INDIANA ECONOMIC ANALYSIS REPORT







September 28, 2007

Members of the State Workforce Innovation Council (SWIC):

We are pleased to submit to you the Indiana Department of Workforce Development's Annual Economic Analysis Report for the fiscal year of 2006.

This analysis provides us with a mid-course evaluation of our progress in achieving our important goals of growing Hoosier jobs and increasing personal income. As we have discussed, capitalizing on Indiana's strengths and identifying emerging growth industries are the keys to an economic comeback for all Hoosiers.

Indiana has experienced major challenges over the years, particularly within the manufacturing industry. Nevertheless, there are numerous positives that are signaling our state's return to prosperity. Many of the job losses that Indiana experienced are now being replaced as a result of new business development and expansions such as the new Honda plant in Greensburg, WellPoint in Indianapolis and in the growth of companies such as SIA in Lafayette and Cummins in Columbus. The health care field has seen an explosion of new jobs throughout the state with the construction of new hospitals and expansion of existing health care facilities. While average annual wages are continuing to increase, state unemployment rates are decreasing. In fact, in 2007, Indiana's non-seasonally adjusted unemployment rate dipped below the national rate for the first time in years.

All in all, there is reason for optimism. Indiana is making a comeback, but much more remains to be done. Creating more jobs, improving workers' skills, and increasing educational attainment are vitally important to be competitive in a global economy. Needless to say, we look forward to working with you in the months ahead to achieve these goals.

Sincerely.

Andrew J. Penca Commissioner

## Acknowledgements

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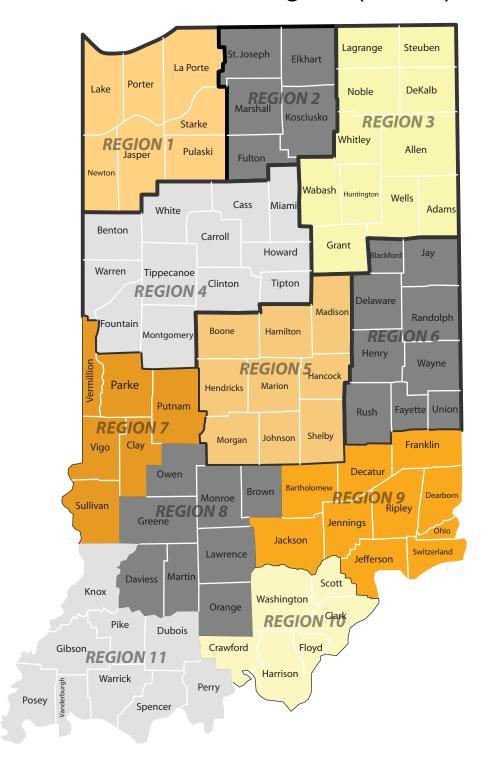
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## IDWD Economic Growth Regions(EGRs)



### 2007 Indiana Research and Analysis Quick Facts

<u>INDIANA EMPLOYMENT FIRMS AND WAGES BY INDUSTRY 2006</u> **Total Annual** Average **Average Industries** Units Wages (in Annual **Employment** billions) Wage **Total** 156,038 \$105.7 2,892,425 \$36,553 **Manufacturing** 9,062 \$28.3 565,689 \$49,952 **Health Care and** 12,189 \$13.1 352,986 \$37,019 **Social Assistance Retail Trade** 20,786 \$7.3 330,439 \$22,156 **Educational Services** 2,784 \$8.3 241,079 \$34,426 **Accommodation and** 11,531 \$12,112 \$2.9 239,153 **Food Services Administrative and** 7,807 \$3.9 160,345 \$24,271 **Waste Services** Construction 17,371 \$6.3 150,663 \$42,119 **Transportation and** 5,643 \$5.0 130,624 \$37,907 **Warehousing Public Administration** 2,978 128,217 \$4.7 \$36,533 **Wholesale Trade** 13,320 \$6.1 123,296 \$49,693

\*table includes the top 10 industries based on average employment

Source: IDWD, Quarterly Census of Employment and Wages (QCEW)

**INDIANA LABOR FORCE AND UNEMPLOYMENT 1990-2006** 

Year	Labor Force	Employment	Unemployment	Unemployment Rate
1990	2,830,551	2,688,858	141,693	5.0
1992	2,877,772	2,703,403	174,369	6.1
1994	3,049,880	2,911,781	138,099	4.5
1996	3,102,990	2,982,750	120,240	3.9
1998	3,124,509	3,033,444	91,065	2.9
2000	3,144,379	3,052,719	91,660	2.9
2001	3,152,135	3,020,985	131,150	4.2
2002	3,165,768	3,002,515	163,253	5.2
2003	3,180,279	3,011,436	168,843	5.3
2004	3,185,893	3,017,271	168,622	5.3
2005	3,227,444	3,054,803	172,641	5.3
2006	3,271,496	3,108,806	162,690	5.0

Source: IDWD, Local Area Unemployment Statistics (LAUS)

LABOR	FORCE AND UN	<b>IEMPLOYMENT</b>	2006	
EGR	Labor Force	Employment	Unemployment	Unemployment Rate
EGR 1	407,376	385,278	22,098	5.4
EGR 2	318,543	302,806	15,737	4.9
EGR 3	386,788	366,287	20,501	5.3
EGR 4	243,495	231,317	12,178	5.0
EGR 5	939,822	898,014	41,808	4.4
EGR 6	171,144	160,987	10,157	5.9
EGR 7	107,770	101,307	6,463	6.0
EGR 8	158,351	150,390	7,961	5.0
EGR 9	167,906	159,912	7,994	4.8
<b>EGR 10</b>	145,719	138,076	7,643	5.2
<b>EGR 11</b>	224,585	214,433	10,152	4.5

Source: IDWD, Local Area Unemployment Statistics (LAUS)

**INDIANA PROJECTED GROWTH 2004 - 2014** 

Industries	Annual Average Growth	<b>Growth Rate</b>
Total	27,048	0.9%
Health Care and Social Assistance	7,500	2.2%
Administrative and Support and Waste Management and Remediation Services	4,586	3.0%
<b>Educational Services</b>	3,897	1.7%
Professional, Scientific, and Technical Services	2,299	2.6%
Accommodation and Food Services	2,255	1.0%
Construction	1,706	1.2%
Transportation and Warehousing	1,325	1.1%
Arts, Entertainment, and Recreation	1,119	2.5%
Gov, Except Postal, Education and Hospitals	933	0.6%
Other Services	657	0.8%
Wholesale Trade	614	0.5%

\*table includes the top 10 industries based on annual average growth

Source: IDWD, Advanced Economic and Market Analysis (AEMA)

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#### **Summary**

#### The Year in Review: Indiana

In 2006, several industries experienced significant employment growth. Health Care and Social Assistance, Accommodation and Food Services, Educational Services, Professional and Technical Services, and Transportation and Warehousing all had considerable employment gains over the year. The most significant losses in jobs over the course of 2006 were in the Manufacturing sector. Average yearly wages for 2006 had sizeable increases for the Mining, Wholesale Trade, Finance and Insurance, and Utilities sectors. Since July of 2006, the U.S. employment rate has steadily dropped and Indiana's rate has dropped along with it. Although Indiana has always been above the U.S. rate for 2006, recent reports indicate that our state is gaining ground on the national figures in 2007.

