014,655	168,333	5.3
2004	3,167,797	2,998,068	169,729	5.4
2005	3,205,436	3,029,959	175,477	5.5
2006	3,235,110	3,072,113	162,997	5
2007	3,207,687	3,061,042	146,645	4.6
2008	3,232,097	3,041,828	190,269	5.9
2009	3,193,989	2,864,985	329,004	10.3
2010	3,175,192	2,845,608	329,584	10.4
2011	3,181,991	2,891,945	290,046	9.1
2012	3,169,835	2,905,549	264,286	8.3
2013	3,188,406	2,944,275	244,131	7.7
2014	3,224,871	3,032,693	192,178	6
2015	3,267,121	3,109,362	157,759	4.8
2016	3,327,139	3,180,104	147,035	4.4
2017	3,320,409	3,203,351	117,058	3.5

Source: IDWD, Local Area Unemployment Statistics (LAUS).



**Indiana Regional Labor Force Data**

INDIANA ECONOMIC GROWTH REGIONS (EGRs), LABOR FORCE AND UNEMPLOYMENT (N.S.A.), 2017				
EGR	Labor Force	Employment	Unemployed	Unemployment Rate
EGR 1	402,675	383,661	19,014	4.7
EGR 2	320,476	310,679	9,797	3.1
EGR 3	379,623	367,385	12,238	3.2
EGR 4	249,800	241,282	8,518	3.4
EGR 5	1,016,658	983,170	33,488	3.3
EGR 6	156,456	150,280	6,176	3.9
EGR 7	100,215	96,036	4,179	4.2
EGR 8	148,252	142,639	5,613	3.8
EGR 9	168,704	163,133	5,571	3.3
EGR 10	151,102	145,824	5,278	3.5
EGR 11	226,451	219,265	7,186	3.2

Source: IDWD, *Local Area Unemployment Statistics (LAUS)*. Region 5 EGR data in this publication includes Marion County Region 12.

**Unemployment Rates**

Historically from 1998 to 2004, Indiana's unemployment rate was below the national average. Although a national recession was a contributor to a rate climb beginning in 2001, the Hoosier state still managed to stay below the nation until late 2004. The unemployment rate went above the national average throughout 2005-06. During the Great Recession Indiana was above the national rate much of the time. Since October 2013 Indiana has been below the U.S. rate. Table 4 and Chart 4 on the next page illustrates how Indiana's unemployment rate has compared to the Nation as a whole over this time frame.

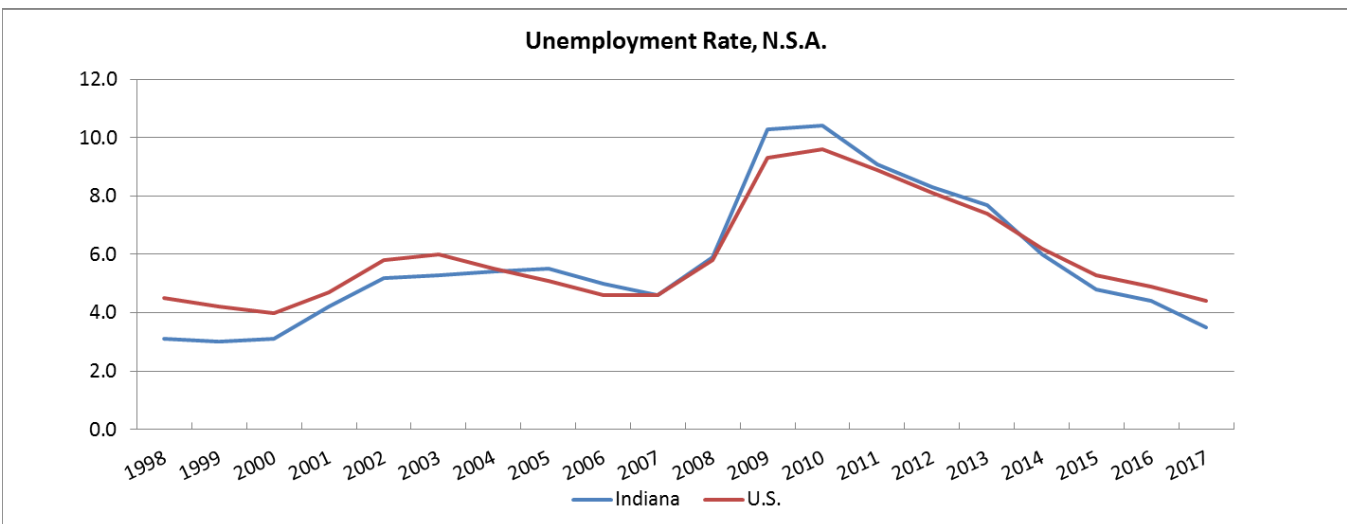
Unemployment rates continued to fall statewide in 2017, with the lowest unemployment levels in Economic Growth Region 2 at 3.1% and Region 3 and Region 11 tied with 3.2% unemployment.

