Advancements in technology and processes are continually changing the Hoosier workplace. With those changes, new occupations are born and existing occupations are adapted. The Research and Analysis (R&A) arm of Indiana’s Department of Workforce Development (DWD) is charged with keeping abreast of our changing workforce to grow Hoosier jobs and incomes. Identification of new and emerging occupations is important to assure that educational and training programs are preparing our workforce with the knowledge, skills and abilities needed to keep Indiana competitive in our knowledge-based economy.

Exotic-sounding occupational areas such as pharmacokinetics (study of what the body does to a drug), bioinformatics (use of computers to handle biological information), and polysomnographics (aid in diagnosing and treating sleep disorders) appear in DWD’s first listing of “New and Emerging Occupations in Indiana.” The list also includes more well-known occupations: carpenters; plumbers, pipefitters and steamfitters; and assemblers and fabricators. New tools, new materials, new methods and advanced computer technology have so changed industries that these less exotic occupations are being transformed, often requiring additional education and training.

This initial list, shown by industry classification within this article, will be updated every six months.

Determining “New and Emerging” Occupations

New occupations are those that cannot be defined by existing standard occupational classifications. The occupations on the list...
were isolated using multiple approaches. First, the OES (Occupational Employment Statistics) survey\(^1\) was used to gather occupations that respondents felt did not fit any of the survey’s pre-defined titles. These were confirmed as “new and/or emerging” by the R&A team by correlating them with occupations included in a Bureau of Labor Statistics study at the national level or in a study at an Indiana educational institution. Additionally, determinations were based on rapid growth of occupations in Indiana’s 2002–2012 occupational projections in industries that have developed new technologies and processes. This approach was based on review of projections made just before the widespread use of computers, which pointed toward new occupations being formed (systems analysts and computer engineers grew into the current variety of computer specialties, including database administrators, software engineers and applications engineers).

Indiana’s Department of Workforce Development is continuing to identify new and emerging occupations by having a team in its Research and Analysis section scrutinize the “supplemental pages” of its OES survey (where respondents list occupations that do not fit the pre-defined occupations) and having OES staff follow-up with respondents. As patterns are discovered, they will be used to revise DWD’s list of “new and emerging” occupations.

**Note**

1. The OES survey is a Bureau of Labor Statistics Program conducted in Indiana by DWD’s Research and Analysis section. No individual or firm is identified by any published information from the survey. All information disclosed is in compiled form assuring confidentiality of the respondents.

—Jon Wright, Research and Analysis Department, Indiana Department of Workforce Development

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**Management, Business and Financial**

- Logisticians
- Management Analysts
- Public Relations Specialists
- Marketing Managers
- Information Systems Managers
- Industrial Production Managers
- Job Analysis Specialists
- Market Research Analysts
- Surveillance

**Computer/Math**

- Computer Support Specialists
- Database Administrators
- Network Systems and Data Communications Analysts
- Web Analyst
- Digital Imagers and Modelers

**Engineering and Science**

- Logisticians
- Management Analysts
- Public Relations Specialists
- Marketing Managers
- Information Systems Managers
- Industrial Production Managers
- Job Analysis Specialists
- Market Research Analysts
- Surveillance
- Environmental Engineers
- Hazardous Material Engineer
- Industrial Engineers
- Mechanical Engineers
- Environmental Engineering Technicians
- Pharmacokineticist
- Biochemists and Biophysicists
- Microbiologists
- Medical Scientists
- Roof Truss Designers
- Energy Auditor

**Health Care and Social Services**

- Bill Review Nurse
- Medical Certification Clerk
- Medical Writers
- Bioinformatics
- Physician Assistants
- CRN Anesthesiologist
- Cardiovascular Technologists and Technicians
- Radiation Therapists
- Occupational Therapist Assistants
- Occupational Health/Safety Specialists
- Healthcare Practitioners/Technical
- Polysomnographic Technicians
- Respiratory Therapy Technicians
- Patient Care Technicians
- Tissue and Eye Bank Technicians
- Medical Specimen Couriers
Property Tax Rates Across the State

This month homeowners statewide paid the first installment of their biannual property tax bill. Property tax liability depends on a number of factors, including where your house or business is located, its assessed value and the applicable deductions, exemptions and credits.