#### **Employment and Income**

Indiana experienced some significant employment shifts in the last five years. The manufacturing industry has been the hardest hit with numerous layoffs and closings. However, this sector is on the mend with several new plant openings, specifically within the automotive manufacturing industry, that offsets these job losses. On the other hand, the health care industry in Indiana has been one of the fastest growing sectors due to many new hospitals and expanded services offered. The top 3 industries by employment for nine out of eleven Economic Growth Regions (EGRs) are Manufacturing, Health Care, and Retail Trade. In comparing Indiana's industry composition to the U.S., it is clearly evident that manufacturing still has a strong presence in our state. Location quotients (LQs) for 2005 shows that the top 5 LQs calculated for Indiana (statewide) for jobs with a U.S. base are all in the manufacturing sector. This signifies not only Indiana's dependence on the manufacturing industry, but also the nation's reliance on Indiana as a supplier.

#### **Education**

Educational attainment is on the rise in Indiana and most migration of college freshmen into the state's educational institutions is among some of the highest in the country. Most Indiana high school graduates intend to seek a post high school education. However, Indiana is still facing a "brain drain" problem with many of its college graduates seeking employment outside of the Hoosier borders.

#### **Workforce Transition**

A national recession, coupled with the 9/11 tragedy, has had a significant impact on unemployment rates, unemployment claims, and mass layoff events for the past five years. Indiana rates rose in 2001 but still remained below the U.S. average until 2005. However, 2006 saw the annual rates drop in Indiana for the first time since 2001. Of the ninety-two Indiana counties in 2006, twenty-nine counties had annual average unemployment rates lower than the U.S. rate of 4.6, while eighteen counties had rates higher than the U.S. but lower than the Indiana rate of 5.0. Unemployment claims in Indiana rose sharply in 2001, dropped in 2002, and remained high, but steady from 2004 to 2006. Between 1997 and 2006, the number of mass layoff events in Indiana peaked in 2003 but steadily decreased into 2006.





#### **Occupational Skills and Shortages**

The Hoosier Hot 50 Jobs listing analyzes the top high demand and high wage jobs throughout the state. Registered nurses, postsecondary teachers, elementary and kindergarten teachers, surgeons, and computer software engineers are all occupations that made the top 5 on this list. Indiana's Strategic Skills Initiative (SSI) was an aggressive plan implemented to address the needs of the state's workforce supply. The top shortage of registered nurses, in 9 out of the 11 Indiana Economic Growth Regions (EGRs) was found to be a crucial issue for the vastly expanding health care industry. In the hard hit manufacturing industry, it was found that many regions were faced with a shortage of skilled production workers. In addressing some of these shortages of workers and skills, Indiana pressed forward in providing increased education and training for the basic and advanced skills needed to strengthen all areas of Indiana's workforce.

#### **Workforce and Industry Composition**

Indiana's workforce is well represented by females and older workers. Of the twenty industry sectors in 2005, ten sectors had female employment of at least 50% or more. The labor force in Indiana is also highly represented by the 55 – 65 age group. The Educational Services, Utilities, and Public Administration sectors all contain significant percentages of those between the ages of 55 – 65. The composition of minorities in the workforce has increased by 12% since 2000. Those of Hispanic origin experienced one of the largest increases with a jump of 39% in the workforce from 2000 to 2006.

### Section 1 – Employment and Income

#### **Employment**

From 2001 to 2006, Indiana has experienced some significant employment shifts in five different industry sectors (Table 1). Industry sectors are different industry groups labeled with codes by the North American Industry Classification System (NAICS). A more in depth look into the industry sectors uncovers some of the sub sector causes of the more dramatic increases and decreases.

#### Table 1

INDIANA AVERAGE ANNUAL EM			
	2001	2006	% Change
Agriculture, Forestry, Fishing, and Hunting	12,214	12,222	0.07%
Mining	6,731	6,568	-2.42%
Construction	148,050	150,529	1.67%
Manufacturing	615,736	565,689	-8.13%
Utilities	16,485	16,465	-0.12%
Wholesale Trade	123,182	123,302	0.10%
Retail Trade	349,456	330,439	-5.44%
Transportation and Warehousing	129,123	130,635	1.17%
Information	51,452	46,750	-9.14%
Finance and Insurance	105,224	100,230	-4.75%
Real Estate and Rental and Leasing	37,733	37,858	0.33%
Professional and Technical Services	87,241	94,295	8.09%
Management of Companies and Enterprises	26,464	26,701	0.90%
Administrative and Waste Services	136,175	160,312	17.75%
<b>Educational Services</b>	223,022	241,079	8.10%
<b>Health Care and Social Assistance</b>	319,264	352,986	10.56%
Arts, Entertainment, and Recreation	44,976	44,228	-1.66%
Accommodation and Food Services	225,319	239,153	6.14%
Other Services	86,140	83,934	-2.56%
Public Administration	126,468	128,217	1.38%
Source: IDWD, Quarterly Census of Employment and Wages (QCEW)			







#### Agriculture, Forestry, Fishing, and Hunting

There have been no major changes in this sector from 2001 to 2006 as employment has remained steady for a mere .07% growth rate. However, future employment in the sub sector of crop production could dramatically increase with the recent push toward bio fuels.

#### Mining

Employment in the Mining sector has dropped slightly for this time period for a 2.42% decrease. Among the three sub sectors, The Mining (Except Oil and Gas) sub sector was the prime factor with a loss of 181 employees.

#### Construction

The Construction sector has slightly increased by 148,050 to 150,529, a 1.67% growth rate. The Specialty Trade Contractors sub sector was the main contributor to this growth with a 2,427 employment jump from 2001 to 2006.

#### Manufacturing

From 2001 to 2006, Manufacturing employment dropped from 615,736 to 565,689. That decrease of 50,047 workers represents a decline of 8.13%. Manufacturing is made up of 21 sub sectors. All but four of the manufacturing sub sectors suffered an employment loss from 2001 to 2006. They were: Food Manufacturing (1.69%), Beverage and Tobacco Product Manufacturing (8.79%), Petroleum and Coal Products Manufacturing (4.47%), and Miscellaneous Manufacturing (5%). Of those recording a loss over the period, the highest numeric loss was in Primary Metal Manufacturing with a decline of 13,714 (-22.65%). The highest percentage loss came in Electrical Equipment, Appliance, and Component Manufacturing at -35.62% (6,778). Transportation Equipment Manufacturing lost 1,846 employees for a 1.33% decline, the second lowest of those sub sectors that experienced loss over the 2001 to 2006 period.

#### **Utilities**

A relatively flat employment trend in this sector resulted in a meager decrease of only 20 employees from 2001 to 2006.

#### **Wholesale Trade**

The Wholesale Trade sector has increased by only 120 workers from 2001 to 2006 for a slight .10% rise in employment.

#### **Retail Trade**

Retail Trade has experienced a downward employment trend since 2001. The largest decrease of 2.42% occurred between 2001 and 2002. During this time period, employment in Food and Beverage Stores dropped by 2,856, employment in Gasoline Stations dropped by 1,470, and employment in General Merchandise Stores decreased by 1,346.

#### **Transportation and Warehousing**

Initial employment in this sector dropped from 129,123 in 2001 to 121,222 in 2003, a 6.12% decrease. The cause of this decrease has been attributed to a drop of 2,181 workers in the Air Transportation industry and 4,240 workers in the Truck Transportation industry. However, employment in this sector from 2004 to 2006 rebounded with an 8.17% increase in Truck Transportation in addition to a 16.77% rise in the Warehousing and Storage sub sector.