Table 4

2017 INDIANA UNEMPLOYMENT RATES, NON-SEASONALLY ADJUSTED (ANNUAL AVERAGES OF MONTHLY DATA)		
Year	Indiana	U.S.
1998	3.1	4.5
1999	3.0	4.2
2000	3.1	4.0
2001	4.2	4.7
2002	5.2	5.8
2003	5.3	6.0
2004	5.4	5.5
2005	5.5	5.1
2006	5.0	4.6
2007	4.6	4.6
2008	5.9	5.8
2009	10.3	9.3
2010	10.4	9.6
2011	9.1	8.9
2012	8.3	8.1
2013	7.7	7.4
2014	6.0	6.2
2015	4.8	5.3
2016	4.4	4.9
2017	3.5	4.4

Source: IDWD, Local Area Unemployment Statistics (LAUS)

Figure 4

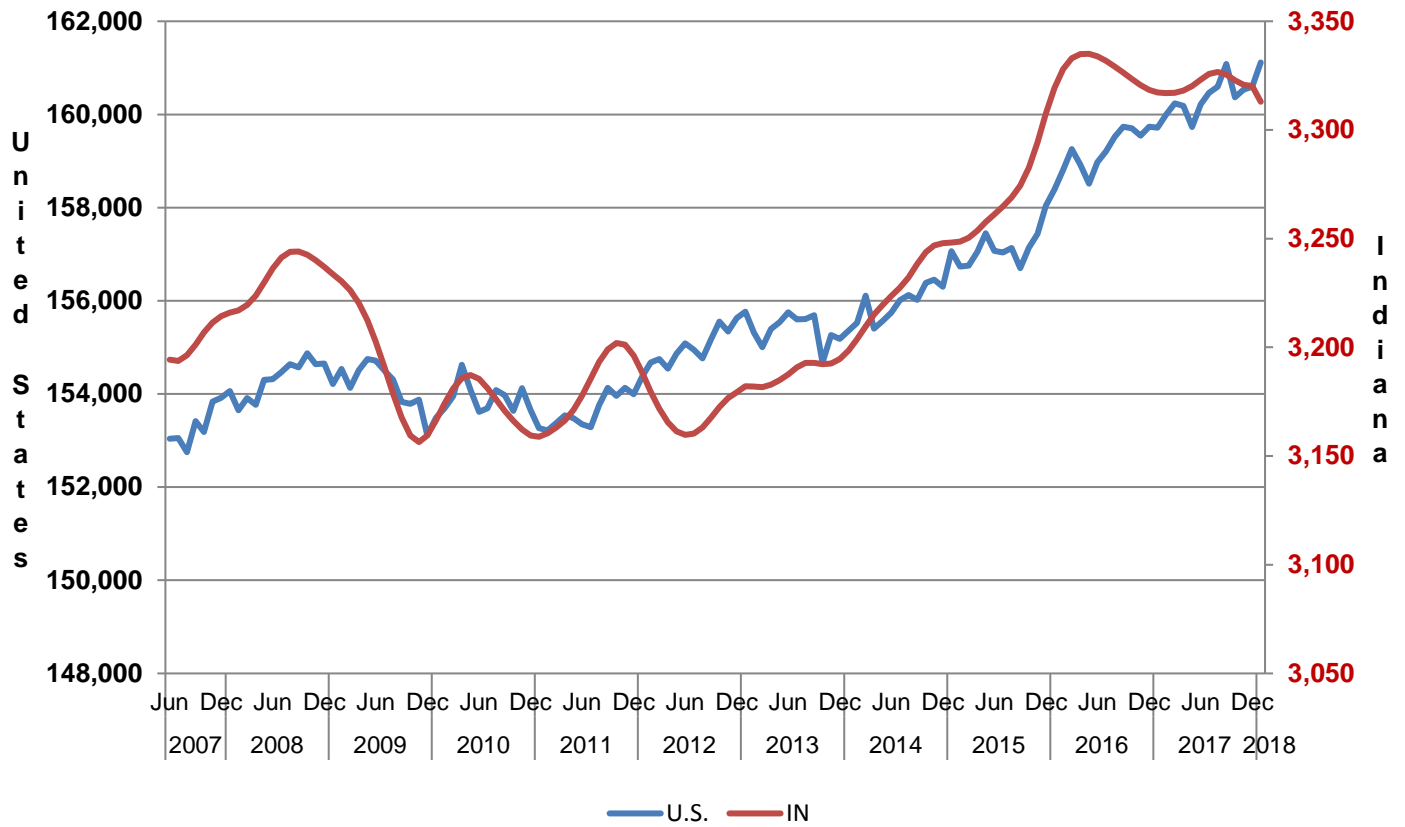


Source: IDWD, Local Area Unemployment Statistics (LAUS)

2017 was a flat year in Labor Force growth actually losing 6,730 people over the year after large increases in 2016. Still since January 2011 the Labor Force has increased over 150,000 by January 2018.

Figure 5

### Indiana & U.S. Labor Force, 2007-2018 (in 1000s)



Source: IDWD, Local Area Unemployment Statistics (LAUS)

The map below illustrates the variances in unemployment rates across the state. Low unemployment in many areas of the state have created labor shortages. This has force employers compete for qualified workers.

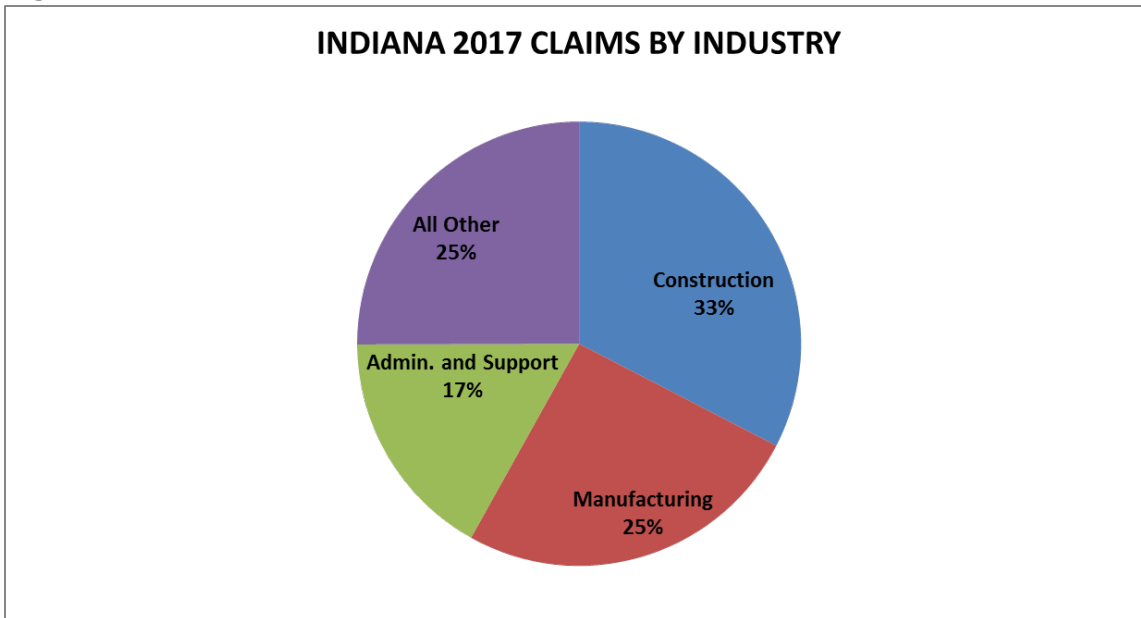
## County Unemployment Rates Annual Averages 2017