The following discussion uses the 2004 property taxes that were payable in 2005, according to the Department of Local Government Finance. Note that Brown County data are unavailable, so they are excluded from this analysis.

Rates across the State

There are more than 1,950 taxing districts in Indiana, and each sets its own tax rate based on the value of property in its jurisdiction and its estimated budget.\(^1\) The number of taxing districts ranges from 61 in Marion County to five in Ohio County, with a median of 20 taxing districts per county.

Eighteen of the 20 highest property tax rates are in Lake and St. Joseph counties, led by the Gary-Calumet Township–Gary Schools district at 8.3101 percent. At the other end of the spectrum, 15 of the 20 lowest property tax rates are found in Steuben and Kosciusko counties, with rates below 1.5 percent. Statewide, the median rate was 2.3295 percent, with a slightly higher average rate of 2.4843 percent.

Bear in mind that these statutory rates are not the effective rates most people or businesses pay. A variety of deductions lower one’s gross assessed value (GAV), while credits lower the amount of tax owed. The state government lowers the tax bill on all properties through the state property tax replacement credit (PTRC), which is financed by the sales tax, individual income tax and riverboat wagering taxes.

Taken together, these factors can lower the effective rate of taxation quite significantly. Figure 1 shows the net rates (which take into account the state PTRC only) averaged across districts in each county, alongside GAV.

Assessed Value

The total gross assessed value of property for the 91 counties where data are available exceeds $269 billion. As one would imagine, assessed value decreases where rurality increases, as seen in Figure 1. Thus, Marion County’s GAV reaches $39.5 billion, whereas Crawford County’s GAV is just under $239.8 million. In fact, Indiana’s 45 metro counties account for 79 percent of the state’s assessed value.

Nevertheless, metro areas do not lead the pack once the assessed value is divvied up among the population.
using assessed value per capita (see Figure 2). With the 2004 population estimates as the base, per capita GAV averaged $43,288 for the 91 counties. Thirty-six counties exceed the average, led by Steuben County (population: 33,722) with per capita GAV of $77,546. Hamilton County, the fifth most populous county in the state, ranks second with per capita GAV of $70,492.

Eight of the bottom 10 counties are in southern Indiana. With the state’s smallest GAV, Crawford County again ranks last with a value of $21,473 per capita. Of course, look at Figure 2 again and note how much of Crawford County is woodland. In fact, most of Crawford and Perry counties are part of the Hoosier National Forest. While not all woodland area shown in the map is classified forest, under state law, land meeting the classified forest criteria is assessed at $1 per acre (although, in the case of the national forests, one should remember that government-owned lands and property are ultimately exempt from taxation). So, considering that southern Indiana has significantly more forested land than northern Indiana, it is somewhat natural that its GAV be lower than it is farther north.

Notes
1. For an explanation of how tax rates are determined, see Carol O. Rogers, “The New Age in Indiana Property Tax Assessment” Indiana Business Review (Spring 2005): 2-4; available online at: www.ibrc.indiana.edu/ibr/2005/spring/article2.html.
2. This law is available at www.in.gov/legislative/ic/code/title6/ar1.1/ch6.html.

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

For additional information on how property taxes are calculated or to see a sample bill with definitions of commonly used terms, visit www.incontext.indiana.edu/2006/may/property_taxes.
According to the American Community Survey (ACS), Indiana has the worst high school dropout rate in the country. At 13 percent, Indiana’s dropout rate is considerably above the national average of 8 percent.