#### **Information**

The Information sector experienced a steady decline since 2001. In the publishing industry, employment dropped by 1,420 for a 9.25% decrease. The telecommunications sub sector accounted for the largest portion of the drop, employment dropped by 2,008 for an 11.95% decrease. Much of the

employment decrease in telecommunications has been attributed to company consolidations which have subsequently resulted in down-sizing.

#### **Finance and Insurance**

Employment dropped steadily in this sector from 2001 to 2006, resulting in a 4.75% decrease. The Insurance Carriers and Related Activities sector has decreased by 45,105 to 41,622, a 3,483 employment drop.

#### **Real Estate and Rental and Leasing**

The Real Estate and Rental and Leasing Sector rose by 125 employees from 2001 to 2006, a mere .33% increase. This sector consists primarily of two sub sectors: Real Estate, and Rental and Leasing Services. The Real Estate sub sector, after an initial drop in the first two years, gained 1,125 employees for a 4.77% increase over the period. In contrast, the Rental and Leasing Services sub sector lost over 1,000 employees before leveling out in the last two years of the period, a 7.24% decrease in that sub sector's employment. The end result is virtually no growth in this sector.

#### **Professional and Technical Services**

The Professional and Technical Services sector rose 8.09%, adding 7,054 employees from 2001 to 2006. After an initial loss of 1,053 workers in 2002, employment rose at an even stronger 9.41%. Two specific industry groups led the growth with an increase of 2,229 in Management, Scientific, And Technical Consulting Services, and 2,141 in Architectural, Engineering, and Related Services.

#### **Management of Companies and Enterprises**

A relatively flat employment trend in this sector resulted in a meager increase of 237 employees from 2001 to 2006; a .90 percentage increase.

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

Employment rose 24,170 from 2001 to 2006 in this sector translating into a very strong 17.75% increase. Virtually all of the growth was in the Administrative and Support Services



sub sector which rose at the rate of 18.62% gaining 24,097 employees. Drilling down even further, the sub sector of Employment Services made up the largest portion of the 18.62% growth rate with an employment growth percentage of 32.88% from 2001 to 2006.

#### **Educational Services**

The Educational Services sector has increased by 18,056 to 241,078, an 8.10% increase in employment. Understandably, the largest numerical increase within the sector was in Elementary and Secondary Schools which gained 8,956 workers for a 5.98% increase. Another contributor to the sector's growth numerically was the Colleges, Universities, and Professional Schools sub sector adding 4,983 employees from 2001 to 2006. However, two of the largest percentage increases were in the Business Schools and Computer and Management Training sub sector, and the Junior Colleges sub sector at 24.23% and 22.75% respectively. Industry Group 6117, Educational Support Services more than doubled its employment over the period leaping from 259 employees in 2001 to 783 employees in 2006. Two examples of businesses in this group are Educational Consultants and Educational Testing Services.

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

The Health Care and Social Assistance sector grew by 33,722 employees over the period representing a 10.56% growth rate. Ambulatory Health Care Services made up the largest portion of the gain both numerically at 16,862 since 2001.

#### **Arts, Entertainment, and Recreation**

This sector remained reasonably stable from 2001 to 2006, dropping slightly in employment for a

1.66% decrease. The Amusements, Gambling, and Recreation industry has been noted as the likely cause going from an initial 34,493 to 33,713 in employment, a 2.26% decrease.

#### **Accommodation and Food Services**

The Accommodation and Food Services sector rose 6.14%, adding 13,834 employees from 2001 to 2006. The Food Services and Drinking Places sub sector made up all of the gain both numerically at 15,837 and by percentage at 7.84%. However, the overall percentage for the sector was driven down by the Accommodation sub sector which experienced an 8.61% employment decrease.

#### **Other Services**

The two industries causing the employment drop in the Other Services sector are the Repair and Maintenance and the Personal and Laundry Services sub sectors. From 2001 to 2006 the Repair and Maintenance sub sector dropped by 900 employees for a 3.21% decrease while the Personal and Laundry Services sub sector fell by 919 employees, a 3.35% decrease.

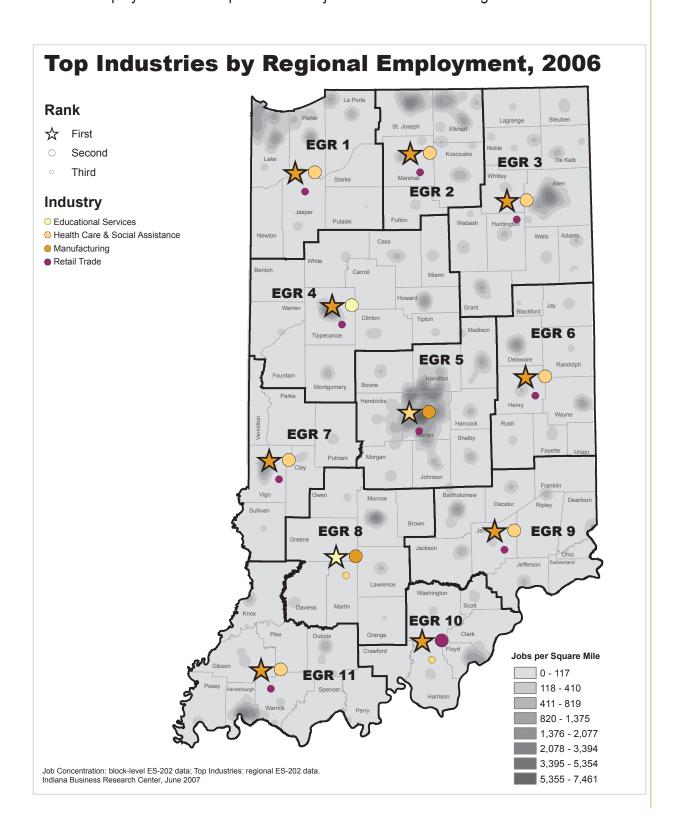
#### **Public Administration**

The Public Administration sector grew by 1,749 employees over the period representing a

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1.38% growth rate. The Executive, Legislative, and Other General Government Support sub sector grew by 3,158 employees for a 4.07% growth rate. However, drops in the Justice, Public Order, and Safety Activities sub sector of 584 employees and a fall of 663 employees in the Administration of Economic Programs sub sector offset the overall growth within Public Administration.

The following map exhibits the top 3 industries for each Economic Growth Region (EGR) based on employment. Also represented are job densities for each region.









#### **Location Quotients**

The Bureau of Labor Statistics defines a location quotient as the ratio that compares the concentration of a resource or activity, such as employment, in a defined area to that of a larger area or base. Location quotients are very important for identifying an area's employment strengths and weaknesses. In (Table 2) below, the top 3 location quotients have been calculated for all 11 Economic Growth Regions for jobs with an Indiana Base.