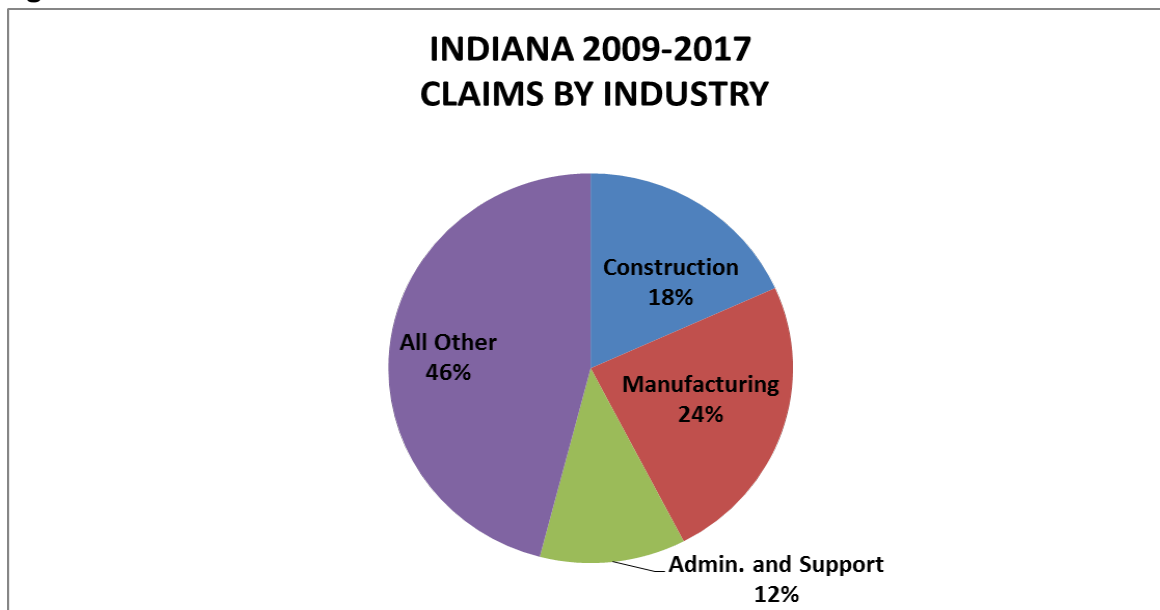
### Unemployment Claims by Industry

The Manufacturing and Construction industries have historically have been leading industries with unemployment claims. This is still true, but in the post-recession era, Construction has surpassed Manufacturing. From 2009-2016 Manufacturing accounted for over almost a fourth of all claims and in 2017 remained at 25%. Over the years of 2009-2016, Construction from unemployment claims captured 18% of all industries, but in 2017 alone the rate has risen to 33% of all claims.