According to the Indiana Department of Education, there were 8,045 dropouts from public schools (seventh through 12th grade) during the 2003/04 school year, which was an 18.5 percent increase over the 2002/03 school year. At 333.3 percent, Decatur County had the largest year-over-year increase in dropouts; however, the increase was from three students in 2002/03 to 13 students in 2003/04. At 1,202, Marion County had the largest number of students dropping out of the public school system during the 2003/04 school year; this represents a 35.1 percent increase over 2002/03.
Defined as “the percentage of teenagers between the ages of 16 and 19, who are not enrolled in high school and are not high school graduates,” the high school dropout in the Midwest was lower than the U.S. average from 2002 through 2004, with the exception of Indiana and Kentucky. Between 2002 and 2004, the Midwestern states of Illinois, Michigan, Ohio and Wisconsin had an average high school dropout rate of 6.7 percent, which was 1.7 percent less than the national average. At 4 percent in 2003, Wisconsin had the lowest dropout rate in the country.

All but nine of Indiana’s 92 counties experienced a drop in their unemployment rates between March 2005 and March 2006, according to the latest labor force figures. Of the nine counties with no decline in rates, Lake (6.7) and Lawrence (7.8) counties had no change between March 2005 and 2006.

Rate increases for the other seven counties were not dramatic, ranging from three-tenths of a point in Washington County to one-tenth of a point in Crawford County.

The biggest declines in unemployment rates over the past year were in Grant, Putnam, Clay and Sullivan counties, each with a drop of 1.7 points or more.
Regional Perspective: Economic Growth Region 5

Over 1.7 million people call Economic Growth Region (EGR) 5 home, making it the most populated region in Indiana. Located in the heart of Indiana, the nine-county region includes Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan and Shelby counties. Even if we were to remove the Indianapolis consolidated area (which, as the state's largest city, makes up more than 46 percent of the region’s population) from the count, EGR 5 would remain the most-populated EGR in the state.

Region 5 saw an increase in population of nearly 106,000 people between July 2000 and 2004. At a more local level, only Madison County has seen a decrease in population, with a loss of nearly 2,900 people. Shelby County had the slightest gain (156 people), while Hamilton County saw the largest increase (more than 55,000 people). The population breakdown by county is shown in Figure 1.

**Jobs**

Jobs are slightly more diversified across industry sectors in Region 5 than at the state level. Manufacturing, health care and social services, and retail trade supply 43.3 percent of all jobs statewide, while that number drops to 35.2 percent at the regional level. This means more jobs are divided among other industries in the region. While manufacturing employs the highest percentage of people both in the region and the state, only 12 percent of all regional jobs are in the manufacturing industry, while the remainder of Indiana sends 23.2 percent of all jobs into manufacturing.

If current trends continue, the health care and social services industry could easily surpass the number of jobs held in the manufacturing industry. From 2001:2 to 2005:2, manufacturing saw a decrease of more than 11,000 jobs in the region. Meanwhile, health care and social services added over 9,700 jobs in that same amount of time (see Table 1). The likelihood that these numbers will keep growing in opposite directions seems fairly certain, at least in the short-term. Added to the most-likely