#### Table 2

Economic Growth Region	NAICS	Industry	2005 Annual Average Jobs*	Jobs LQ (Indiana Base)
EGR 1	324	Petroleum and Coal Products Manufacturing	1,902	5.14
	331	Primary Metal Manufacturing	20,250	3.80
	713	Amusement, Gambling, and Recreation Industries	9,681	2.57
EGR 2	321	Wood Product Manufacturing	7,978	3.68
	336	Transportation Equipment Manufacturing	39,805	2.63
	339	Miscellaneous Manufacturing	8,385	2.58
EGR 3	334	Computer and Electronic Product Manufacturing	6,862	2.74
	335	Electrical Equip., Appliance, and Comp. Manufacturing	2,899	1.87
	326	Plastics and Rubber Products Manufacturing	9,057	1.76
EGR 4	311	Food Manufacturing	7,225	3.24
	111	Crop Production	1,110	2.72
	336	Transportation Equipment Manufacturing	22,822	2.36
EGR 5	711	Performing Arts, Spectator Sports, and Related Industries	6,179	2.63
	481	Air Transportation	4,750	2.54
	492	Couriers and Messengers	9,104	2.09
EGR 6	322	Paper Manufacturing	1,242	2.37
	327	Nonmetallic Mineral Product Manufacturing	1,416	2.08
	333	Machinery Manufacturing	3,440	1.71
EGR 7	922	Justice, Public Order, and Safety Activities	2,457	6.15
	326	Plastics and Rubber Products Manufacturing	3,063	2.39
	221	Utilities	861	1.98
EGR 8	212	Mining (except Oil and Gas)	1,382	5.63
	924	Administration of Environmental Quality Programs	621	3.42
	339	Miscellaneous Manufacturing	3,488	2.92
EGR 9	312	Beverage and Tobacco Product Manufacturing	690	3.96
	333	Machinery Manufacturing	7,886	3.79
	713	Amusement, Gambling, and Recreation Industries	5,080	3.23

<b>EGR 10</b>	321	Wood Product Manufacturing	2,222	3.14	
	337	Furniture and Related Product Manufacturing	2,223	2.28	
	323	Printing and Related Support Activities	1,475	2.15	
<b>EGR 11</b>	337	Furniture and Related Product Manufacturing	8,411	4.22	
	212	Mining (except Oil and Gas)	1,642	3.69	
	335	Electrical Equip., Appliance, and Comp. Manufacturing	3,087	3.27	
* - Partie and a second					



\*indicates employment of at least 500

Source: Indiana Business Research Center (IBRC) and INcontext

Location quotients identify export and import industries in an area. An export industry is an industry that produces more of a good or service than is needed to meet area demand. An import industry is an industry that produces less than enough of a good or service to meet area demand.

A location quotient greater than 1.0 has proportionately more workers than the larger comparison area (or base) and therefore suggests that more of a product is being produced than can be consumed by the area residents. Consequently, an LQ greater than 1.0 is considered to be an exporter. A location quotient less than 1.0 has proportionately less workers than the base and this suggests that less of a product is being produced than can be consumed locally. Consequently, an LQ less than 1.0 is considered to be an importer. This can indicate an opportunity to develop certain industries in the area to meet demand.

Although Indiana's eleven Economic Growth Regions (EGRs) are composed of many differing and unique industries, ten out of the eleven EGRs have the manufacturing sector with a high location quotient. It is this similarity that once again demonstrates the importance of manufacturing throughout the state.

Many high LQs (or export industries) are partially the result of the particular region's geography. Both EGR 10 and EGR 11 have high LQs (3.14 and 4.22) in furniture and related product manufacturing (NAICS 337). With a combined workforce of over 10,600, NAICS 337 flourishes in the midst of these two heavily forested regions. With an LQ of 5.63, the mining sector (NAICS 212) is dominant in EGR 8. Mining's LQ is also very high in EGR 11 which comes as no surprise considering that southwestern Indiana is a hotbed for the coal industry. Geography is also a crucial factor in EGR's 1 and 9 with the amusement, gambling, and recreation industries sector (NAICS 713). With Lake Michigan and the Ohio River as



significant bordering bodies of water, the riverboat casino industry in EGRs 1 and 9 are the resulting beneficiaries with high LQs of 2.57 and 3.23 respectively.

Another significant industry to note is that of air transportation (NAICS 481). Despite the fact that air transportation has experienced a large number of job losses over the years, this industry still maintains a high LQ of 2.54 in EGR 5. This exemplifies EGR 5's continued focus on being a central distribution and transportation hub.

In (Table 3) below, the top 5 location quotients were calculated for Indiana (statewide) for jobs with a U.S. Base.

Table 3

NAICS	Industry	Jobs LQ (U.S. Base)
331	Primary metal manufacturing	4.63
336	Transportation equipment manufacturing	3.52
326	Plastics and rubber products manufacturing	2.42
337	Furniture and related product manufacturing	2.18
339	Miscellaneous manufacturing	2.06

Source: U.S. Bureau of Labor Statistics (BLS)

Indiana's heavy concentration in the manufacturing sector is apparent in analyzing its LQs with a U.S. base. All top 5 LQs are not only considerably high, but they are also all within the manufacturing industry. Even though primary metal manufacturing (NAICS 331) and transportation equipment manufacturing (NAICS 336) have experienced some major layoffs and closings since 2001, their status still stands as two very significant export industries for the rest of the nation.

#### Wages

Average annual wages/weekly wages are affected by the ratio of full-time to part-time workers as well as the number of individuals in high-paying and low-paying occupations. As expected, Indiana's average weekly wages for all sub sectors increased from 2001 to 2006 (Table 4). However, some sectors experienced a more dramatic percentage change than other sectors. The largest percentage increase involved the real estate sector with a 23.92% change from 2001 to 2006 while the wholesale trade and mining sectors saw a 19.67% and a 20.45% increase respectively. Public administration went from \$591 to \$703 for an 18.95% change while the manufacturing sector had an 18.64% increase for the five year period. Educational services had the lowest increase of average weekly wages for all sectors at 8.88%.

#### Table 4

**Indiana Average Weekly Wages by Industry** 

(2001 and 2006)

	2001	2006	% Change
Agriculture, Forestry, Fishing, and Hunting	\$453	\$518	14.34%
Mining	\$885	\$1,066	20.45%
Construction	\$706	\$810	14.73%
Manufacturing	\$810	\$961	18.64%
Utilities	\$1,099	\$1,255	14.19%
Wholesale Trade	\$798	\$956	19.80%
Retail Trade	\$379	\$426	12.40%
Transportation and Warehousing	\$635	\$729	14.80%
Information	\$680	\$788	15.88%
Finance and Insurance	\$853	\$991	16.18%
Real Estate and Rental and Leasing	\$489	\$606	23.92%
Professional and Technical Services	\$816	\$942	15.44%
Management of Companies and Enterprises	\$1,257	\$1,418	12.81%
Administrative and Waste Services	\$407	\$467	14.74%
Educational Services	\$608	\$662	8.88%
Health Care and Social Assistance	\$605	\$712	17.69%
Arts, Entertainment, and Recreation	\$459	\$532	15.90%
Accommodation and Food Services	\$211	\$233	10.43%
Other Services	\$399	\$461	15.54%
	\$591	\$703	18.95%

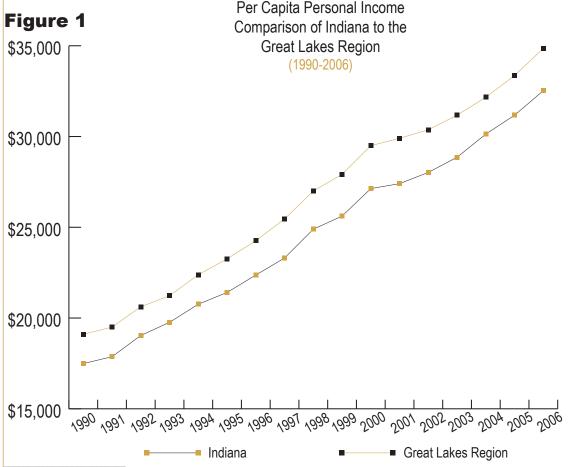




#### **Per Capita Personal Income**

As described by the Bureau of Economic Analysis (BEA), personal income is the income that is received by persons from all sources. These sources include the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income with inventory valuation and capital consumption adjustments, rental income of persons with capital consumption adjustment, personal dividend income, personal interest income, and personal current transfer receipts, less contributions for government social insurance. The per capita personal income is calculated as the personal income of the residents of a given area divided by the resident population of the area. In computing per capita personal income, BEA uses the Census Bureau's annual midyear population estimates.