**Figure 5**

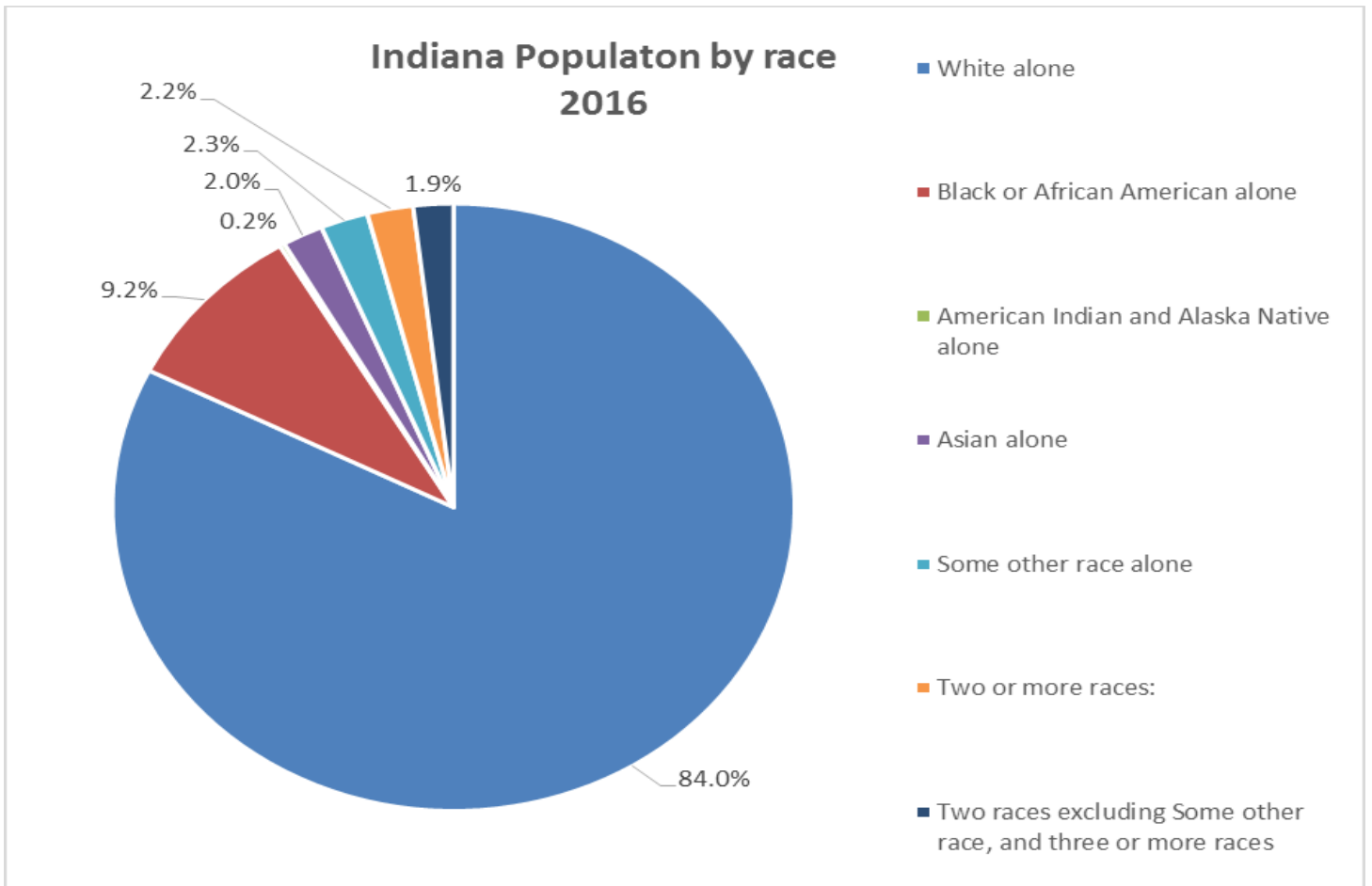


**Figure 6**



Source: IDWD, Unemployment Insurance Claims.

## B2 Population, Workforce and Industry Composition Population Distribution by Race, Age and Gender



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

## Age Distribution of the Population

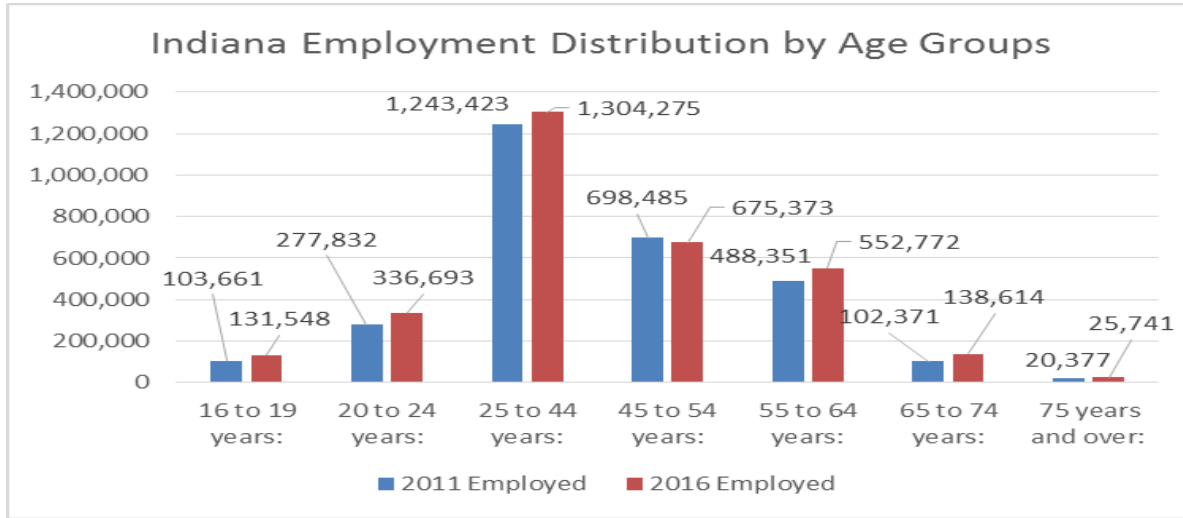
Indiana		
Total population 2017	6,666,818	
AGE	Pct of Population	
Under 5 years	419,552	6.3%
5 to 9 years	434,312	6.5%
10 to 14 years	448,343	6.7%
15 to 19 years	463,660	7.0%
20 to 24 years	465,634	7.0%
25 to 29 years	448,004	6.7%
30 to 34 years	420,012	6.3%
35 to 39 years	424,639	6.4%
40 to 44 years	393,844	5.9%
45 to 49 years	423,910	6.4%
50 to 54 years	432,063	6.5%
55 to 59 years	447,621	6.7%
60 to 64 years	421,338	6.3%
65 to 69 years	352,941	5.3%
70 to 74 years	246,821	3.7%
75 to 79 years	178,790	2.7%
80 to 84 years	115,591	1.7%
85 years and over	129,743	1.9%
SELECTED AGE CATEGORIES		
5 to 14 years	882,655	13.2%
15 to 17 years	271,824	4.1%
Under 18 years	1,574,031	23.6%
18 to 24 years	657,470	9.9%
15 to 44 years	2,615,793	39.2%
16 years and over	5,275,305	79.1%
18 years and over	5,092,787	76.4%
21 years and over	4,800,181	72.0%
60 years and over	1,445,224	21.7%
62 years and over	1,268,917	19.0%
65 years and over	1,023,886	15.4%
75 years and over	424,124	6.4%
SUMMARY INDICATORS		
Median age (years)	37.7	
Sex ratio (males per 100 females)	97.2	
Age dependency ratio	63.8	
Old-age dependency ratio	25.2	
Child dependency ratio	38.7	