### TABLE 1: Change in Jobs in EGR 5 and Indiana, 2001:2 to 2005:2

<table>
<thead>
<tr>
<th>Industry</th>
<th>EGR 5</th>
<th>Percentage Change Since 2001:2</th>
<th>Percent Change</th>
<th>Indiana</th>
<th>Percentage Change Since 2001:2</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>871,051</td>
<td>14,637</td>
<td>1.7</td>
<td>2,892,130</td>
<td>100.0</td>
<td>-8,900</td>
</tr>
<tr>
<td>Administrative, Support and Waste</td>
<td>62,650</td>
<td>8,684</td>
<td>16.1</td>
<td>158,953</td>
<td>5.5</td>
<td>20,379</td>
</tr>
<tr>
<td>Management and Public Administration</td>
<td>16,312</td>
<td>1,748</td>
<td>12.0</td>
<td>38,254</td>
<td>1.3</td>
<td>-198</td>
</tr>
<tr>
<td>Real Estate and Rental Leasing</td>
<td>104,052</td>
<td>9,736</td>
<td>10.3</td>
<td>241,265</td>
<td>8.3</td>
<td>16,309</td>
</tr>
<tr>
<td>Health Care and Social Services</td>
<td>57,931</td>
<td>4,544</td>
<td>8.5</td>
<td>239,483</td>
<td>8.3</td>
<td>10,123</td>
</tr>
<tr>
<td>Educational Services</td>
<td>75,455</td>
<td>5,817</td>
<td>8.4</td>
<td>47,848</td>
<td>1.7</td>
<td>-99</td>
</tr>
<tr>
<td>Accommodation and Food Services</td>
<td>15,481</td>
<td>696</td>
<td>4.7</td>
<td>150,688</td>
<td>5.2</td>
<td>-749</td>
</tr>
<tr>
<td>Arts, Entertainment and Recreation</td>
<td>50,880</td>
<td>1,926</td>
<td>3.9</td>
<td>129,099</td>
<td>4.5</td>
<td>1,822</td>
</tr>
<tr>
<td>Public Administration</td>
<td>41,936</td>
<td>1,398</td>
<td>3.4</td>
<td>84,923</td>
<td>2.9</td>
<td>-2,902</td>
</tr>
<tr>
<td>Other Services (Except Public Administration)</td>
<td>28,018</td>
<td>789</td>
<td>2.9</td>
<td>19,295</td>
<td>2.6</td>
<td>2,767</td>
</tr>
<tr>
<td>Professional, Scientific and Technical</td>
<td>39,295</td>
<td>982</td>
<td>2.6</td>
<td>90,233</td>
<td>3.1</td>
<td>2,767</td>
</tr>
<tr>
<td>Information</td>
<td>13,189</td>
<td>-564</td>
<td>-3.0</td>
<td>47,482</td>
<td>1.6</td>
<td>-4,364</td>
</tr>
<tr>
<td>Management of Companies and Enterprises</td>
<td>11,111</td>
<td>-369</td>
<td>-3.2</td>
<td>26,353</td>
<td>0.9</td>
<td>-255</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>97,355</td>
<td>-3,452</td>
<td>-3.4</td>
<td>330,856</td>
<td>11.4</td>
<td>-18,482</td>
</tr>
<tr>
<td>Transportation and Warehousing</td>
<td>50,952</td>
<td>-2,096</td>
<td>-4.0</td>
<td>127,501</td>
<td>4.4</td>
<td>-2,888</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>43,106</td>
<td>-1,935</td>
<td>-4.3</td>
<td>122,007</td>
<td>4.2</td>
<td>-2,049</td>
</tr>
<tr>
<td>Finance and Insurance</td>
<td>44,809</td>
<td>-2,935</td>
<td>-5.3</td>
<td>99,766</td>
<td>3.5</td>
<td>-5,787</td>
</tr>
<tr>
<td>Utilities</td>
<td>24,209</td>
<td>-341</td>
<td>-7.5</td>
<td>16,369</td>
<td>0.6</td>
<td>-136</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>104,945</td>
<td>-11,022</td>
<td>-9.5</td>
<td>574,457</td>
<td>19.9</td>
<td>-50,156</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing and</td>
<td>1,913</td>
<td>-207</td>
<td>-9.8</td>
<td>12,014</td>
<td>0.4</td>
<td>140</td>
</tr>
<tr>
<td>Hunting</td>
<td>620</td>
<td>-78</td>
<td>-11.2</td>
<td>6,577</td>
<td>0.2</td>
<td>-255</td>
</tr>
</tbody>
</table>

Note: Percentages are rounded to the nearest tenth and may not add to 100.
Source: IBRC, using Bureau of Labor Statistics data
list of manufacturing closings (and not included in the 11,000 job loss number) is the Delphi plant in Anderson. If this plant closes as expected, Madison County and the surrounding area are expected to lose nearly 1,000 jobs.1

Wages
Region 5 has fared better than the state in terms of average weekly wages paid in 2005:2. EGR 5 paid higher weekly wages than the state average across every major industry sector (see Figure 2). The largest difference in pay was in the management of companies and enterprises, where EGR 5 paid $213 more on average per week than the entire state, more than $11,000 over the year. Both Indiana and the region have increased wages since 2001:2, but Region 5 increased at a faster rate in the majority of the industry sectors, outpacing the rest of the state.