In comparing Indiana to the BEA defined Great Lakes Region (Illinois, Indiana, Michigan, Ohio, and Wisconsin), the per capita personal income has run congruently from 1990 to 2006 as shown in (Figure 1). Indiana's per capita personal income averaged to \$17,491 in 1990 and \$32,526 in 2006. The Great Lakes Region had a per capita personal income of \$19,105 in 1990 and \$34,854 in 2006. Although national inflation has had an affect on the drastic change in these numbers, Indiana's increase from 1990-2006 was 85.96% while the increase for the Great Lakes Region was 82.43%. Consequently, the gap between Indiana and the rest of the Great Lakes Region has slightly narrowed.



Source: U.S. Bureau of Economic Analysis (BEA)

#### Section 2 – Education

#### **Educational Attainment and Population**

Table 5

Educational Attainment, Indiana Population 25 Years & Over

Year	Some college, no degree	Assoc Degree	BA/BS or Above	Population 25 Yrs & Over
2000	727,387	210,265	749,872	3,893,278
2001	739,281	244,714	789,776	3,882,504
2002	725,926	219,712	794,098	3,845,706
2003	747,449	253,224	811,771	3,863,200
2004	768,437	250,762	838,435	3,889,833
2005	789,952	276,886	840,876	3,956,723
2000-2005	8.60%	31.68%	12.14%	1.63%

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

Indiana is fortunate to have some of the best state colleges and universities in the nation. People from across the country as well as across the state are being drawn to Indiana's highly esteemed educational institutions. U.S. News & World Report has ranked Purdue's Krannert School of Management and Indiana University's Kelley School of Business in the nation's top 25 graduate schools for business.

Furthermore, U.S. News & World Report has listed the University of Notre Dame's law school at 21st in the nation, Purdue's engineering graduate program up to 6th in the nation, and Rose-Hulman's bachelor's program at 1st in the nation. These high accreditations have been a driving force in Indiana's rising numbers of educational attainment.

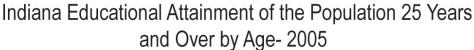
Educational Attainment as an age group percentage is much lower among older adults than younger (Figure 2). Twenty-five percent of those in the 25-34 year age group hold a bachelor's degree while only 13.1% of those in the 65+ year age group have attained a bachelor's degree.

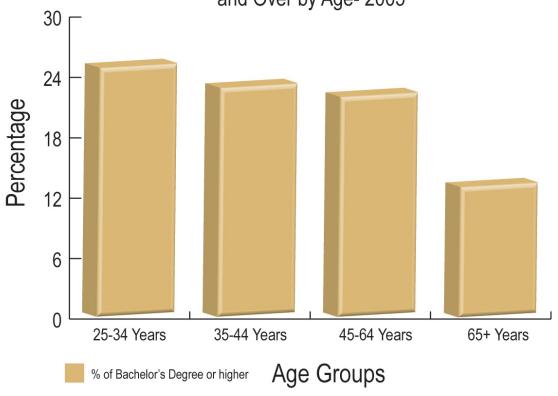






#### Figure 2





Source: U.S. Bureau of Census, American Community Survey (ACS)

#### **Educational In/Out Migration**

Indiana had the 2nd highest net migration of college freshmen in the country. Yet there is still a lot of out migration of the young, single and educated population. (See Table 6 below.)

#### Table 6

#### **INDIANA COLLEGE ENROLLMENT AND MIGRATION: 2002**

	Number	Rank
Total Postsecondary Enrollment	342,064	16
Freshmen Enrollment in Indiana Schools	40,033	9
In-state students	28,725	9
Out-of-state students	11,308	4
Hoosiers Going Out-of-state	4,042	21
Net Migration of Freshmen	7,266	2
Indiana Business Research Center (IBRC), Stats Indiana		

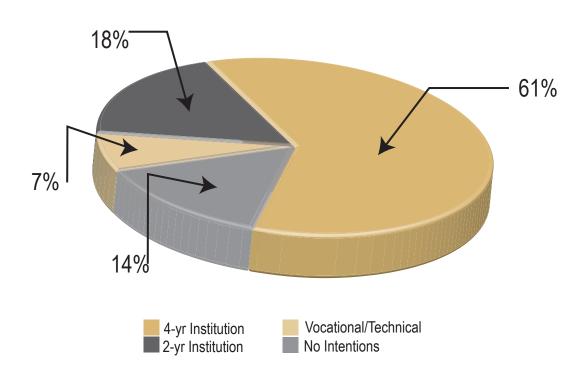
#### **Educational Intentions**

According to 2005 data from the American Community Survey, 82% of Indiana high school graduates intend to seek some form of higher education. From this percentage, sixty-one percent of high school graduates expected to attend a 4 year institution. However, eighteen percent were surveyed as having no intentions for post high school education. See (Figure 3) below.



#### Figure 3

# Indiana High School Graduates Intentions for Higher Education



Source: U.S. Bureau of Census, American Community Survey (ACS)



### Section 3 – Workforce Transition

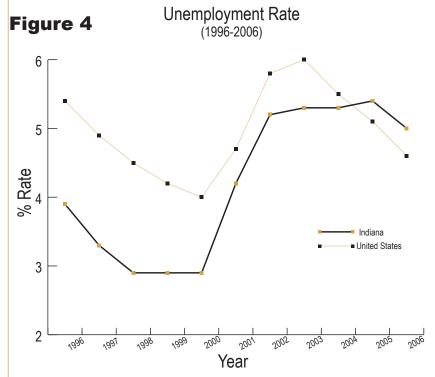
#### **Unemployment Rates**

Table 7 **UNEMPLOYMENT RATE – (SEASONALLY ADJUSTED)** AVERAGES OF MONTHLY DATA)

Year	Indiana	U.S.
1996	3.9	5.4
1997	3.3	4.9
1998	2.9	4.5
1999	2.9	4.2
2000	2.9	4.0
2001	4.2	4.7
2002	5.2	5.8
2003	5.3	6.0
2004	5.3	5.5
2005	5.3	5.1
2006	5.0	4.6

Source: IDWD, Local Area Unemployment Statistics (LAUS)

The unemployment rate in Indiana from 1996 to 2004 has historically been below the national average (Table 7). The national recession has been viewed as a large contributor to a climbing rate beginning in 2001. In 2005, the unemployment rate in Indiana above the national average to 5.3% and then decreased to 5.0% in 2006. A visual representation of Indiana and U.S. rates is shown below (Figure 4).

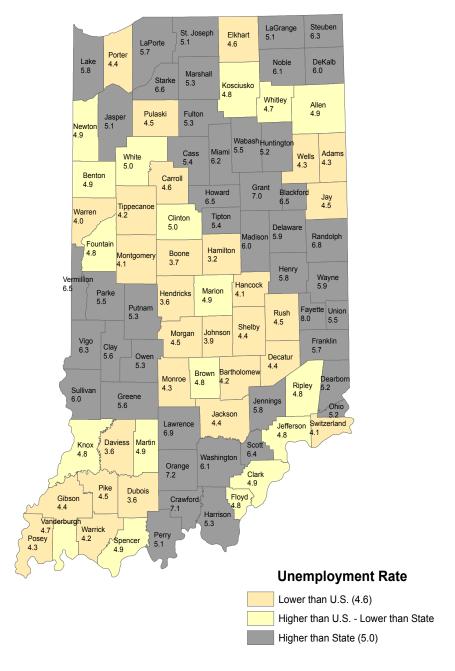


Source: IDWD, Local Area Unemployment Statistics (LAUS)

The following map is a comparison of unemployment rates for Indiana counties with rates of the U.S. All rates are non-seasonally adjusted.