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

### Age Distribution of the Workforce

The age distribution of Indiana’s workforce is shown in Figure 7. Between the 2011 and 2016 estimates of the age distribution, Indiana’s workforce continued to grow older. The number of workers age 55 and older increased from 611,099 to 717,127. Workers under age 55 increased from 2.32 million to 2.45 million reversing a trend of recent years. This shift reflects an increased participation in the labor force among workers of all ages in 2016. At the time of this writing, the 2017 American Community Survey was not available.

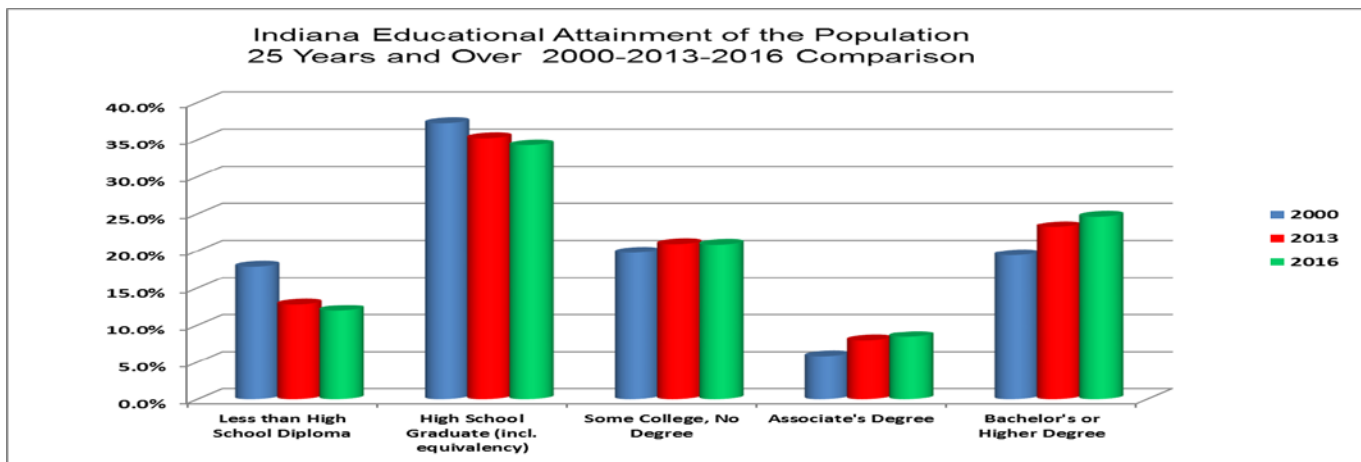
Figure 7



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

### B3 Education

Rates of educational attainment continue to rise Indiana. Since 2000, the percent of the population 25 years and older with at least a Bachelor’s degree rose from 19.4% to 24.6%, as illustrated below. The percent of the population without a high school diploma decreased from 17.9% to 11.9%, but there are still significant portions of Indiana’s population without a high school diploma. Certain areas of the state illustrate greater numbers at risk and in need of continued and higher education programs.