Commuting
Of the 815,115 people that work in EGR 5, 94.2 percent also live in the region. At the local level, Marion County unsurprisingly surpassed all other counties in the region in terms of the number of people who both live and work in the county. Over 368,000 workers fell into this category in Marion County, or eight-and-a-half times more than second place Hamilton County (43,356 workers). These same two counties contributed the highest number of workers to fellow EGR counties; Hamilton County sent out about 46,600 workers into the other eight counties, while Marion County sent out over 48,400 workers within the EGR. At the other end of the spectrum was EGR 5’s least populated county: Shelby County didn’t participate as much to intra-regional commuting, sending and receiving the fewest number of workers within the region.

Conclusion
Region 5 seems to be more resilient than the rest of Indiana. While the state lost jobs, EGR 5 managed to add jobs while paying its workers more at the same time. As such, January unemployment rates in the region have stayed below both the state and the nation by at least 0.4 percentage points since 1990.

Notes

—Molly Marlatt, Research Associate, Indiana Business Research Center, Kelley School of Business, Indiana University
Sister Carrie and Women Wage Earners in the 1890s

It's late summer in 1889, and Carrie Meeber, the 18-year-old heroine of Theodore Dreiser's fictional Sister Carrie, is wandering through Chicago's manufacturing and wholesale district trying to find work. She imagines the people working in the buildings “counting money, dressing magnificently and riding in carriages.” As she walks past windows and signs, she becomes “conscious of being gazed upon and understood for what she is—a wage-seeker.” On her seventh attempt to find work, she is finally offered a position in a shoe factory punching holes in leather for $4.50 per week (about $110 per week in 2006). She accepts though she had expected no less than $6.00 per week (about $146 in 2006). She leaves the building feeling lighter, noticing that men and women are smiling, overhearing conversation and laugher. She believes she will do well, that life is better, livelier and sprightlier.

In 1895–96, the U.S. Department of Labor surveyed 1,067 industrial establishments in 30 states in order to investigate the employment and wages of women and children compared to that of men. The survey collected data on 68,380 males and 79,987 females. The data was presented in the Eleventh Annual Report of the Commissioner of Labor, entitled Work and Wages of Men, Women and Children.

TABLE 1: AVERAGE DAILY WAGES FOR WOMEN IN SELECTED INDUSTRIES, 1898

<table>
<thead>
<tr>
<th>Occupation (Industry)</th>
<th>Average Daily Wages (2006 Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreladies (Clothing, Hosiery and Gloves)</td>
<td>$2.06</td>
</tr>
<tr>
<td>Foreladies (Wood and Paper Boxes)</td>
<td>$1.36</td>
</tr>
<tr>
<td>Canvasers (Products of Hogs and Cattle)</td>
<td>$1.09</td>
</tr>
<tr>
<td>Hatmakers (Hats and Millinery Trimmings)</td>
<td>$0.85</td>
</tr>
<tr>
<td>Gilders (Wood Specialists)</td>
<td>$0.77</td>
</tr>
<tr>
<td>Candymakers (Candies and Confectioneries)</td>
<td>$0.57</td>
</tr>
<tr>
<td>Boxmakers (Wood Specialists)</td>
<td>$0.50</td>
</tr>
<tr>
<td>Machine hands (Metal and Metallic Goods)</td>
<td>$0.40</td>
</tr>
</tbody>
</table>

Source: State of Indiana—Seventh Biennial Report of the Department of Statistics for 1897 and 1898

According to the report, rents were moderate, but nine of every 10 working women of Indianapolis lived at home. There was little poverty and even the worst streets were relatively neat and desirable. Wages were low, but many girls wanted to save and they owned stock in building associations or had bank accounts. There was an ample supply of educational facilities and even though churches were numerous, few working girls were churchgoers.

Generally, the establishments were not terribly suited for industrial use. Many did not have proper fire escapes, dressing rooms or closets. Lighting and ventilation were poor. According to the report, however, “[t]he shop regulations are kind and fair, the moral tone of the workrooms respectable, and the employers, as a class, just.”