**Annual Average 2006** 

# non-seasonally adjusted. Unemployment Rate



The annual average unemployment rates for 2006 varied from region to region in comparison to the U.S. and the rest of the state. Most of the counties in the central part of the state had rates lower than the U.S. rate of 4.6. Rates lower than the U.S. was also the case with most southwestern counties as well. Northeastern and northwestern Indiana were composed of a mix of counties with rates higher than the U.S. as well as rates higher than the state rate of 5.0.





#### **Unemployment Claims**

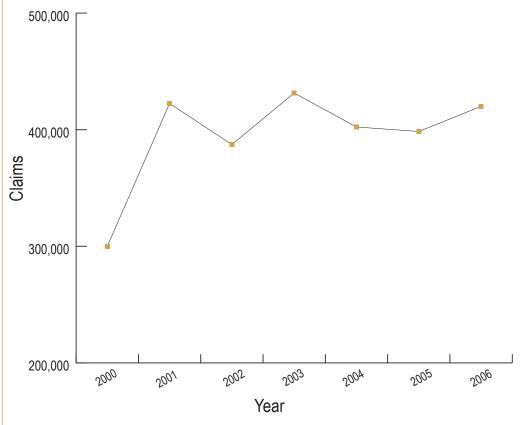
Table 8

<b>TOTAL INITIAL UNEMPLO</b>	<u>YMENT CLAIMS (2000-2006)</u>
Year	Total Claims
2000	299,921
2001	422,511
2002	387,297
2003	431,465
2004	402,308
2005	398,486
2006	419,992

Source: IDWD, Local Area Employment Statistics (LAUS)

Indiana's total unemployment claims rose sharply from 2000 to 2001 (Table 8). Similar to other states, the sharp rise has been attributed largely to the 9/11 tragedy as well as the be ginning of a national recession. Initial claims dropped in 2002 but rose again in 2003. From 2004 to 2006, total initial claims remained high but fairly level. The graph below (Figure 5) shows a visual representation of total initial unemployment claims in Indiana from 2000-2006.

Figure 5 **Total Initial Unemployment Claims** (2000-2006)



Source: IDWD, Local Area Employment Statistics (LAUS)

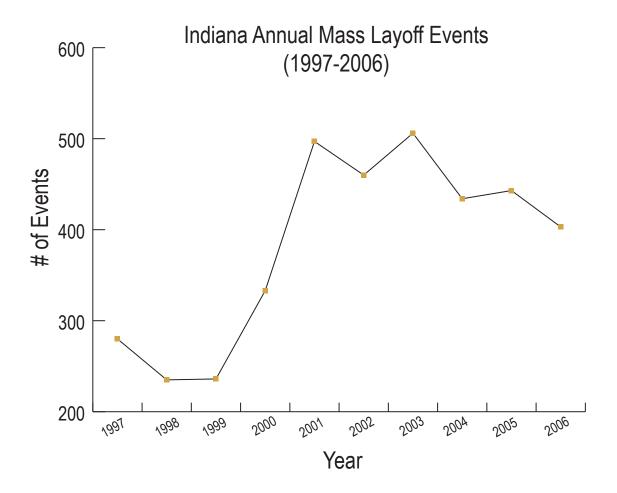
#### **Mass Layoff Events**

Under Bureau of Labor Statistics guidelines, a mass layoff event is identified when the number of persons filing an initial claim for unemployment benefits with an employer reaches 50 within any consecutive five-week period. In Figure 6, the number of mass layoff events in Indiana is charted annually for the time period of 1997 to 2006.



The number of mass layoff events was 280 in 1997 and climbed to 497 in 2001. Like unemployment rates, this climb has been largely attributed to the occurrence of the 9/11 tragedy. Coupled with a national recession, mass layoffs again peaked in 2003 with 506 events before a gradual decrease to 403 events in 2006.

#### Figure 6



Source: IDWD, Mass Layoff Statistics (MLS)

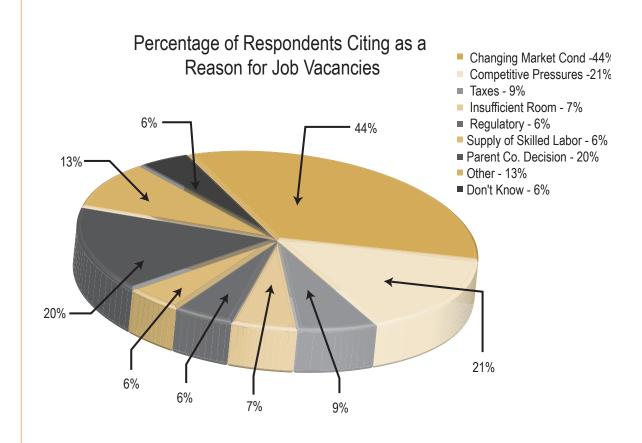


#### Section 4 – Occupational Skills and Shortages

#### Job Vacancy Survey

An examination of the employer responses to the supplemental questions from Indiana's Job Vacancy Survey provides some interesting "data tales" about the mood and expectations of employers in the middle of 2005. The sample size of 1,676 is respectable enough to allow us to draw some conclusions. Key questions related to the employers' expectations for the next 24 months in terms of staffing levels and the possibility of expanding, downsizing, closing, relocating or outsourcing operations. See (Figure 7) and (Figure 8) for the survey results to these issues.

#### Figure 7



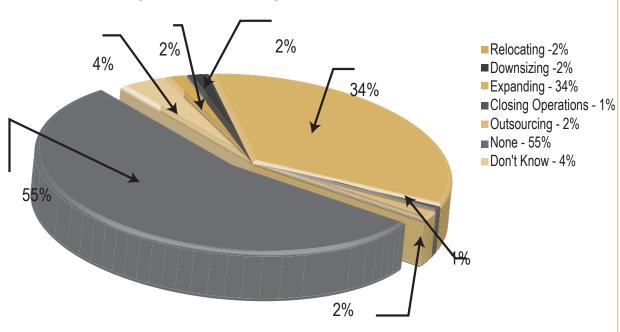
Source: ERISS Job Vacancy Survey

The most common response represented in (Figure 7) was changing market conditions at 44%, with a response share greater than the next two reasons (competitive pressures at 21% and parent company decision at 20%) combined.

WWW.In.gov/dwd

Figure 8

## Considering Relocating, Downsizing, Expanding, Closing or Outsourcing Operations



Source: ERISS Job Vacancy Survey

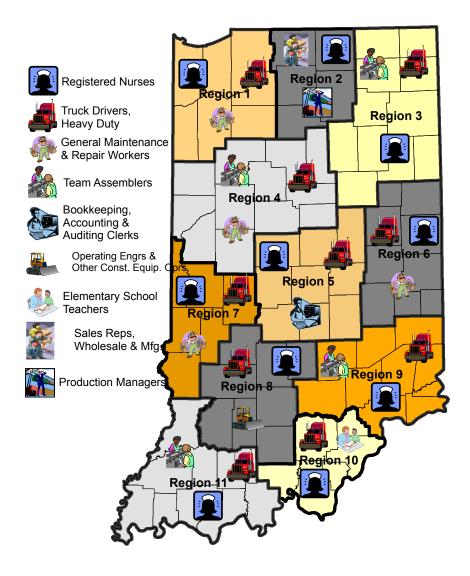
The pie chart in Figure 8 depicts that 34% of the respondents expected their operations to expand, while 55% expected the status quo to prevail for a while. Relocating, downsizing and outsourcing of operations, at 2% each, were accompanied by 1% of the respondents who were considered closing their establishments and 4% who were unable to make a decision about the options under consideration.