Source: 2000 Census and 2013, 2016 ACS 5-year estimates



# Adults Age 18 to 64 without a High School Diploma or HSE, 2016

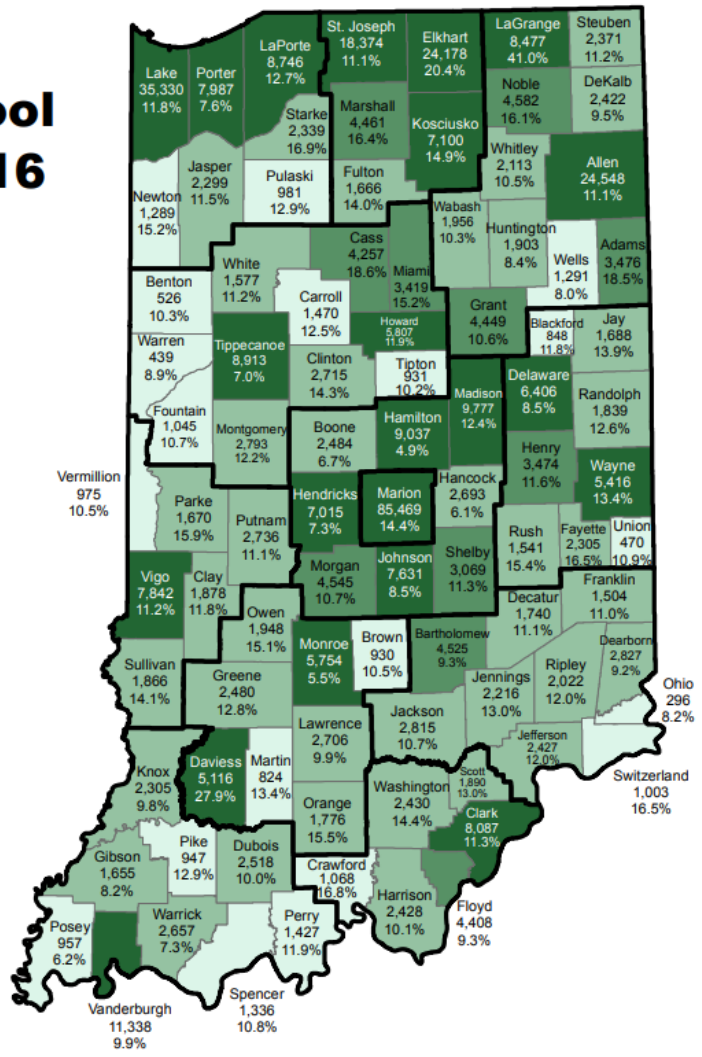
Indiana = 467,264 adults  
(11.5% of total age group)

## Number of Adults

- 296 - 1,500 (20)
- 1,501 - 3,000 (39)
- 3,001 - 5,000 (11)
- 5,001 - 85,469 (22)

Economic Growth Region

Labels also show the percent of adults in this age group without a high school diploma or high school equivalency (HSE).



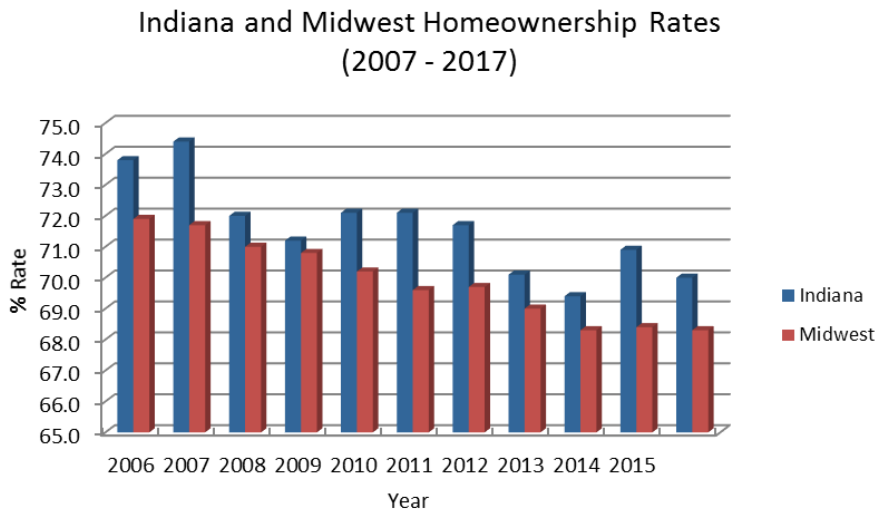
Map produced by the Indiana Business Research Center, using the American Community Survey 2012-2016 five-year estimates that were released by the U.S. Census Bureau in December 2017.