—Frank Wilmot, State Data Center Coordinator, Indiana State Library

FIGURE 1: WOMEN EMPLOYMENT, INDIANA 1898

Source: State of Indiana—Seventh Biennial Report of the Department of Statistics for 1897 and 1898
Raising Children ... Again
Indiana’s Grandparents as Primary Caregivers

Whether one prefers ‘Grandma,’ ‘Nana’ or ‘Mamaw,’ a growing number of Hoosier grandmothers could theoretically have their grandchildren call them something else: ‘Mom.’ Three percent of all Indiana households (68,310 homes) consist of a grandparent and his or her grandchildren. While in some cases the parent is present, 57 percent of grandparents sharing a home with their grandchildren are indeed responsible for raising their children’s children—a rising trend according to 2004 American Community Survey (ACS) estimates.

Between 2000 and 2004, the United States as a whole saw a 2 percent increase in the number of grandparents living with their grandchildren, but an up-tick of just 0.3 percent in the number of grandparents responsible for their grandchildren’s care. Indiana meanwhile had a 4 percent drop in the number of grandparents living with grandchildren. None of these figures are statistically significant and could simply be the result of sampling error.

What is significant, however, is that the number of Hoosier grandparents responsible for their grandchildren’s care jumped 13.2 percent during those four years.

Over 56,000 grandparents in Indiana are raising their grandkids, or about 1.6 percent of the total population age 30 or older. Indiana ranks 15th nationwide on a numeric basis and 18th on a percentage basis. While Illinois, Ohio and Michigan have larger numbers of grandparent caregivers, Indiana tied with Kentucky to have the highest percentage in the Midwest (see Figure 1). Of course, the Midwestern rates are lower than is typical of southern states; in fact, Mississippi leads the nation on the percentage of its population 30 and older who are responsible for their grandchildren with a rate of 3.2 percent, which is twice the Indiana rate. ACS data are also available for Indiana’s four largest counties: The number of grandparent caregivers varies from 670 in St. Joseph County to 9,635 in Marion County (see Figure 2).

FIGURE 1: PERCENT OF POPULATION AGE 30 AND OLDER WHO ARE RAISING THEIR GRANDCHILDREN, 2004

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

FIGURE 2: GRANDPARENTS RESPONSIBLE FOR GRANDKIDS UNDER 18, 2004

Source: IBRC, using U.S. Census Bureau data
More often than not, raising grandchildren turns out to be a long-term arrangement. While 20 percent of grandparent caregivers in Indiana were responsible for their grandchildren less than a year in 2004, the majority had cared for their grandchildren for three years or more—and almost 40 percent had been responsible for them for five years or more (see Figure 3).

Demographics

Roughly 64 percent of Indiana’s grandparent caregivers are grandmothers, almost 70 percent of them are married, 26 percent are age 60 or older, and the vast majority are white. Those who declared their race as white alone (and not of Hispanic origin) made up 76 percent of the grandparent caregivers under age 60 and 83 percent of those age 60 and older.

How old are the children under their care? We don’t have data specifically for the children who are their grandparent’s responsibility, but we do know that out of the 86,926 Hoosier children who live in a grandparent’s home, nearly half (48.6 percent) are younger than 6 years old. An additional 31.6 percent are between 6 and 11 years old, while the remaining 19.8 percent are teenagers between age 12 and 17.

The Trend of Labor Force Participation

Since 2000, Indiana’s percentage of grandparent caregivers who work soared from 61 percent to 71 percent (significantly higher than the U.S. rate of 59 percent). Meanwhile, the state’s percentage of those in poverty has stayed about the same at 17.7 percent.

It is interesting to note that the vast majority of the state’s grandparent caregivers in poverty are, in fact, under the age of 60. Of the almost 9,900 grandparent caregivers in poverty, 82 percent are under the age of 60.

Aging grandparents face many difficulties when raising grandchildren, including their own failing health; for example, 47 percent of those caregivers age 60 or older in Indiana have a disability. However, it is the younger set of grandparents who are more likely to be in poverty, struggling with the financial burdens of raising a second generation.

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