#### **Top Occupations**

The following map shows the top 3 occupations of 2006 within each Indiana Economic Growth Region, with wages above the state median wage of \$27,742.

## Economic Growth Regions 2006 Top Occupations



Top 3 occupations by total employment and with regional median wage greater than state median annual wage of \$28,500. Source: Indiana Workforce Development, Research and Analysis, Occupational Employment Statistics.

#### **Jobs in Demand**

The occupations projected to see the most total growth in new jobs, over the next decade are listed below. Registered Nurses continue to top this list, as well as many service-support occupations. The demand for Team Assemblers is also robust. Some of the fastest growing occupations are: Network Systems and Data Communications Analysts, Computer Software Engineers, Systems Software, and Computer Software Engineers, Applications. Yet these jobs are not seen on the listing of jobs with the highest growth in new jobs, as the total numbers of new jobs are relatively lower. See Table 9 below.

Table 9

Occupational Title	2004 Employment	2014 Projection	Total Growth	Rate
Total, All Occupations	3,056,560	3,359,170	302,600	10%
Registered Nurses	51,900	67,300	15,400	30%
<b>Team Assemblers</b>	68,950	78,300	9,350	14%
Janitors and Cleaners, Except Maids	48,200	57,480	9,280	19%
Retail Salespersons	86,460	94,080	7,620	9%
Waiters and Waitresses	48,430	55,560	7,130	15%
Truck Drivers, Heavy and Tractor-Trailer	58,660	65,540	6,870	12%
<b>Customer Service Representatives</b>	34,450	40,610	6,160	18%
Nursing Aides, Orderlies, and Attendants	29,850	35,780	5,930	20%
Food Preparation and Serving Workers	60,080	64,800	4,730	8%
Home Health Aides	8,910	13,450	4,530	51%

Source: IDWD, Occupational Projections





#### **Hoosier Hot 50 Jobs**

The Hoosier Hot 50 Jobs is a listing of the jobs most "in demand" for the state of Indiana between 2004 and 2014. By reviewing this list, Hoosiers can easily see the top high wage, high growth occupations and the education and skills needed for on the job success. The skills are identified by the skill pathways developed by the Indiana Department of Workforce Development in the 2007 Indiana Career Guide. The four skills pathways are: People, Things, Systems, and Information. The People pathway deals with interaction, and values people skills – such as persuasion and social perceptiveness. The Things pathway emphasizes skills such as equipment maintenance, installation and repairing. The Systems pathway includes skills in systems evaluation, resource management, and judgment and decision making. Finally, the Information pathway skills include programming, technology design and complex problem solving.

To be selected for the list, a job had to be ranked in the top 200 in terms of both total growth (the numeric count of new jobs) and percent growth from 2004 to 2014. Also, jobs had to have a median wage higher than the State's median wage for all jobs of \$27,742.

Each occupation that qualified by selection criteria was indexed based on median values for annual numeric growth, annual percent growth and average annual wage for the entire list. The two growth factors were weighted 50% and the single wage factor was weighted the remaining 50% to form the final "heat" index. The selected jobs were then ranked by the "heat" index to create the final list of Indiana's "Hot Jobs". Table 10 below shows the top 10 listing in the Hoosier Hot 50 Jobs.

Table 10

	Skill	Job Title	2004	2014	Growth	%	Avg.	Education
	Pathway						Wage	
1	People	Registered Nurses	51,900	67,300	15,400	29.70%	\$49,067	Associate degree
2	People	Postsecondary Teachers	30,490	39,550	9,150	30.00%	\$45,890	Doctoral degree
3	People	Teachers, Elementary and Kindergarten	32,040	37,450	5,420	16.90%	\$44,544	Bachelor's degree
4	People	Surgeons	2,450	3,000	540	22.20%	\$191,580	First professional degree
5	Information and Concepts	Computer Software Engineers, Applications	3,920	5,670	1,750	44.70%	\$65,549	Bachelor's degree
6	People	Dentists	3,570	4,540	970	27.10%	\$135,686	First professional degree
7	Information and Concepts	Computer Systems Analysts	7,410	9,660	2,250	30.30%	\$59,976	Bachelor's degree
8	People	Dental Hygienists	4,030	5,690	1,660	41.20%	\$59,055	Associate degree
9	Information and Concepts	Network Systems and Data Communications Analysts	1,980	3,070	1,090	54.80%	\$56,212	Bachelor's degree
10	Systems	First-Line Supervisors	15,520	18,180	2,660	17.10%	\$51,047	Work experience in a related occupation

Source: IDWD, Indiana Advanced Economic and Market Analysis (AEMA) \* wages based on 2005 OES Wage Survey

#### **Occupational Shortages**

A main focus of Indiana's Strategic Skills Initiative (SSI) was to gain a better understanding of Indiana's workforce supply, in order to best meet employer and industry demand. The SSI analysis found a demand for and shortage of skilled production workers in the advanced manufacturing sector. The SSI also pointed to skill shortages to fill occupations in the high growth industries of health and life sciences. Manufacturing occupations such as Welders, and Machinists, were identified as possible shortage areas by over half of the economic growth regions in Indiana. Two key factors were identified: 1) pending replacement needs of baby boomers and 2) need for firms to competitively adapt their processes to the demands of the marketplace. Occupation shortages in the health care service industry have also been projected in areas of Registered Nurses, Pharmacists, Respiratory Therapists, & Radiological Technicians. Indiana's Strategic Skills Initiative (SSI) also identified the following key skills in shortage throughout the state: Critical Thinking, Complex Problem Solving, Science, Mathematics, Reading Comprehension, and Active (Lifelong) Learning. The following table lists occupational shortage areas by region.



SOC Code*	Occupational Title	Regions with Shortage	Total Regions with Shortage	Estimated 2007 Shortage	Statewide OES Wage
Health Care &Social Assistance Manufacturing	Registered Nurses	1, 2, 3, 5, 8, 9, 10, 11	9	1735	\$46,903
Manufacturing	Welders, Cutters, Solderers & Brazers	1, 2, 5, 10	4	525	\$32,065
Manufacturing	Machinists (Metal & Plastic)	3, 4, 5, 10	4	443	\$35,883
<b>Retail Trade</b>	Pharmacists	1, 10	2	122	\$80,664
Transportation & Warehousing	Supervisor Transportation Workers	1, 5	2	280	\$47,792
Manufacturing	Supervisor, Production and Operating workers	1, 2, 4, 8, 10	5	280	\$47,428
Manufacturing	Maintenance & Repair workers; General	3, 4, 7, 11	4	344	\$32,819
Manufacturing	Computer-controlled Machine Tool Operators	2, 3, 4, 5, 6	5	328	\$31,828
Transportation & Warehousing	Truck Drivers, Heavy Tractor Trailer	5, 6, 10	3	294	\$36,153
Manufacturing	Industrial Maintenance Technicians	3, 4, 10, 11	4	244	\$43,820