## B4 Housing

### Homeownership Rates

According to data from the U.S. Bureau of Census’s Housing Vacancy Survey (HVS), from 2007 to 2017 Indiana maintained a higher percentage of homeownership in comparison to the Midwest region as a whole. Indiana showed declines in homeownership from 2012-2015 but saw a leveling off in 2016 and had slight dip in 2017. In 2017, Indiana had a rate of 73.8% in comparison to the Midwest’s 71.9%. Indiana maintained the higher rate during the entire ten year time frame from 2007-2017. In 2017, the state finished with a homeownership rate of 70.0% compared to the Midwest’s 68.3%. For a year-by- year comparison, see Figure 7.

**Figure 7**



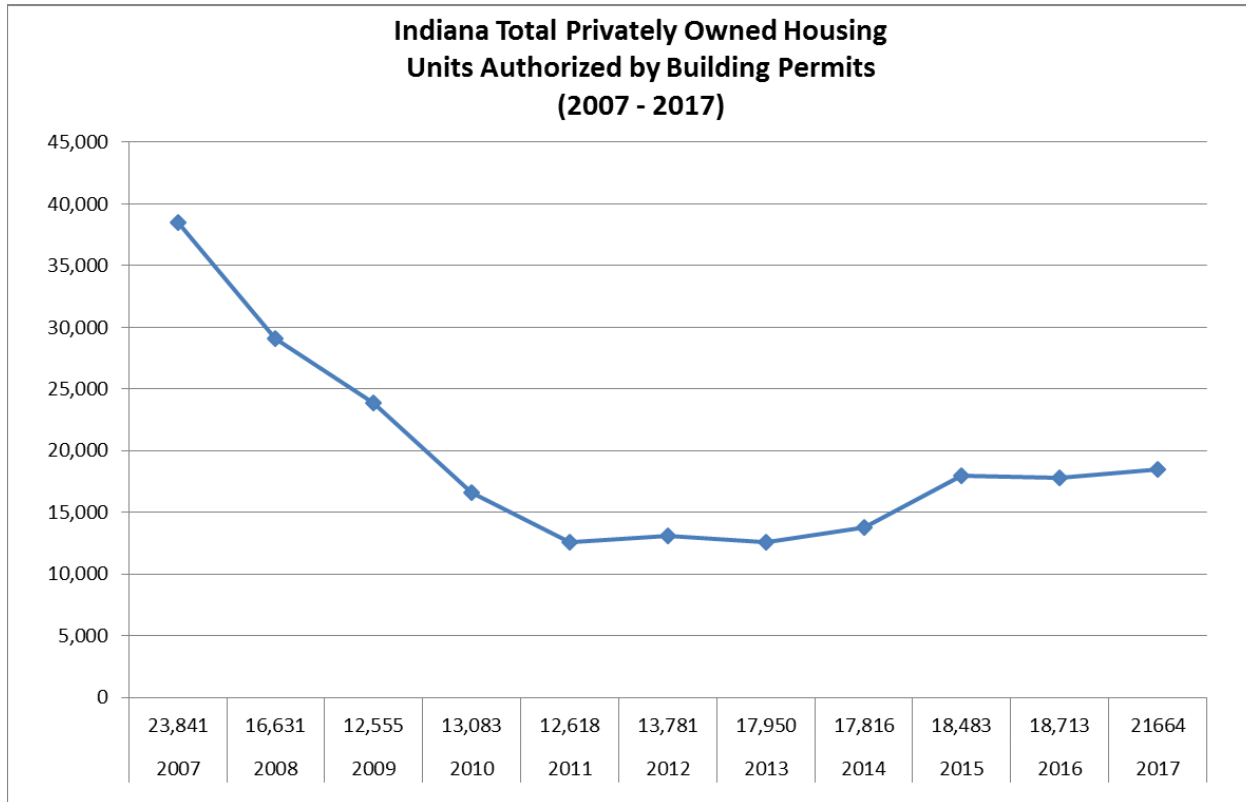
**Source:** U.S. Bureau of Census, *Housing Vacancy Survey (HVS)*

\*Midwest: Illinois, Indiana, Michigan, Ohio, Wisconsin, Iowa, Kansas, Minnesota, Missouri, Nebraska North Dakota, South Dakota

## Housing Permits

For the sixth straight year Indiana’s number of home building permits grew. In 2017, there were 21,664 home building permits. This is the highest number of permits since 2007. As shown in Figure 8, the number of home building permits increased has been relatively flat, but stable since 2013.

**Figure 8**



Source: U.S. Census Bureau