Wholesale Trade	Sales Reps, Wholesale & Manufacturing	1	1	200	\$49,815
Manufacturing	Maintenance Workers; Machinery	3, 4, 7, 11	4	198	\$37,405
Manufacturing	Team Assemblers	8	1	234	\$30,069
Retail Trade	Electrical & Electronics Engineering Techs	8	1	134	\$44,962
Retail Trade	Supervisor, Mechanics, Installers & Repairers	4, 7	2	76	\$49,820
Health Care & Social Assistance	Licensed Practical Nurses	5, 6, 8, 9, 10, 11	6	125	\$33,800
Manufacturing	Inspectors, Testers, Sorters, Samplers	1, 5, 10	3	129	\$32,312
Health Care & Social Assistance	Respiratory Therapist	2, 7, 8, 10	4	76	\$41,505
Health Care & Social Assistance	Radiological Technicians	7, 10	2	26	\$41,149
*COC Codo - Standard Occu	national Classification Code				

<sup>\*</sup>SOC Code = Standard Occupational Classification Code

## Indexed Occupational Shortages and Wages, Statewide Summary

Although educational attainment is on the rise in Indiana – in order to meet increasing demands for a skilled workforce we will need to continue to focus resources to increase the educational levels of Hoosiers. Two degree areas are highlighted here:

- 1. Nurse Training (Associates Degree Graduates): 3,500 students graduate each year from over 35 Indiana public institutions projected need for 2014 will be 67,300, (growth of over 15,000) http://www.in.gov/dwd/employers/SSI/shortagesreportstate.pdf
- 2. Bachelor's Degree in Business/Management: An average of 4,662 students graduate each year from 26 Indiana public institutions projected need in 2014 will be 35,790 for general and operation's managers and 21,080 for business operations specialists (combined growth of over 8,000).

#### Technology Needs/Skills

All of the top growth jobs also require some sort of skill proficiency in a computer or medical technology. These jobs require proficiency in personal and desktop computers, Microsoft office applications, financial software, new advanced manufacturing technology, and medical

technology. There are increasing needs for workers with advanced technological and computer skills – leads to shortages among the incumbent and dislocated worker supply. Indiana's emerging workforce is achieving higher levels of education and technological training – yet there is still a need to address the problem of the brain drain.

Many national articles also point to shortage areas in Science, Engineering, and Technology, as America faces increased global competition. American (and Indiana) workers at every skill level are in direct competition with workers all over the world. Indiana and the US can maintain competitive advantage with increases in education and training that will lead to innovation and creativity.

The following are highlights from the National Association of Manufacturers - 2005 Skills Shortage Report:

- The vast majority of American manufacturers are experiencing a serious shortage of qualified employees, which in turn is causing significant impact to business and the ability of the country as a whole to compete in a global economy.
- Countries with rich educational heritages, e.g., India, China and Russia, are graduating millions more students each year from college than the United States.
- More than 80 percent of respondents indicated that they are experiencing a shortage of qualified workers overall – with 13 percent reporting severe shortages and 68 percent indicating moderate shortages.
- Among respondents to this national survey, nearly half indicated their current employees have inadequate basic employability skills, such as attendance, timeliness and work ethic, while 46 percent reported inadequate problem-solving skills, and 36 percent indicated insufficient reading, writing, and communication skills.





### Section 5 – Workforce and Industry Composition

#### Females in Industry

Although many industries such as mining and utilities have been traditionally male dominated, there are several Indiana industry sectors in which females comprise the majority of the labor force. In the health care and social assistance sector, females make up 85% of the average annual employment. Finance and insurance have a labor force makeup of 69% female while educational services is at 68%. Of the twenty industry sectors, ten sectors have female employment of at least 50% or more (See Table 12). Therefore, this demonstrates that Indiana is quite diverse in regards to different genders in the labor force.

Table 12

Industry	Average Annual Female Employment (2005)	% of Females In Sector
All Industry Sectors	1,376,067	48%
Agriculture, Forestry, Fishing and Hunting	3,746	32%
Mining	561	8%
Utilities	3,818	4%
Construction	19,144	13%
Manufacturing	174,311	30%
Wholesale Trade	34,587	28%
Retail Trade	175,266	53%
Transportation and Warehousing	30,440	28%
Information	24,116	51%
Finance and Insurance	69,049	69%
Real Estate and Rental and Leasing	17,847	48%
Professional and Technical Services	47,182	52%
Management of Companies and Enterprises	14,587	54%
Administrative and Waste Services	70,401	43%
<b>Educational Services</b>	165,850	68%
Arts, Entertainment, and Recreation	22,504	51%
Health Care and Social Assistance	274,669	85%
Accommodation and Food Services	136,482	59%
Other Services (except Public Administration)	42,969	51%
Public Administration	48,530	42%

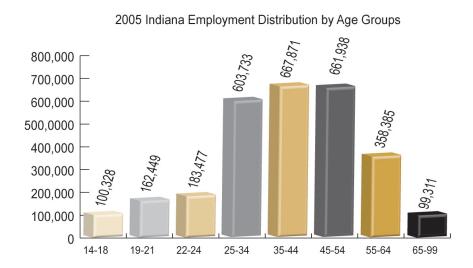
Source: U.S. Census Bureau, Local Employment Dynamics (LED)

#### **Age Groups of the Workforce**

Not surprisingly, Indiana's employment distribution is dominated by three of the eight age groups shown in (Figure 9). According to 2005 Local Employment Dynamics (LED) data, 603,733 of Indiana workers were between the ages of 25 and 34; 667,871 of the workers were between the ages of 35 and 44; and 661,938 of the workers were between the ages of 45-54. These numbers drastically decrease as many of Indiana's employers approach or enter into the most common age ranges (55-99) for retirement. This decrease is quite evident in that for those Indiana workers between the ages of 55 and 64, there are nearly half the employees than there was for the 45 to 54 age range.



#### Figure 9



The United States is currently experiencing an aging workforce and Indiana is no exception. However, the percentage of those Indiana employees in the 55-64 age group is higher in some industry sectors than in others. Listed in (Table 13) are the top 5 industry sectors for the percentage of workers in the 55-64 age group.

Table 13

TOP 5 SECTORS IN NAICS Sector	DERGENTAGE EMI Ave. Annual Employment (55-64 Age Group)	Ave. Annual Employment (All Age Groups)	% of (55-65 Age
Educational Services	48,490	244,613	19.82%
Utilities	3,103	16,695	18.59%
Public Administration	20,047	115,177	17.41%
Manufacturing	80,321	580,757	13.83%
Finance and Insurance	13,611	100,532	13.56%

Source: U.S. Bureau of Census, Local Employment Dynamics (LED)



### **Race/Ethnicity in the Workforce**

The composition of minorities in the workforce has increased by 12% since 2000. The category of Other races increased the most with a 45% change from 2000 to 2006. This was followed by those of Hispanic origin which jumped by 39%. The largest decrease was with the American Indian/Alaska Native group at a 47% drop. The categories of Blacks and Whites experienced a very slight drop at 4% for both. See Table 14 below.

Table 14

Race/Ethnicity	2000	2006	% Change		
White	2,779,013	2,675,427	-4%		
Black	221,231	212,633	-4%		
American Indian/ Alaska Native	8,551	4,566	-47%		
Asian	30,583	39,445	29%		
Two or More Races	31,417	29,138	-7%		
Other Races	47,102	68,512	45%		
Hispanic origin	97,811	135,954	39%		
<b>Total Minority</b>	436,695	490,248	12%		
Source: U.S. Bureau of Census (2000 Census), U.S. Bureau of Census, American Community Survey (ACS) 2006					